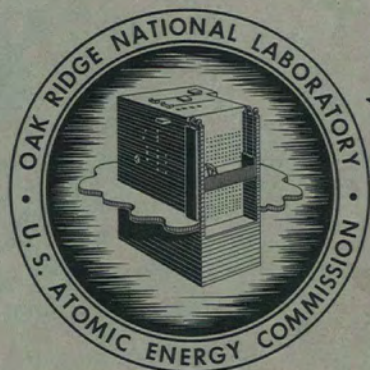


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TABLES FOR THE TRANSFORMATION BETWEEN
THE LABORATORY AND CENTER-OF-MASS
COORDINATE SYSTEMS AND FOR THE
CALCULATION OF THE ENERGIES
OF REACTION PRODUCTS

J. B. Marion
T. I. Arnette
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TABLES FOR THE TRANSFORMATION BETWEEN THE LABORATORY AND CENTER-OF-MASS COORDINATE SYSTEMS AND FOR THE CALCULATION OF THE ENERGIES OF REACTION PRODUCTS

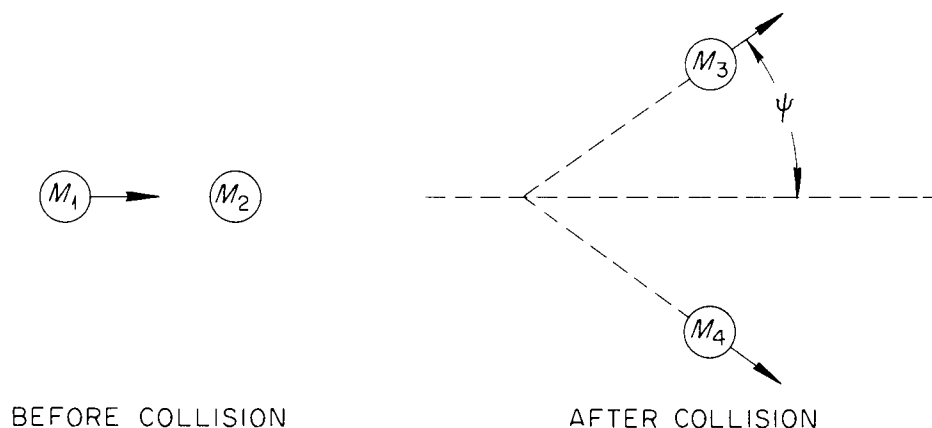
Jerry B. Marion*

T. I. Arnette

H. C. Owens

From a theoretical standpoint the most meaningful representation of angular distribution data is in the center-of-mass coordinate system. The following tables have been prepared to facilitate the transformation of such data between the laboratory and center-of-mass systems. In this respect, these tables represent an extension of tables calculated previously¹ by making available more entries and thus reducing the necessity for interpolation. In addition, an associated table has been included which makes possible the calculation with relative ease of the energy of a nuclear reaction product as a function of the angle of observation in the laboratory system.

A nuclear reaction may be represented in the laboratory system in the following manner:



where

M_1 = (mass of) incident particle,

M_2 = target nucleus,

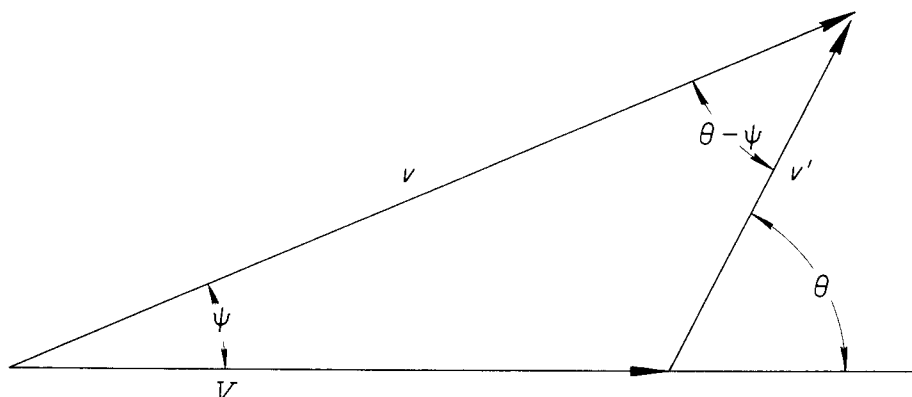
M_3 = reaction product observed at the laboratory angle ψ ,

M_4 = residual nucleus.

*Summer visitor from University of Maryland, College Park, Maryland.

¹J. B. Marion and A. S. Ginzburg, *Tables for the Transformation of Angular Distribution Data from the Laboratory System to the Center of Mass System* (Shell Development Company, Houston, 1955); reprinted as Atomic Energy Commission Document NP-6241 (1957).

The corresponding velocity diagram is as follows:



where

ψ = laboratory angle of observation,

θ = center-of-mass angle corresponding to ψ ,

V = velocity of the center of mass,

v = velocity of M_3 in the laboratory system,

v' = velocity of M_3 in the center-of-mass system.

The ratio of the velocity of the center of mass to the velocity of the observed particle, M_3 , in the center-of-mass system is defined to be the parameter x :

$$(1) \quad x = \frac{V}{v'} ,$$

and

$$(2) \quad x^2 = \left(\frac{V}{v'} \right)^2 = \frac{M_1 M_3}{M_4 (M_3 + M_4 - M_1)} \cdot \left(1 + \frac{M_3 + M_4}{M_3 + M_4 - M_1} \cdot \frac{Q}{E_1} \right)^{-1} ,$$

where E_1 is the energy of the incident particle, M_1 , in the laboratory system, and Q is the energy release of the particular reaction under consideration. Equation 2 follows from the conservation of energy and momentum.

Depending on the accuracy desired, it is frequently permissible to make the approximation:

$$(3) \quad M_1 + M_2 \approx M_3 + M_4 .$$

Equation 2 then becomes:

$$(4) \quad x^2 = \frac{M_1 M_3}{M_2 M_4} \cdot \left(1 + \frac{M_1 + M_2}{M_2} \cdot \frac{Q}{E_1} \right)^{-1} .$$

The relation between ψ and θ is:

$$(5) \quad \frac{\sin(\theta - \psi)}{\sin \psi} = \frac{V}{v'} = x .$$

Since the total number of particles emitted into a unit solid angle must be the same in the two coordinate systems, then

$$(6) \quad I(\theta) \cdot 2\pi \sin \theta d\theta = J(\psi) \cdot 2\pi \sin \psi d\psi ,$$

where $I(\theta)$ and $J(\psi)$ are the intensities in the center-of-mass and laboratory systems respectively.

The ratio of I and J is defined to be the transformation function, $G(x, \psi)$:

$$(7) \quad G(x, \psi) \equiv \frac{I}{J} = \frac{\sin \psi d\psi}{\sin \theta d\theta} = \cos(\theta - \psi) \frac{\sin^2 \psi}{\sin^2 \theta} .$$

Using Eq. 5, one may also write G as:

$$(8) \quad G(x, \psi) = [1 - x^2 \sin^2 \psi]^{1/2} [x \cos \psi + (1 - x^2 \sin^2 \psi)^{1/2}]^{-2} .$$

The transformation of data from the laboratory to the center-of-mass system is accomplished simply by calculating from Eq. 2 (or Eq. 4) the value of x corresponding to the particular reaction and bombarding energy under consideration and performing the following operation through the use of the tables:

$$(9) \quad I(\theta) = J(\psi) G(x, \psi) .$$

Tabulations have been made as a function of ψ from 0° to 180° in intervals of 5° and as a function of x^2 from 0.001 to 1.000 in intervals of 0.001 and from 1.050 to 20.000 in intervals of 0.050 (ref 2). For $x^2 > 1.2$, $\Delta\psi = 2^\circ$. The quantities calculated are θ , $\cos \theta$, and $G(x, \psi)$.

Values of x greater than unity imply that the velocity of the center of mass exceeds the center-of-mass velocity of the observed particle. Thus the emitted particles are confined to a cone about the forward direction. The half-angle of this cone is given by:

$$(10) \quad \psi_{\max} = \sin^{-1} \left(\frac{1}{x} \right) , \quad x > 1 .$$

Cases in which $x > 1$ arise are:

(a) Reactions in which particles (especially neutrons) are emitted at bombarding energies only slightly above the threshold energy, E_{th} , where

$$(11) \quad E_{th} = - \frac{M_1 + M_2}{M_2} Q .$$

If one defines $\Delta E = E_1 - E_{th}$, then Eq. 10 may be written as:

$$(12) \quad \psi_{\max} = \sin^{-1} \left(\frac{M_2 M_4}{M_1 M_3} \cdot \frac{\Delta E}{E_1} \right)^{1/2} ,$$

²For larger values of x^2 a computer program is on file; see B. D. Williams, *Kinematics of Nuclear Reactions Calculated with the IBM 704 Computer*, ORNL CF-58-9-43.

and the particles are confined to a forward cone (i.e., $x > 1$) as long as

$$(13) \quad \frac{\Delta E}{E_1} < \frac{M_1 M_3}{M_2 M_4} .$$

(b) Some reactions in which the target nucleus is lighter than the incident particle ($M_2 < M_1$). (Depending on the particle observed and the Q -value, x can be either greater or less than unity.)

(c) Some reactions in which the recoil nucleus is observed ($M_3 > M_4$). (Again, depending on the masses of M_1 and M_2 and the Q -value, x can be either greater or less than unity.)

In addition to the values of θ and $\cos \theta$ and the transformation function G , a quantity S^2 has been tabulated which enables the energy of reaction products as a function of ψ to be calculated with relative ease. Referring to the velocity diagram and Eq. 1, one can readily show that

$$(14) \quad E_3(E_1, \psi) = \frac{M_1 M_3 E_1}{(M_1 + M_2)(M_3 + M_4)} \cdot S^2 ,$$

where

$$(15) \quad S(x, \psi) = \cos \psi + \frac{\cos (\theta - \psi)}{x} .$$

Although the transformation function $G(x, \psi)$ is almost always sufficiently accurate in the nonrelativistic approximation used in the above derivation, values of E_3 calculated from Eq. 14 can be in error by 0.1 per cent in many instances. A first-order relativistic correction can be applied by substituting for each mass an effective mass given by:³

$$(16) \quad M_i^{\text{Eff}} = M_i + \frac{E_i}{2c^2} .$$

If this correction factor is used, it is necessary to perform successive approximations in order to obtain a value for E_3 . Even so, however, considerably less labor is involved than in using the complete relativistic expressions.⁴

The calculations were performed on the Oak Ridge National Laboratory ORACLE computer.

³A. B. Brown, C. W. Snyder, W. A. Fowler, and C. C. Lauritsen, *Phys. Rev.* **82**, 159 (1951).

⁴R. H. Bacon, *Am. J. Phys.* **8**, 154, 354 (1940).

x = 0.001					x = 0.002					x = 0.003				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.9396	1064.24555	0.00	1.0000	0.9162	545.72136	0.00	1.0000	0.8988	370.84817		
5	5.16	0.9960	0.9399	1063.28945	5.22	0.9958	0.9165	545.53565	5.27	0.9958	0.8992	370.69361		
10	10.31	0.9838	0.9405	1063.22346	10.44	0.9834	0.9174	544.98031	10.54	0.9831	0.9003	370.23149		
15	15.47	0.9638	0.9416	1061.95443	15.66	0.9629	0.9190	544.06065	15.81	0.9622	0.9021	369.46644		
20	20.62	0.9359	0.9432	1060.19394	20.88	0.9344	0.9211	542.78546	21.07	0.9331	0.9046	368.40608		
25	25.77	0.9006	0.9451	1057.95760	26.08	0.8982	0.9238	541.16686	26.33	0.8963	0.9079	367.06093		
30	30.91	0.8580	0.9475	1055.26540	31.28	0.8546	0.9270	539.22014	31.57	0.8520	0.9118	365.44424		
35	36.04	0.8086	0.9503	1052.14121	36.47	0.8042	0.9309	536.96355	36.80	0.8007	0.9164	363.57179		
40	41.16	0.7528	0.9534	1048.61253	41.65	0.7473	0.9352	534.41803	42.02	0.7429	0.9216	361.46162		
45	46.28	0.6911	0.9570	1044.71016	46.81	0.6844	0.9401	531.60695	47.22	0.6792	0.9275	359.13384		
50	51.39	0.6240	0.9608	1040.46796	51.96	0.6162	0.9454	528.55580	52.40	0.6101	0.9339	356.61029		
55	56.48	0.5522	0.9650	1035.82135	57.10	0.5432	0.9512	525.29186	57.57	0.5362	0.9409	353.91426		
60	61.57	0.4761	0.9695	1031.11089	62.22	0.4661	0.9574	521.84389	62.72	0.4584	0.9484	351.07019		
65	66.64	0.3965	0.9742	1026.07493	67.32	0.3855	0.9640	518.24172	67.85	0.3771	0.9564	348.10334		
70	71.70	0.3139	0.9791	1020.85563	72.41	0.3022	0.9709	514.51603	72.95	0.2932	0.9648	345.03953		
75	76.75	0.2292	0.9843	1015.49546	77.48	0.2169	0.9781	510.69789	78.03	0.2074	0.9736	341.90479		
80	81.78	0.1429	0.9896	1010.03742	82.52	0.1301	0.9856	506.81853	83.09	0.1203	0.9826	338.72512		
85	86.81	0.0557	0.9950	1004.52463	87.55	0.0427	0.9932	502.90902	88.13	0.0327	0.9920	335.52624		
90	91.81	-0.0316	1.0005	999.93996	92.56	-0.0447	1.0010	498.99997	93.14	-0.0548	1.0015	332.33331		
95	96.81	-0.1185	1.0060	993.50567	97.55	-0.1315	1.0089	495.12131	98.13	-0.1414	1.0111	329.17076		
100	101.78	-0.2042	1.0116	988.09311	102.52	-0.2169	1.0167	491.30203	103.09	-0.2265	1.0208	326.06211		
105	106.75	-0.2882	1.0171	982.77241	107.48	-0.3003	1.0245	487.57001	108.03	-0.3096	1.0305	323.02978		
110	111.70	-0.3698	1.0224	977.61221	112.41	-0.3812	1.0322	483.95183	112.95	-0.3899	1.0400	320.09500		
115	116.64	-0.4484	1.0277	972.63942	117.32	-0.4590	1.0398	480.47265	117.85	-0.4671	1.0493	317.27771		
120	121.57	-0.5235	1.0328	967.88904	122.22	-0.5332	1.0471	477.15606	122.72	-0.5405	1.0584	314.59644		
125	126.48	-0.5946	1.0376	963.39395	127.10	-0.6032	1.0541	474.02405	127.57	-0.6098	1.0671	312.06833		
130	131.39	-0.6612	1.0422	959.18478	131.96	-0.6687	1.0607	471.09686	132.40	-0.6744	1.0753	309.70304		
135	136.28	-0.7227	1.0465	955.28978	136.81	-0.7291	1.0669	468.39301	137.22	-0.7340	1.0831	307.53279		
140	141.16	-0.7790	1.0505	951.73471	141.65	-0.7842	1.0727	465.92923	142.02	-0.7882	1.0902	305.55231		
145	146.04	-0.8294	1.0541	948.54278	146.47	-0.8336	1.0779	463.72046	146.80	-0.8368	1.0967	303.77889		
150	150.91	-0.8738	1.0572	945.73456	151.28	-0.8770	1.0825	461.77983	151.57	-0.8794	1.1025	302.22240		
155	155.77	-0.9119	1.0600	943.32794	156.08	-0.9141	1.0865	460.11869	156.33	-0.9158	1.1075	300.89129		
160	160.62	-0.9433	1.0623	941.33812	160.88	-0.9448	1.0898	458.74681	161.07	-0.9459	1.1117	299.79266		
165	165.47	-0.9680	1.0640	939.77754	165.66	-0.9689	1.0924	457.67139	165.81	-0.9695	1.1150	298.93227		
170	170.31	-0.9857	1.0653	938.55591	170.44	-0.9861	1.0943	456.89907	170.54	-0.9864	1.1173	298.31455		
175	175.16	-0.9964	1.0661	937.98016	175.22	-0.9965	1.0954	456.43396	175.27	-0.9966	1.1188	297.94266		
180	180.00	-1.0000	1.0664	937.75445	180.00	-1.0000	1.0958	456.27864	180.00	-1.0000	1.1192	297.81850		

x = 0.004					x = 0.005					x = 0.006				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.8846	282.62278	0.00	1.0000	0.8723	229.28427	0.00	1.0000	0.8614	193.48656		
5	5.32	0.9957	0.8850	282.48677	5.35	0.9956	0.8727	229.16091	5.39	0.9956	0.8619	193.37252		
10	10.63	0.9828	0.8862	282.08017	10.70	0.9826	0.8741	228.73216	10.77	0.9824	0.8633	193.03169		
15	15.94	0.9616	0.8883	281.40719	16.05	0.9610	0.8763	228.18196	16.15	0.9605	0.8658	192.46778		
20	21.24	0.9321	0.8911	280.47478	21.39	0.9311	0.8795	227.33679	21.52	0.9303	0.8692	191.68695		
25	26.53	0.8947	0.8948	279.25251	26.71	0.8933	0.8835	226.26559	26.88	0.8920	0.8735	190.69768		
30	31.81	0.8498	0.8992	277.87243	32.03	0.8478	0.8884	224.97958	32.22	0.8460	0.8788	189.51057		
35	37.08	0.7978	0.9045	276.22883	37.32	0.7952	0.8941	223.49207	37.55	0.7929	0.8850	188.13821		
40	42.33	0.7393	0.9104	274.37807	42.61	0.7360	0.9007	221.81826	42.85	0.7331	0.8921	186.59496		
45	47.56	0.6748	0.9171	272.33830	47.87	0.6709	0.9081	219.97498	48.14	0.6673	0.9001	184.89667		
50	52.78	0.6049	0.9244	270.12920	53.11	0.6003	0.9162	217.98043	53.40	0.5962	0.9088	183.06047		
55	57.97	0.5304	0.9324	267.77169	58.32	0.5252	0.9250	215.85392	58.64	0.5204	0.9184	181.10447		
60	63.14	0.4518	0.9410	265.28764	63.51	0.4460	0.9345	213.61559	63.85	0.4408	0.9288	179.04752		
65	68.29	0.3700	0.9501	262.69959	68.67	0.3637	0.9446	211.28608	69.03	0.3580	0.9398	176.90690		
70	73.41	0.2856	0.9597	260.03045	73.81	0.2788	0.9553	208.89635	74.17	0.2727	0.9514	174.70811		
75	78.50	0.1993	0.9698	257.30325	78.92	0.1922	0.9666	206.43737	79.29	0.1858	0.9637	172.46457		
80	83.57	0.1120	0.9803	254.54086	83.99	0.1046	0.9782	203.95988	84.37	0.0980	0.9764	170.19747		
85	88.61	0.0242	0.9910	251.75580	89.04	0.0168	0.9902	201.47419	89.43	0.0100	0.9895	167.92549		
90	93.63	-0.0632	1.0020	248.95398	94.05	-0.0707	1.0025	198.99998	94.44	-0.0775	1.0030	165.66665		
95	98.61	-0.1497	1.0132	246.26454	99.04	-0.1571	1.0150	196.55616	99.43	-0.1638	1.0167	163.43820		
100	103.57	-0.2346	1.0244	243.57971	103.99	-0.2418	1.0276	194.16070	104.37	-0.2483	1.0305	161.25644		
105	108.50	-0.3173	1.0356	240.96466	108.92	-0.3242	1.0402	191.83054	109.29	-0.3304	1.0444	159.13668		
110	113.41	-0.3973	1.0466	238.43742	113.81	-0.4037	1.0526	189.58152	114.17	-0.4095	1.0581	157.09311		
115	118.29	-0.4739	1.0575	236.01480	118.67	-0.4798	1.0649	187.42831	119.03	-0.4852	1.0717	155.13883		
120	123.14	-0.5467	1.0681	233.71232	123.51	-0.5521	1.0768	185.38439	123.85	-0.5570	1.0848	153.28578		
125	127.97	-0.6152	1.0783	231.54424	128.32	-0.6201	1.0883	183.46201	128.64	-0.6244	1.0976	151.54479		
130	132.78	-0.6791	1.0879	229.52347	133.11	-0.6833	1.0993	181.67225	133.40	-0.6871	1.1097	149.92554		
135	137.56	-0.7380	1.0970	227.66157	137.87	-0.7416	1.1096	180.02500	138.14	-0.7448	1.1211	148.43664		
140	142.33	-0.7915	1.1054	225.96920	142.61	-0.7945	1.1191	178.52901	142.85	-0.7971	1.1317	147.08565		
145	147.08	-0.8394	1.1131	224.45515	147.32	-0.8417	1.1278	177.19195	147.55	-0.8438	1.1414	145.87914		
150	151.81	-0.8814	1.1199	223.										

$\frac{2}{x} = 0.007$
 $\frac{2}{x} = 0.008$
 $\frac{2}{x} = 0.009$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.8515	167.76172	0.00	1.0000	0.8425	148.36068	0.00	1.0000	0.8342	133.19296
5	5.42	0.9955	0.8521	167.65453	5.45	0.9955	0.8431	148.25972	5.47	0.9954	0.8348	133.09683
10	10.83	0.9822	0.8536	167.33576	10.89	0.9820	0.8447	147.95801	10.94	0.9818	0.8365	132.80956
15	16.24	0.9601	0.8562	166.80780	16.33	0.9597	0.8475	147.45899	16.41	0.9593	0.8394	132.33450
20	21.64	0.9295	0.8598	166.07694	21.75	0.9288	0.8513	146.76637	21.86	0.9281	0.8434	131.67718
25	27.03	0.8908	0.8645	165.15128	27.17	0.8897	0.8562	145.89396	27.30	0.8886	0.8485	130.84518
30	32.40	0.8444	0.8701	164.04098	32.56	0.8426	0.8621	144.84554	32.72	0.8413	0.8547	129.84798
35	37.75	0.7907	0.8767	162.75908	37.94	0.7886	0.8691	143.63469	38.12	0.7867	0.8621	128.69673
40	43.08	0.7304	0.8843	161.31625	43.30	0.7278	0.8771	142.27458	43.50	0.7254	0.8705	127.46433
45	48.39	0.6640	0.8928	159.73062	48.63	0.6610	0.8861	140.77973	48.85	0.6581	0.8800	125.98465
50	53.67	0.5924	0.9022	158.01746	53.93	0.5888	0.8961	139.16573	54.17	0.5854	0.8904	124.45278
55	58.93	0.5161	0.9125	156.19397	59.20	0.5120	0.9070	137.44506	59.46	0.5082	0.9019	122.92457
60	64.16	0.4359	0.9235	154.27800	64.44	0.4314	0.9187	135.64674	64.71	0.4272	0.9143	121.11635
65	69.35	0.3527	0.9354	152.28777	69.65	0.3478	0.9313	133.77513	69.93	0.3431	0.9276	119.34490
70	74.51	0.2671	0.9479	150.24162	74.82	0.2618	0.9447	131.85469	75.11	0.2569	0.9416	117.52676
75	79.64	0.1799	0.9611	148.15783	79.96	0.1744	0.9587	129.89969	80.26	0.1692	0.9565	115.67850
80	84.73	0.0919	0.9748	146.05431	85.05	0.0862	0.9733	127.92409	85.36	0.0809	0.9720	113.81622
85	89.78	0.0038	0.9890	143.94849	90.11	-0.0020	0.9885	125.95629	90.42	-0.0074	0.9880	111.95547
90	94.80	-0.0837	1.0035	141.85713	95.13	-0.0894	1.0040	123.99998	95.44	-0.0949	1.0045	110.11110
95	99.78	-0.1699	1.0183	139.79615	100.11	-0.1756	1.0199	122.07407	100.42	-0.1809	1.0214	108.29711
100	104.73	-0.2542	1.0333	137.74056	105.05	-0.2597	1.0360	120.19249	105.36	-0.2649	1.0385	106.52619
105	109.64	-0.3360	1.0483	135.82438	109.96	-0.3413	1.0521	118.36823	110.26	-0.3462	1.0556	104.81164
110	114.51	-0.4148	1.0633	133.94054	114.82	-0.4198	1.0681	116.61320	115.11	-0.4244	1.0728	103.16334
115	119.35	-0.4901	1.0780	132.14091	119.65	-0.4947	1.0840	114.93826	119.93	-0.4990	1.0897	101.59173
120	124.16	-0.5614	1.0923	130.43625	124.44	-0.5656	1.0994	113.35324	124.71	-0.5695	1.1062	100.10581
125	128.93	-0.6284	1.1062	128.83625	129.20	-0.6321	1.1144	111.86633	129.46	-0.6355	1.1222	98.71359
130	133.67	-0.6905	1.1195	127.34951	133.93	-0.6938	1.1287	110.48695	134.17	-0.6968	1.1375	97.42213
135	138.39	-0.7477	1.1319	125.99365	138.63	-0.7504	1.1422	109.22025	138.85	-0.7529	1.1519	96.23756
140	143.08	-0.7995	1.1435	124.74531	143.30	-0.8017	1.1547	108.07269	143.50	-0.8038	1.1654	95.15017
145	147.75	-0.8457	1.1541	123.64023	147.94	-0.8475	1.1661	107.04933	148.12	-0.8491	1.1777	94.20946
150	152.40	-0.8862	1.1635	122.67329	152.56	-0.8875	1.1764	106.15445	152.72	-0.8888	1.1886	93.37423
155	157.03	-0.9207	1.1717	121.84857	157.17	-0.9216	1.1852	105.39160	157.30	-0.9225	1.1981	92.66261
160	161.64	-0.9491	1.1785	121.16943	161.75	-0.9497	1.1926	104.76371	161.86	-0.9503	1.2061	92.07712
165	166.24	-0.9713	1.1839	120.63853	166.33	-0.9717	1.1985	104.27305	166.41	-0.9720	1.2144	91.61977
170	170.83	-0.9872	1.1878	120.25791	170.89	-0.9874	1.2027	103.92137	170.94	-0.9875	1.2169	91.29201
175	175.42	-0.9968	1.1902	120.02657	175.45	-0.9968	1.2052	103.70989	175.47	-0.9969	1.2197	91.05501
180	180.00	-1.0000	1.1909	119.95257	180.00	-1.0000	1.2061	103.63932	180.00	-1.0000	1.2206	91.02926

 $\frac{2}{x} = 0.010$
 $\frac{2}{x} = 0.011$
 $\frac{2}{x} = 0.012$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.8264	121.00000	0.00	1.0000	0.8192	110.97834	0.00	1.0000	0.8123	102.59075
5	5.50	0.9954	0.8270	120.90794	5.52	0.9954	0.8198	110.88979	5.55	0.9953	0.8129	102.50525
10	10.99	0.9816	0.8288	120.63285	11.04	0.9815	0.8216	110.82522	11.09	0.9813	0.8148	102.44382
15	16.48	0.9589	0.8318	120.17807	16.56	0.9585	0.8247	110.78781	16.62	0.9582	0.8180	101.82758
20	21.96	0.9274	0.8360	119.54890	22.06	0.9268	0.8291	109.56284	22.15	0.9262	0.8225	101.24369
25	27.42	0.8876	0.8413	118.75275	27.54	0.8867	0.8346	108.81750	27.65	0.8858	0.8283	100.50522
30	32.87	0.8399	0.8476	117.79884	33.01	0.8386	0.8414	107.90932	33.14	0.8373	0.8352	99.52098
35	38.29	0.7849	0.8555	116.69809	38.45	0.7832	0.8493	106.84343	38.60	0.7815	0.8435	98.60140
40	43.69	0.7231	0.8643	115.46285	43.87	0.7210	0.8585	105.65740	44.04	0.7189	0.8529	97.45826
45	49.05	0.6553	0.8742	114.10673	49.25	0.6527	0.8687	104.35595	49.44	0.6502	0.8636	96.20448
50	54.39	0.5822	0.8851	112.64432	54.61	0.5792	0.8802	102.95329	54.81	0.5762	0.8754	94.85393
55	59.70	0.5045	0.8971	111.09095	59.93	0.5011	0.8927	101.46430	60.15	0.4978	0.8884	93.42109
60	64.97	0.4231	0.9101	109.46242	65.21	0.4193	0.9062	99.90430	65.44	0.4156	0.9025	91.92086
65	70.20	0.3387	0.9240	107.71478	70.45	0.3345	0.9207	98.28882	70.70	0.3306	0.9176	90.36833
70	75.39	0.2522	0.9388	106.04408	75.66	0.2477	0.9362	96.63335	75.91	0.2435	0.9337	88.77951
75	80.54	0.1643	0.9544	104.28614	80.81	0.1596	0.9525	94.95315	81.07	0.1552	0.9507	87.16614
80	85.65	0.0758	0.9707	102.51638	85.93	0.0710	0.9695	93.26302	86.19	0.0664	0.9685	85.54549
85	90.72	-0.0125	0.9876	100.74362	91.00	-0.0174	0.9873	91.57717	91.27	-0.0221	0.9870	83.93025
90	95.74	-0.1000	1.0050	98.99999	96.02	-0.1049	1.0055	89.90908	96.29	-0.1095	1.0061	82.33332
95	100.72	-0.1860	1.0228	97.28073	101.00	-0.1908	1.0242	88.27137	101.27	-0.1953	1.0256	80.76678
100	105.65	-0.2698	1.0409	95.60421	105.93	-0.2744	1.0432	86.67575	106.19	-0.2789	1.0455	79.24176
105	110.54	-0.3509	1.0591	93.98178	110.81	-0.3553	1.0624	85.13296	111.07	-0.3596	1.0655	77.76845
110	115.39	-0.4288	1.0772	92.42381	115.66	-0.4330	1.0815	83.65272	115.91	-0.4369	1.0856	76.35604
115	120.20	-0.5030	1.0951	90.93962	120.45	-0.5069	1.1004	82.24377	120.70	-0.5105	1.1054	75.01274
120	124.97	-0.5731	1.1127	89.53756	125.21	-0.5766	1.1189	80.91386	125.44	-0.5799	1.1249	73.74578
125	129.70	-0.6387	1.1297	88.22499	129.93	-0.6418	1.1369	79.66983	130.15	-0.6448	1.1438	72.56152
130	134.39	-0.6996	1.1459	87.00836	134.61	-0.7023	1.1541	78.51758	134.81	-0.7048	1.1620	71.46542
135	139.05	-0.7563	1.1613	85.89325	139.25	-0.7576	1.1704	77.46221	139.44	-0.7598	1.1791	70.46217
140	143.69	-0.8058	1.1756	84.88443	143.87	-0.8076	1.1855	76.50807	144.04	-0.8094	1.1951	69.55569
145	148.29	-0.8507	1.1887	83.98594	148.45	-0.8522	1.1994	75.65577	148.60	-0.8536	1.2097	68.74929
150	152.87	-0.8899	1.2004	83.20115	153.01	-0.8911	1.2118	74.91735	153.14	-0.8921	1.2228	68.04567
155	157.42	-0.9234	1.2106	82.53282	157.54	-0.9241	1.2226	74.28624	157.65	-0.9249	1.2342	67.44701
160	161.96	-0.9508	1.2190	81.96318	162.06	-0.9514	1.2316	73.76743	162.15	-0.9518	1.2437	66.95506
165	166.48	-0.9723	1.2258	81.55398	166.56	-0.9726	1.2387	73.36242	166.62	-0.9729	1.2513	66.57113
170	170.99	-0.9877	1.2306	81.24650	171.04	-0.9878	1.2439	73.07235	171.09	-0.9879	1.2568	66.29623
175	175.50	-0.9969	1.2336	81.06167	175.52	-0.9969	1.2470	72.89800	175.55	-0.9970	1.2601	66.13102
180	180.00	-1.0000	1.2346	81.00000	180.00	-1.0000	1.2481	72.83984	180.00	-1.0000	1.2612	66.07591

x = 0.013					x = 0.014					x = 0.015				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.8058	95.46424	0.00	1.0000	0.7996	89.33166	0.00	1.0000	0.7937	83.99660		
5	5.57	0.9953	0.8064	95.38143	5.59	0.9952	0.8003	89.25125	5.61	0.9952	0.7944	83.91834		
10	11.13	0.9812	0.8084	95.13405	11.18	0.9810	0.8023	89.01104	11.22	0.9809	0.7965	83.68456		
15	16.69	0.9579	0.8117	94.72518	16.75	0.9575	0.8057	88.61406	16.82	0.9572	0.7999	83.29827		
20	22.23	0.9256	0.8163	94.15988	22.32	0.9251	0.8104	88.06531	22.40	0.9245	0.8048	82.76436		
25	27.76	0.8849	0.8222	93.44509	27.87	0.8840	0.8165	87.37159	27.97	0.8832	0.8110	82.08956		
30	33.27	0.8361	0.8294	92.58946	33.39	0.8349	0.8239	86.54143	33.51	0.8338	0.8186	81.78226		
35	38.75	0.7799	0.8379	91.60321	38.89	0.7783	0.8327	85.58486	39.03	0.7768	0.8276	81.45233		
40	44.20	0.7169	0.8477	90.49769	44.36	0.7149	0.8427	84.51323	44.52	0.7131	0.8380	79.31094		
45	49.62	0.6478	0.8587	89.28617	49.80	0.6455	0.8541	83.33895	49.97	0.6432	0.8496	78.17028		
50	55.01	0.5734	0.8710	87.98157	55.20	0.5707	0.8667	82.07529	55.38	0.5681	0.8626	76.94339		
55	60.36	0.4946	0.8844	86.59827	60.56	0.4915	0.8806	80.73611	60.76	0.4885	0.8769	75.64385		
60	65.67	0.4120	0.8990	85.15079	65.88	0.4086	0.8956	79.33562	66.09	0.4053	0.8924	74.28557		
65	70.93	0.3267	0.9146	83.65381	71.16	0.3230	0.9118	77.88814	71.37	0.3194	0.9091	72.88255		
70	76.15	0.2394	0.9313	82.12192	76.38	0.2354	0.9290	76.40787	76.61	0.2316	0.9269	71.44867		
75	81.32	0.1509	0.9489	80.56941	81.56	0.1467	0.9473	74.90871	81.79	0.1427	0.9457	69.99745		
80	86.45	0.0620	0.9674	79.01010	86.69	0.0577	0.9665	73.40406	86.93	0.0536	0.9655	68.54193		
85	91.52	-0.0266	0.9867	77.45718	91.77	-0.0309	0.9864	71.90668	92.01	-0.0350	0.9862	67.09446		
90	96.55	-0.1140	1.0066	75.92307	96.80	-0.1183	1.0071	70.42856	97.03	-0.1225	1.0076	65.66666		
95	101.52	-0.1997	1.0270	74.41934	101.77	-0.2040	1.0283	68.98082	102.01	-0.2080	1.0296	64.26923		
100	106.45	-0.2831	1.0477	72.95664	106.69	-0.2872	1.0498	67.57367	106.93	-0.2912	1.0519	62.91200		
105	111.32	-0.3636	1.0686	71.54467	111.56	-0.3675	1.0716	66.21636	111.79	-0.3713	1.0746	61.60381		
110	116.15	-0.4407	1.0896	70.19212	116.38	-0.4444	1.0935	64.91716	116.61	-0.4479	1.0973	60.35256		
115	120.93	-0.5140	1.1104	68.90675	121.16	-0.5174	1.1152	63.68341	121.37	-0.5206	1.1198	59.16519		
120	125.67	-0.5831	1.1308	67.69535	125.88	-0.5861	1.1365	62.52150	126.09	-0.5890	1.1420	58.04775		
125	130.36	-0.6476	1.1506	66.56383	130.56	-0.6503	1.1572	61.43698	130.76	-0.6529	1.1636	57.00543		
130	135.01	-0.7072	1.1696	65.51727	135.20	-0.7096	1.1771	60.43454	135.38	-0.7118	1.1843	56.04263		
135	139.62	-0.7618	1.1876	64.55997	139.80	-0.7638	1.1959	59.51818	139.97	-0.7657	1.2040	55.16303		
140	144.20	-0.8111	1.2044	63.69554	144.36	-0.8127	1.2135	58.69120	144.52	-0.8143	1.2224	54.36968		
145	148.75	-0.8549	1.2198	62.92697	148.89	-0.8562	1.2296	57.95631	149.03	-0.8574	1.2392	53.66503		
150	153.27	-0.8931	1.2336	62.25668	153.39	-0.8941	1.2440	57.31570	153.51	-0.8950	1.2543	53.05107		
155	157.76	-0.9256	1.2455	61.68663	157.87	-0.9263	1.2566	56.77112	157.97	-0.9270	1.2674	52.52934		
160	162.23	-0.9523	1.2556	61.21835	162.32	-0.9528	1.2671	56.32392	162.40	-0.9532	1.2784	52.10106		
165	166.69	-0.9731	1.2635	60.85302	166.75	-0.9734	1.2755	55.97512	166.82	-0.9736	1.2872	51.76711		
170	171.13	-0.9881	1.2693	60.59148	171.18	-0.9882	1.2815	55.72549	171.22	-0.9883	1.2935	51.52815		
175	175.57	-0.9970	1.2728	60.43433	175.59	-0.9970	1.2852	55.57551	175.61	-0.9971	1.2973	51.38461		
180	180.00	-1.0000	1.2739	60.38192	180.00	-1.0000	1.2864	55.52549	180.00	-1.0000	1.2986	51.33673		

x = 0.016					x = 0.017					x = 0.018				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7880	79.31139	0.00	1.0000	0.7826	75.16283	0.00	1.0000	0.7774	71.46268		
5	5.63	0.9952	0.7887	79.23507	5.65	0.9951	0.7833	75.08828	5.67	0.9951	0.7781	71.38974		
10	11.26	0.9808	0.7909	79.00711	11.30	0.9806	0.7855	74.86561	11.33	0.9805	0.7804	71.17191		
15	16.88	0.9569	0.7944	78.63047	16.93	0.9566	0.7892	74.49774	16.99	0.9564	0.7841	70.81207		
20	22.48	0.9240	0.7994	78.10998	22.56	0.9235	0.7942	73.98946	22.63	0.9230	0.7893	70.31495		
25	28.06	0.8824	0.8058	77.45228	28.16	0.8816	0.8008	73.34732	28.25	0.8809	0.7959	69.68705		
30	33.63	0.8327	0.8136	76.66565	33.74	0.8316	0.8087	72.57949	33.85	0.8305	0.8041	68.93642		
35	39.16	0.7754	0.8228	75.75981	39.29	0.7740	0.8182	71.69558	39.41	0.7726	0.8137	68.07256		
40	44.66	0.7112	0.8334	74.74577	44.81	0.7095	0.8290	70.70642	44.95	0.7078	0.8248	67.10617		
45	50.13	0.6410	0.8454	73.63552	50.29	0.6389	0.8413	69.62385	50.44	0.6368	0.8373	66.04894		
50	55.56	0.5655	0.8587	72.44189	55.73	0.5631	0.8549	68.46048	55.90	0.5607	0.8513	64.91327		
55	60.95	0.4856	0.8734	71.17820	61.13	0.4828	0.8700	67.22944	61.31	0.4801	0.8667	63.71211		
60	66.29	0.4021	0.8893	69.85811	66.48	0.3990	0.8863	65.94412	66.67	0.3960	0.8835	62.45863		
65	71.58	0.3159	0.9065	68.49533	71.79	0.3126	0.9039	64.61798	71.98	0.3093	0.9015	61.16604		
70	76.83	0.2279	0.9248	67.10342	77.04	0.2243	0.9228	63.26430	77.24	0.2208	0.9209	59.84736		
75	82.02	0.1389	0.9442	65.69559	82.24	0.1351	0.9428	61.89599	82.45	0.1315	0.9414	58.51523		
80	87.16	0.0496	0.9647	64.28453	87.38	0.0458	0.9638	60.52542	87.59	0.0420	0.9630	57.18175		
85	92.24	-0.0391	0.9860	62.88225	92.46	-0.0430	0.9858	59.16429	92.68	-0.0468	0.9857	55.85832		
90	97.27	-0.1265	1.0081	61.49999	97.49	-0.1304	1.0086	57.82352	97.71	-0.1342	1.0091	54.55555		
95	102.24	-0.2120	1.0308	60.14811	102.46	-0.2158	1.0321	56.51313	102.68	-0.2195	1.0333	53.28315		
100	107.16	-0.2950	1.0540	58.83606	107.38	-0.2987	1.0560	55.24223	107.59	-0.3022	1.0580	52.04995		
105	112.02	-0.3749	1.0775	57.57234	112.24	-0.3784	1.0803	54.01900	112.45	-0.3818	1.0830	50.86381		
110	116.83	-0.4513	1.1010	56.36447	117.04	-0.4546	1.1046	52.85065	117.24	-0.4578	1.1062	49.73165		
115	121.58	-0.5237	1.1244	55.21907	121.79	-0.5268	1.1289	51.74348	121.98	-0.5297	1.1332	48.65948		
120	126.29	-0.5919	1.1474	54.14187	126.48	-0.5946	1.1527	50.70292	126.67	-0.5972	1.1580	47.65247		
125	130.95	-0.6554	1.1699	53.13774	131.13	-0.6578	1.1760	49.73356	131.31	-0.6601	1.1820	46.71495		
130	135.56	-0.7140	1.1914	52.21080	135.73	-0.7161	1.1984	48.83926	135.90	-0.7181	1.2053	45.85053		
135	140.13	-0.7675	1.2119	51.36446	140.29	-0.7693	1.2197	48.02319	140.44	-0.7710	1.2273	45.06216		
140	144.66	-0.8158	1.2311	50.60152	144.81	-0.8172	1.2396	47.28792	144.95	-0.8186	1.2479	44.35222		
145	149.16	-0.8586	1.2486	49.92421	149.29	-0.8598	1.2578	46.63551	149.41	-0.8609	1.2669	43.72258		
150	153.63	-0.8959	1.2643	49.33434	153.74	-0.8968	1.2742	46.06756	153.85	-0.8976	1.2839	43.17468		
155	158.06	-0.9276	1.2780	48.83329	158.16	-0.9282	1.2881	45.58531	158.25					

x = 0.019										x = 0.020										x = 0.021									
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S									
0	0.00	1.0000	0.7724	68.14110	0.00	1.0000	0.7676	65.14214	0.00	1.0000	0.7629	62.42036	0	0.00	1.0000	0.7629	62.42036	0	0.00	1.0000	0.7629	62.42036							
5	5.69	0.9951	0.7731	68.06966	5.71	0.9950	0.7683	65.07206	5.72	0.9950	0.7637	62.35155	5	5.69	0.9951	0.7731	68.06966	5	5.69	0.9951	0.7731	68.06966							
10	11.37	0.9804	0.7754	67.85627	11.41	0.9802	0.7706	64.86278	11.44	0.9801	0.7660	62.14607	10	11.37	0.9804	0.7754	67.85627	10	11.37	0.9804	0.7754	67.85627							
15	17.04	0.9561	0.7792	67.50351	17.10	0.9558	0.7745	64.51713	17.15	0.9555	0.7699	61.80674	15	17.04	0.9561	0.7792	67.50351	15	17.04	0.9561	0.7792	67.50351							
20	22.70	0.9225	0.7845	67.01636	22.77	0.9220	0.7799	64.03975	22.84	0.9216	0.7754	61.33814	20	22.70	0.9225	0.7845	67.01636	20	22.70	0.9225	0.7845	67.01636							
25	28.34	0.8801	0.7913	66.40213	28.43	0.8794	0.7868	63.43700	28.51	0.8787	0.7824	60.74659	25	28.34	0.8801	0.7913	66.40213	25	28.34	0.8801	0.7913	66.40213							
30	33.95	0.8295	0.7996	65.50732	34.05	0.8285	0.7952	62.71673	34.16	0.8275	0.7910	60.03992	30	33.95	0.8295	0.7996	65.50732	30	33.95	0.8295	0.7996	65.50732							
35	39.53	0.7712	0.8094	64.82190	39.65	0.7699	0.8052	61.88840	39.77	0.7686	0.8012	59.27322	35	39.53	0.7712	0.8094	64.82190	35	39.53	0.7712	0.8094	64.82190							
40	45.08	0.7061	0.8207	63.87645	45.22	0.7044	0.8168	60.96229	45.34	0.7028	0.8130	58.31914	40	45.08	0.7061	0.8207	63.87645	40	45.08	0.7061	0.8207	63.87645							
45	50.59	0.6348	0.8335	62.84251	50.74	0.6329	0.8298	59.94987	50.88	0.6309	0.8263	57.32667	45	50.59	0.6348	0.8335	62.84251	45	50.59	0.6348	0.8335	62.84251							
50	56.06	0.5583	0.8478	61.73233	56.22	0.5560	0.8444	58.86323	56.37	0.5538	0.8412	56.26188	50	56.06	0.5583	0.8478	61.73233	50	56.06	0.5583	0.8478	61.73233							
55	61.48	0.4774	0.8635	60.53965	61.65	0.4748	0.8605	57.71496	61.82	0.4723	0.8575	55.13716	55	61.48	0.4774	0.8635	60.53965	55	61.48	0.4774	0.8635	60.53965							
60	66.86	0.3930	0.8807	59.33446	67.03	0.3902	0.8780	56.51783	67.21	0.3874	0.8754	53.96514	60	66.86	0.3930	0.8807	59.33446	60	66.86	0.3930	0.8807	59.33446							
65	72.18	0.3061	0.8992	58.07274	72.36	0.3030	0.8970	55.28463	72.55	0.2999	0.8948	52.75842	65	72.18	0.3061	0.8992	58.07274	65	72.18	0.3061	0.8992	58.07274							
70	77.44	0.2174	0.9190	56.78627	77.64	0.2141	0.9172	54.02794	77.83	0.2109	0.9155	51.52935	70	77.44	0.2174	0.9190	56.78627	70	77.44	0.2174	0.9190	56.78627							
75	82.65	0.1279	0.9401	55.48745	82.85	0.1244	0.9388	52.75991	83.05	0.1211	0.9376	50.28989	75	82.65	0.1279	0.9401	55.48745	75	82.65	0.1279	0.9401	55.48745							
80	87.80	0.0384	0.9623	54.18811	88.01	0.0348	0.9616	51.49212	88.20	0.0312	0.9600	49.05139	80	87.80	0.0384	0.9623	54.18811	80	87.80	0.0384	0.9623	54.18811							
85	92.92	-0.0505	0.9855	52.89937	93.10	-0.0541	0.9854	50.23346	93.30	-0.0576	0.9853	47.82449	85	92.92	-0.0505	0.9855	52.89937	85	92.92	-0.0505	0.9855	52.89937							
90	97.92	-0.1378	1.0096	51.63157	98.13	-0.1414	1.0102	48.99999	98.33	-0.1449	1.0107	46.61904	90	97.92	-0.1378	1.0096	51.63157	90	97.92	-0.1378	1.0096	51.63157							
95	102.89	-0.2231	1.0345	50.39415	103.10	-0.2266	1.0357	47.79491	103.30	-0.2301	1.0369	45.44397	95	102.89	-0.2231	1.0345	50.39415	95	102.89	-0.2231	1.0345	50.39415							
100	107.80	-0.3057	1.0599	49.15265	108.01	-0.3091	1.0619	46.62848	108.20	-0.3124	1.0637	44.30730	100	107.80	-0.3057	1.0599	49.15265	100	107.80	-0.3057	1.0599	49.15265							
105	112.65	-0.3851	1.0857	48.04364	112.85	-0.3883	1.0884	45.50802	113.05	-0.3915	1.0910	43.21614	105	112.65	-0.3851	1.0857	48.04364	105	112.65	-0.3851	1.0857	48.04364							
110	117.44	-0.4609	1.1117	46.94478	117.64	-0.4639	1.1151	44.43995	117.83	-0.4668	1.1185	42.17664	110	117.44	-0.4609	1.1117	46.94478	110	117.44	-0.4609	1.1117	46.94478							
115	122.18	-0.5325	1.1376	45.90483	122.36	-0.5353	1.1418	43.42977	122.55	-0.5380	1.1460	41.19409	115	122.18	-0.5325	1.1376	45.90483	115	122.18	-0.5325	1.1376	45.90483							
120	126.86	-0.5998	1.1631	44.92888	127.03	-0.6023	1.1681	42.46216	127.21	-0.6047	1.1731	40.27294	120	126.86	-0.5998	1.1631	44.92888	120	126.86	-0.5998	1.1631	44.92888							
125	131.48	-0.6624	1.1890	44.02045	131.65	-0.6646	1.1938	41.60099	131.82	-0.6668	1.1995	39.41688	125	131.48	-0.6624	1.1890	44.02045	125	131.48	-0.6624	1.1890	44.02045							
130	136.06	-0.7201	1.2120	43.18352	136.22	-0.7220	1.2186	40.78946	136.37	-0.7239	1.2251	38.28381	130	136.06	-0.7201	1.2120	43.18352	130	136.06	-0.7201	1.2120	43.18352							
135	140.59	-0.7727	1.2348	42.42054	140.74	-0.7743	1.2422	40.05012	140.88	-0.7758	1.2494	37.31141	135	140.59	-0.7727	1.2348	42.42054	135	140.59	-0.7727	1.2348	42.42054							
140	145.08	-0.8200	1.2562	41.73399	145.22	-0.8213	1.2643	39.38499	145.34	-0.8226	1.2723	37.26624	140	145.08	-0.8200	1.2562	41.73399	140	145.08	-0.8200	1.2562	41.73399							
145	149.53	-0.8619	1.2758	41.12529	149.65	-0.8630	1.2846	38.75663	149.77	-0.8640	1.2932	36.69481	145	149.53	-0.8619	1.2758	41.12529	145	149.53	-0.8619	1.2758	41.12529							
150	153.95	-0.8984	1.2934	40.59583	154.05	-0.8992	1.3028	38.29320	154.16	-0.9000	1.3121	36.19817	150	153.95	-0.8984	1.2934	40.59583	150	153.95	-0.8984	1.2934	40.59583							
155	158.34	-0.9294	1.3084	40.14660	158.43	-0.9299	1.3187	37.84857	158.51	-0.9305	1.3285	35.77707	155	158.34	-0.9294	1.3084	40.14660	155	158.34	-0.9294	1.3084	40.14660							
160	162.70	-0.9548	1.3217	39.77829	162.77	-0.9551	1.3302	37.43933	162.84	-0.9555	1.3423	35.43204	160	162.70	-0.9548	1.3217	39.77829	160	162.70	-0.9548	1.3217	39.77829							
165	167.04	-0.9745	1.3319	39.49140	167.10	-0.9748	1.3426	37.21492	167.15	-0.9750	1.3533	35.16341	165	167.04	-0.9745	1.3319	39.49140	165	167.04	-0.9745	1.3319	39.49140							
170	171.37	-0.9887	1.3393	39.28627	171.41	-0.9888	1.3503	37.01661	171.44	-0.9889	1.3612	34.97140	170	171.37	-0.9887	1.3393	39.28627	170	171.37	-0.9887	1.3393	39.28627							
175	175.69	-0.9972	1.3438	39.16312	175.71	-0.9972	1.3550	36.83756	175.72	-0.9972	1.3660	34.85616	175	175.69	-0.9972	1.3438	39.16312	175	175.69	-0.9972	1.3438	39.16312							
180	180.00	-1.0000	1.3453	39.12205	180.00	-1.0000	1.3566	36.85786	180.00	-1.0000	1.3677	34.81774	180	180.00	-1.0000	1.3453	39.12205	180	180.00	-1.0000	1.3453	39.12205							

x = 0.022										x = 0.023										x = 0.024									
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S									
0	0.00	1.0000	0.7584	59.93854	0.00	1.0000	0.7540	57.66587	0.00	1.0000	0.7497	55.57661	0	0.00	1.0000	0.7584	59.93854	0	0.00	1.0000	0.7584	59.93854							
5	5.74	0.9950	0.7591	59.87092	5.76	0.9950	0.7548	57.59935	5.77	0.9949	0.7505	55.51112	5	5.74	0.9950	0.7591	59.87092	5	5.74	0.9950	0.7591	59.87092							
10	11.48	0.9800	0.7615	59.66898	11.51	0.9799	0.7572	57.40071	11.54	0.9798	0.7530	55.31557	10	11.48	0.9800	0.7615	59.66898	10	11.48	0.9800	0.7615	59.66898							
15	17.20	0.95555																											

x = 0.025					x = 0.026					x = 0.027				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7456	53.64911	0.00	1.0000	0.7416	51.86501	0.00	1.0000	0.7377	50.20865		
5	5.79	0.9949	0.7464	53.58459	5.81	0.9949	0.7424	51.80140	5.82	0.9948	0.7385	50.14590		
10	11.57	0.9797	0.7489	53.39194	11.60	0.9796	0.7449	51.61148	11.64	0.9795	0.7411	49.95855		
15	17.35	0.9545	0.7530	53.07389	17.39	0.9543	0.7491	51.29795	17.44	0.9540	0.7453	49.64930		
20	23.10	0.9198	0.7588	52.63493	23.16	0.9194	0.7550	50.86530	23.22	0.9190	0.7513	49.22258		
25	28.83	0.8760	0.7663	52.08115	28.91	0.8754	0.7626	50.31956	28.98	0.8748	0.7589	48.68442		
30	34.53	0.8238	0.7755	51.42016	34.62	0.8229	0.7718	49.66829	34.71	0.8220	0.7683	48.04232		
35	40.20	0.7638	0.7863	50.66086	40.31	0.7626	0.7828	48.92034	40.41	0.7614	0.7795	47.30507		
40	45.83	0.6967	0.7988	49.81325	45.95	0.6953	0.7955	48.08562	46.06	0.6939	0.7923	46.48252		
45	51.42	0.6236	0.8131	48.88819	51.55	0.6219	0.8100	47.17492	51.67	0.6202	0.8070	45.58537		
50	56.96	0.5453	0.8290	47.89718	57.10	0.5432	0.8261	46.19963	57.23	0.5413	0.8234	44.62492		
55	62.44	0.4626	0.8466	46.85209	62.59	0.4604	0.8440	45.17152	62.74	0.4581	0.8415	43.61283		
60	67.87	0.3767	0.8658	45.76498	68.03	0.3742	0.8635	44.10250	68.18	0.3717	0.8614	42.56090		
65	73.24	0.2884	0.8867	44.64778	73.40	0.2856	0.8848	43.00440	73.56	0.2829	0.8829	41.48083		
70	78.54	0.1986	0.9091	43.51218	78.72	0.1957	0.9076	41.88874	78.88	0.1928	0.9061	40.38400		
75	83.78	0.1083	0.9330	42.36939	83.96	0.1052	0.9319	40.76658	84.13	0.1022	0.9309	39.28132		
80	88.96	0.0182	0.9583	41.23000	89.14	0.0151	0.9578	39.64835	89.31	0.0120	0.9572	38.18306		
85	94.06	-0.0708	0.9850	40.10386	94.24	-0.0740	0.9849	38.54372	94.42	-0.0771	0.9849	37.09874		
90	99.10	-0.1581	1.0127	38.99999	99.28	-0.1612	1.0133	37.46153	99.46	-0.1643	1.0138	36.03703		
95	104.06	-0.2430	1.0415	37.92650	104.24	-0.2460	1.0426	36.40973	104.42	-0.2490	1.0438	35.00570		
100	108.96	-0.3249	1.0711	36.89060	109.14	-0.3278	1.0728	35.39533	109.31	-0.3307	1.0746	34.01161		
105	113.78	-0.4033	1.1012	35.89854	113.96	-0.4061	1.1036	34.42443	114.13	-0.4088	1.1061	33.06069		
110	118.54	-0.4778	1.1316	34.95571	118.72	-0.4805	1.1348	33.50223	118.88	-0.4830	1.1379	32.15797		
115	123.24	-0.5481	1.1621	34.06663	123.40	-0.5505	1.1660	32.63308	123.56	-0.5529	1.1698	31.30766		
120	127.87	-0.6139	1.1922	33.23501	128.03	-0.6160	1.1969	31.82056	128.18	-0.6181	1.2015	30.51316		
125	132.44	-0.6748	1.2218	32.46385	132.59	-0.6767	1.2272	31.06750	132.74	-0.6786	1.2325	29.77719		
130	136.96	-0.7308	1.2503	31.75551	137.10	-0.7325	1.2555	30.37614	137.23	-0.7341	1.2625	29.10185		
135	141.42	-0.7817	1.2776	31.11180	141.55	-0.7831	1.2845	29.74815	141.67	-0.7845	1.2913	28.48869		
140	145.83	-0.8274	1.3032	30.53404	145.95	-0.8285	1.3108	29.18474	146.06	-0.8297	1.3182	27.93884		
145	150.20	-0.8678	1.3268	30.02317	150.31	-0.8687	1.3350	28.68677	150.41	-0.8696	1.3431	27.45303		
150	154.53	-0.9028	1.3480	29.57983	154.62	-0.9035	1.3568	28.25478	154.71	-0.9042	1.3655	27.03174		
155	158.83	-0.9325	1.3666	29.20442	158.91	-0.9330	1.3759	27.88909	158.98	-0.9335	1.3851	26.67522		
160	163.10	-0.9568	1.3822	28.89716	163.16	-0.9571	1.3919	27.58986	163.22	-0.9574	1.4016	26.38358		
165	167.35	-0.9757	1.3946	28.65815	167.39	-0.9759	1.4047	27.35716	167.44	-0.9761	1.4147	26.15682		
170	171.57	-0.9892	1.4036	28.48744	171.60	-0.9893	1.4139	27.19098	171.64	-0.9894	1.4242	25.99491		
175	175.79	-0.9973	1.4091	28.38503	175.81	-0.9973	1.4196	27.09129	175.82	-0.9973	1.4300	25.89779		
180	180.00	-1.0000	1.4109	28.35089	180.00	-1.0000	1.4214	27.05806	180.00	-1.0000	1.4319	25.86542		

x = 0.028					x = 0.029					x = 0.030				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7339	48.66657	0.00	1.0000	0.7301	47.22716	0.00	1.0000	0.7265	45.88034		
5	5.84	0.9948	0.7347	48.60463	5.85	0.9948	0.7310	47.16599	5.86	0.9948	0.7274	45.81990		
10	11.67	0.9793	0.7373	48.41971	11.69	0.9792	0.7336	46.98337	11.72	0.9791	0.7300	45.63946		
15	17.48	0.9538	0.7416	48.11450	17.53	0.9536	0.7380	46.68198	17.57	0.9534	0.7344	45.34170		
20	23.28	0.9186	0.7476	47.69340	23.34	0.9182	0.7440	46.26620	23.40	0.9178	0.7406	44.93056		
25	29.06	0.8742	0.7554	47.16240	29.13	0.8735	0.7519	45.74199	29.20	0.8729	0.7485	44.41319		
30	34.80	0.8212	0.7649	46.52898	34.88	0.8203	0.7615	45.11677	34.97	0.8195	0.7582	43.79576		
35	40.51	0.7603	0.7762	45.80184	40.61	0.7592	0.7729	44.39923	40.70	0.7581	0.7698	43.08731		
40	46.17	0.6925	0.7892	44.99080	46.28	0.6911	0.7862	43.59908	46.39	0.6897	0.7832	42.29751		
45	51.80	0.6185	0.8040	44.10646	51.92	0.6168	0.8012	42.72688	52.03	0.6152	0.7984	41.43683		
50	57.36	0.5393	0.8207	43.16004	57.50	0.5374	0.8180	41.79375	57.62	0.5355	0.8154	40.51633		
55	62.88	0.4559	0.8391	42.16310	63.02	0.4537	0.8367	40.81118	63.16	0.4516	0.8343	39.54740		
60	68.33	0.3692	0.8592	41.12734	68.48	0.3668	0.8571	39.79074	68.63	0.3644	0.8551	38.54151		
65	73.72	0.2803	0.8811	40.06432	73.88	0.2777	0.8794	38.74389	74.03	0.2751	0.8776	37.51001		
70	79.05	0.1900	0.9047	38.98530	79.21	0.1872	0.9033	37.68177	79.37	0.1845	0.9020	36.46393		
75	84.30	0.0993	0.9299	37.90106	84.47	0.0964	0.9289	36.61500	84.63	0.0936	0.9280	35.41376		
80	89.49	0.0090	0.9567	36.82170	89.65	0.0060	0.9561	35.55357	89.82	0.0031	0.9556	34.36935		
85	94.60	-0.0801	0.9848	35.75661	94.77	-0.0831	0.9848	34.50670	94.94	-0.0860	0.9848	33.33981		
90	99.63	-0.1673	1.0143	34.71428	99.80	-0.1703	1.0148	33.48275	99.97	-0.1732	1.0153	32.33333		
95	104.60	-0.2520	1.0449	33.70233	104.77	-0.2549	1.0460	32.48919	104.94	-0.2577	1.0471	31.35722		
100	109.49	-0.3336	1.0763	32.72747	109.65	-0.3363	1.0781	31.53255	109.82	-0.3391	1.0798	30.41790		
105	114.30	-0.4115	1.1085	31.79545	114.47	-0.4142	1.1109	30.61845	114.63	-0.4168	1.1132	29.52084		
110	119.05	-0.4855	1.1410	30.91116	119.21	-0.4880	1.1441	29.75165	119.37	-0.4904	1.1471	28.67063		
115	123.72	-0.5552	1.1736	30.07866	123.88	-0.5574	1.1774	28.93603	124.03	-0.5596	1.1812	27.87106		
120	128.33	-0.6202	1.2060	29.30122	128.48	-0.6223	1.2105	28.17476	128.63	-0.6242	1.2150	27.12514		
125	132.88	-0.6804	1.2378	28.58142	133.02	-0.6822	1.2430	27.47028	133.16	-0.6840	1.2482	26.43522		
130	137.36	-0.7357	1.2686	27.92123	137.50	-0.7372	1.2745	26.82446	137.62	-0.7387	1.2804	25.80303		
135	141.80	-0.7858	1.2980	27.32211	141.92	-0.7871	1.3046	26.23863	142.03	-0.7884	1.3112	25.22983		
140	146.17	-0.8307	1.3256	26.78506	146.28	-0.8318	1.3330	25.71373	146.39	-0.8328	1.3402	24.71645		
145	150.51	-0.8704	1.3511	26.31076	150.61	-0.8713	1.3591	25.25032	150.70	-0.8721	1.3670	24.26339		
150	154.80	-0.9048	1.3741	25.89959	154.88	-0.9055	1.3827	24.84874	154.97	-0.9061	1.3912	23.87090		
155	159.06	-0.9339	1.3942	25.55174	159.13	-0.9344	1.4033	24.50910	159.20					

x = 0.031					x = 0.032					x = 0.033				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7230	44.61730	0.00	1.0000	0.7195	43.43034	0.00	1.0000	0.7162	42.31267		
5	5.98	0.9947	0.7239	44.55755	5.89	0.9947	0.7204	43.37125	5.91	0.9947	0.7171	42.25421		
10	11.75	0.9790	0.7265	44.37919	11.78	0.9789	0.7231	43.19486	11.81	0.9788	0.7198	42.07970		
15	17.61	0.9531	0.7310	44.08487	17.65	0.9529	0.7276	42.90382	17.69	0.9527	0.7243	41.79179		
20	23.45	0.9174	0.7372	43.67893	23.51	0.9170	0.7339	42.50244	23.56	0.9166	0.7306	41.39476		
25	29.27	0.8723	0.7452	43.16728	29.34	0.8718	0.7420	41.99662	29.40	0.8712	0.7388	40.89449		
30	35.05	0.8186	0.7550	42.55726	35.13	0.8178	0.7519	41.39365	35.21	0.8170	0.7489	40.29824		
35	40.80	0.7570	0.7667	41.85745	40.89	0.7560	0.7637	40.70208	40.98	0.7549	0.7468	39.61453		
40	46.50	0.6884	0.7803	41.07748	46.60	0.6871	0.7774	39.93147	46.71	0.6857	0.7746	38.85285		
45	52.15	0.6136	0.7956	40.22776	52.27	0.6120	0.7930	39.09219	52.38	0.6104	0.7904	38.02352		
50	57.75	0.5336	0.8129	39.31927	57.88	0.5317	0.8104	38.19514	58.00	0.5299	0.8080	37.13738		
55	63.29	0.4494	0.8321	38.36331	63.43	0.4474	0.8298	37.25153	63.56	0.4453	0.8277	36.20557		
60	68.77	0.3621	0.8531	37.37126	68.91	0.3598	0.8511	36.27268	69.05	0.3575	0.8492	35.23930		
65	74.18	0.2726	0.8760	36.35438	74.33	0.2701	0.8743	35.26971	74.48	0.2676	0.8727	34.24962		
70	79.52	0.1818	0.9006	35.32356	79.68	0.1792	0.8993	34.25344	79.83	0.1766	0.8981	33.24723		
75	84.79	0.0908	0.9271	34.28313	84.95	0.0880	0.9262	33.23413	85.11	0.0853	0.9253	32.24229		
80	89.99	0.0003	0.9552	33.26100	90.15	-0.0026	0.9547	32.22138	90.31	-0.0053	0.9542	31.24429		
85	95.10	-0.0889	0.9848	32.24792	95.27	-0.0918	0.9848	31.22402	95.43	-0.0946	0.9848	30.26193		
90	100.14	-0.1761	1.0159	31.25006	100.30	-0.1789	1.0164	30.24999	100.47	-0.1817	1.0169	29.30302		
95	105.10	-0.2605	1.0482	30.29857	105.27	-0.2633	1.0493	29.30635	105.43	-0.2660	1.0503	28.37451		
100	109.99	-0.3416	1.0815	29.37573	110.15	-0.3444	1.0832	28.39922	110.31	-0.3470	1.0848	27.48237		
105	114.79	-0.4193	1.1156	28.49497	114.95	-0.4218	1.1179	27.53381	115.11	-0.4243	1.1202	26.63170		
110	119.52	-0.4928	1.1501	27.66047	119.68	-0.4951	1.1531	26.71446	119.83	-0.4974	1.1561	25.82673		
115	124.18	-0.5618	1.1849	26.87616	124.33	-0.5640	1.1885	25.94470	124.48	-0.5661	1.1922	25.07086		
120	128.77	-0.6262	1.2194	26.14485	128.91	-0.6281	1.2238	25.22731	129.05	-0.6300	1.2281	24.36675		
125	133.29	-0.6857	1.2533	25.46577	133.43	-0.6874	1.2584	24.56442	133.56	-0.6891	1.2635	23.71644		
130	137.75	-0.7402	1.2863	24.84955	137.88	-0.7417	1.2921	23.95756	138.00	-0.7431	1.2979	23.12137		
135	142.15	-0.7896	1.3178	24.28838	142.27	-0.7909	1.3243	23.40780	142.38	-0.7921	1.3308	22.58253		
140	146.50	-0.8339	1.3475	23.78593	146.60	-0.8349	1.3546	22.91581	146.71	-0.8359	1.3618	22.10050		
145	150.80	-0.8729	1.3749	23.34271	150.89	-0.8737	1.3827	22.48195	150.98	-0.8745	1.3904	21.67557		
150	155.05	-0.9067	1.3996	22.95887	155.13	-0.9073	1.4080	22.10634	155.21	-0.9079	1.4163	21.30781		
155	159.27	-0.9352	1.4212	22.63442	159.34	-0.9357	1.4301	21.78895	159.40	-0.9361	1.4389	20.99714		
160	163.45	-0.9586	1.4395	22.36329	163.51	-0.9589	1.4488	21.52964	163.56	-0.9591	1.4580	20.74338		
165	167.61	-0.9767	1.4540	22.16331	167.65	-0.9769	1.4636	21.32822	167.69	-0.9770	1.4732	20.54632		
170	171.75	-0.9897	1.4645	22.01632	171.78	-0.9897	1.4744	21.18452	171.81	-0.9898	1.4843	20.40574		
175	175.88	-0.9974	1.4709	21.82519	175.89	-0.9974	1.4810	21.09837	175.91	-0.9974	1.4910	20.32147		
180	180.00	-1.0000	1.4730	21.59853	180.00	-1.0000	1.4832	21.06966	180.00	-1.0000	1.4932	20.29339		

x = 0.034					x = 0.035					x = 0.036				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7129	41.25829	0.00	1.0000	0.7096	40.26188	0.00	1.0000	0.7065	39.31870		
5	5.92	0.9947	0.7138	41.20043	5.93	0.9946	0.7106	40.20459	5.95	0.9946	0.7074	39.26196		
10	11.83	0.9787	0.7165	41.02772	11.86	0.9786	0.7133	40.03360	11.89	0.9786	0.7102	39.09262		
15	17.74	0.9525	0.7211	40.74275	17.78	0.9523	0.7179	39.75152	17.81	0.9521	0.7148	38.81327		
20	23.62	0.9163	0.7275	40.34992	23.67	0.9159	0.7244	39.36262	23.72	0.9155	0.7213	38.42817		
25	29.47	0.8706	0.7357	39.85495	29.53	0.8701	0.7327	38.87272	29.60	0.8695	0.7297	37.94312		
30	35.29	0.8162	0.7459	39.26512	35.37	0.8155	0.7429	38.28903	35.44	0.8147	0.7401	37.36531		
35	41.07	0.7539	0.7579	38.58890	41.16	0.7529	0.7551	37.61999	41.25	0.7519	0.7523	36.70313		
40	46.81	0.6845	0.7719	37.83576	46.91	0.6832	0.7692	36.87500	47.01	0.6819	0.7666	35.96596		
45	52.49	0.6089	0.7878	37.01594	52.60	0.6074	0.7853	36.06428	52.71	0.6058	0.7828	35.16395		
50	58.12	0.5281	0.8057	36.14022	58.24	0.5264	0.8033	35.19853	58.36	0.5246	0.8011	34.30775		
55	63.69	0.4433	0.8255	35.21967	63.82	0.4413	0.8234	34.26876	63.94	0.4393	0.8214	33.40831		
60	69.19	0.3553	0.8473	34.26543	69.32	0.3531	0.8455	33.34603	69.46	0.3509	0.8437	32.47660		
65	74.62	0.2652	0.8711	33.28845	74.76	0.2628	0.8696	32.38120	74.90	0.2605	0.8681	31.52341		
70	79.98	0.1740	0.8968	32.29933	80.13	0.1715	0.8956	31.40478	80.27	0.1690	0.8944	30.55917		
75	85.26	0.0826	0.9244	31.30813	85.41	0.0800	0.9236	30.42674	85.56	0.0774	0.9227	29.59373		
80	90.46	-0.0081	0.9538	30.32423	90.62	-0.0108	0.9534	29.45633	90.77	-0.0134	0.9529	28.63625		
85	95.58	-0.0973	0.9848	29.35620	95.74	-0.1000	0.9849	28.50202	95.90	-0.1027	0.9849	27.69511		
90	100.63	-0.1844	1.0174	28.41176	100.78	-0.1871	1.0180	27.57142	100.94	-0.1897	1.0185	26.77777		
95	105.58	-0.2687	1.0514	27.49770	105.74	-0.2713	1.0525	26.67120	105.90	-0.2739	1.0535	25.89082		
100	110.46	-0.3496	1.0865	26.61990	110.62	-0.3521	1.0882	25.80713	110.77	-0.3546	1.0898	25.03990		
105	115.26	-0.4267	1.1225	25.78333	115.41	-0.4291	1.1248	24.98406	115.56	-0.4315	1.1270	24.22976		
110	119.98	-0.4997	1.1590	24.99210	120.13	-0.5019	1.1620	24.20597	120.27	-0.5041	1.1649	23.46428		
115	124.62	-0.5681	1.1958	24.24949	124.76	-0.5702	1.1994	23.47607	124.90	-0.5722	1.2030	22.74655		
120	129.19	-0.6319	1.2325	23.55809	129.32	-0.6337	1.2367	22.79682	129.46	-0.6355	1.2410	22.07895		
125	133.69	-0.6907	1.2685	22.91981	133.82	-0.6923	1.2735	22.17004	133.94	-0.6939	1.2785	21.46320		
130	138.12	-0.7445	1.3036	22.33600	138.24	-0.7459	1.3093	21.59702	138.36	-0.7473	1.3149	20.90050		
135	142.49	-0.7933	1.3372	21.80758	142.60	-0.7944	1.3436	21.07857	142.71	-0.7956	1.3499	20.39160		
140	146.81	-0.8368	1.3688	21.33056	146.91	-0.8378	1.3759	20.61514	147.01	-0.8387	1.3829	19.93698		
145	151.07	-0.8752	1.3981	20.91866	151.16	-0.8760	1.4058	20.20690	151.25	-0.8767	1.4134	19.53646		
150	155.29	-0.9084	1.4246	20.55840	155.37	-0.9090	1.4328	19.85382	155.44	-0.9096	1.4410	19.19024		
155	159.47	-0.9365	1.4477	20.25415	159.53	-0.9369	1.4565	19.55571	15					

x = 0.037					x = 0.038					x = 0.039				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.7034	38.42453	0.00	1.0000	0.7003	37.57557	0.00	1.0000	0.6974	36.76842		
5	5.96	0.9946	0.7043	38.36832	5.97	0.9946	0.7013	37.51986	5.99	0.9945	0.6983	36.71319		
10	11.91	0.9785	0.7071	38.20055	11.94	0.9784	0.7041	37.35361	11.97	0.9783	0.7012	36.54839		
15	17.85	0.9518	0.7118	37.92382	17.89	0.9516	0.7088	37.07938	17.93	0.9514	0.7059	36.27658		
20	23.77	0.9152	0.7183	37.54236	23.82	0.9148	0.7154	36.70142	23.87	0.9144	0.7126	35.90197		
25	29.66	0.8690	0.7268	37.06196	29.73	0.8684	0.7240	36.22549	29.79	0.8679	0.7212	35.43032		
30	35.52	0.8139	0.7372	36.48979	35.59	0.8132	0.7345	35.55872	35.67	0.8124	0.7318	34.86874		
35	41.33	0.7509	0.7496	35.83419	41.42	0.7499	0.7470	35.00943	41.50	0.7489	0.7444	34.22553		
40	47.10	0.6807	0.7640	35.10451	47.20	0.6795	0.7615	34.28694	47.29	0.6783	0.7590	33.50995		
45	52.82	0.6044	0.7804	34.31085	52.92	0.6029	0.7780	33.50130	53.03	0.6014	0.7757	32.73201		
50	58.47	0.5229	0.7988	33.46381	58.59	0.5212	0.7966	32.65305	58.70	0.5195	0.7945	31.90221		
55	64.07	0.4373	0.8193	32.57427	64.19	0.4354	0.8174	31.78302	64.31	0.4335	0.8154	31.03132		
60	69.59	0.3487	0.8419	31.65313	69.72	0.3466	0.8402	30.87205	69.85	0.3445	0.8385	30.13011		
65	75.04	0.2581	0.8666	30.71112	75.18	0.2559	0.8651	29.94076	75.31	0.2536	0.8637	29.20914		
70	80.41	0.1665	0.8933	29.75856	80.56	0.1641	0.8921	28.99942	80.69	0.1617	0.8910	28.27858		
75	85.71	0.0748	0.9219	28.80521	85.85	0.0723	0.9211	28.05769	86.00	0.0698	0.9204	27.34803		
80	90.92	-0.0160	0.9525	27.86015	91.07	-0.0186	0.9521	27.12455	91.21	-0.0212	0.9518	26.42635		
85	96.05	-0.1054	0.9849	26.93162	96.20	-0.1080	0.9850	26.20815	96.35	-0.1105	0.9850	25.52162		
90	101.09	-0.1924	1.0190	26.02702	101.24	-0.1949	1.0196	25.31578	101.39	-0.1975	1.0201	24.64102		
95	106.05	-0.2764	1.0546	25.15280	106.20	-0.2790	1.0557	24.45380	106.35	-0.2814	1.0567	23.79080		
100	110.92	-0.3571	1.0914	24.31451	111.07	-0.3595	1.0931	23.62763	111.21	-0.3619	1.0947	22.97630		
105	115.71	-0.4338	1.1293	23.51678	115.85	-0.4361	1.1315	22.84183	116.00	-0.4383	1.1337	22.20196		
110	120.41	-0.5062	1.1677	22.76339	120.56	-0.5084	1.1706	22.10006	120.69	-0.5105	1.1735	21.47137		
115	125.04	-0.5741	1.2065	22.05735	125.18	-0.5761	1.2101	21.40523	125.31	-0.5780	1.2136	20.78732		
120	129.59	-0.6373	1.2452	21.40091	129.72	-0.6390	1.2495	20.75952	129.85	-0.6407	1.2536	20.15193		
125	134.07	-0.6955	1.2834	20.79573	134.19	-0.6970	1.2883	20.16450	134.31	-0.6985	1.2932	19.56668		
130	138.47	-0.7486	1.3206	20.24294	138.59	-0.7500	1.3262	19.62122	138.70	-0.7513	1.3317	19.03253		
135	142.82	-0.7967	1.3562	19.74320	142.92	-0.7978	1.3625	19.13027	143.03	-0.7989	1.3687	18.55004		
140	147.10	-0.8396	1.3898	19.29684	147.20	-0.8405	1.3968	18.69193	147.29	-0.8414	1.4037	18.11940		
145	151.33	-0.8774	1.4210	18.90390	151.42	-0.8781	1.4285	18.30618	151.50	-0.8789	1.4360	17.74056		
150	155.52	-0.9101	1.4491	18.56426	155.59	-0.9106	1.4572	17.97286	155.67	-0.9112	1.4653	17.41330		
155	159.66	-0.9377	1.4738	18.27766	159.73	-0.9380	1.4824	17.63166	159.79	-0.9384	1.4910	17.13730		
160	163.77	-0.9602	1.4946	18.04378	163.82	-0.9604	1.5037	17.46224	163.87	-0.9606	1.5127	16.91216		
165	167.85	-0.9776	1.5112	17.86229	167.89	-0.9778	1.5206	17.28424	167.93	-0.9779	1.5299	16.73752		
170	171.91	-0.9901	1.5233	17.73289	171.94	-0.9901	1.5329	17.15736	171.97	-0.9902	1.5425	16.61305		
175	175.96	-0.9975	1.5306	17.65535	175.97	-0.9975	1.5404	17.08133	175.99	-0.9975	1.5502	16.53847		
180	180.00	-1.0000	1.5331	17.62952	180.00	-1.0000	1.5429	17.05601	180.00	-1.0000	1.5527	16.51363		

x = 0.040					x = 0.041					x = 0.042				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6944	36.00000	0.00	1.0000	0.6916	35.26754	0.00	1.0000	0.6888	34.56852		
5	6.00	0.9945	0.6954	35.94524	6.01	0.9945	0.6925	35.21323	6.02	0.9945	0.6897	34.51465		
10	11.99	0.9782	0.6983	35.78183	12.01	0.9781	0.6954	35.05116	12.04	0.9780	0.6926	34.35387		
15	17.97	0.9512	0.7030	35.51233	18.00	0.9510	0.7002	34.78389	18.04	0.9508	0.6975	34.08875		
20	23.92	0.9141	0.7098	35.14096	23.97	0.9138	0.7070	34.41563	24.02	0.9134	0.7043	33.72347		
25	29.85	0.8673	0.7184	34.67343	29.91	0.8668	0.7157	33.95206	29.97	0.8663	0.7131	33.26373		
30	35.74	0.8117	0.7291	34.11684	35.81	0.8110	0.7265	33.40028	35.88	0.8102	0.7239	32.57658		
35	41.59	0.7479	0.7418	33.47946	41.67	0.7470	0.7393	32.76852	41.75	0.7461	0.7368	32.09023		
40	47.39	0.6771	0.7566	32.77052	47.48	0.6759	0.7542	32.06597	47.57	0.6747	0.7518	31.39385		
45	53.13	0.6000	0.7734	32.00000	53.23	0.5986	0.7711	31.30258	53.33	0.5972	0.7689	30.63734		
50	58.81	0.5178	0.7924	31.17834	58.92	0.5162	0.7903	30.48875	59.03	0.5146	0.7882	29.83105		
55	64.43	0.4316	0.8135	30.31624	64.55	0.4298	0.8116	29.65513	64.66	0.4279	0.8098	28.98559		
60	69.97	0.3424	0.8368	29.42442	70.10	0.3404	0.8351	28.75236	70.22	0.3384	0.8335	28.11155		
65	75.44	0.2513	0.8623	28.51338	75.57	0.2491	0.8609	27.85089	75.70	0.2469	0.8595	27.21930		
70	80.83	0.1593	0.8899	27.59321	80.97	0.1570	0.8888	26.94071	81.10	0.1547	0.8877	26.31877		
75	86.14	0.0673	0.9195	26.67340	86.28	0.0649	0.9189	26.03127	86.42	0.0625	0.9181	25.41932		
80	91.36	-0.0237	0.9514	25.76277	91.50	-0.0262	0.9510	25.13127	91.64	-0.0287	0.9507	24.52958		
85	96.49	-0.1131	0.9851	24.86927	96.64	-0.1156	0.9852	24.24860	96.78	-0.1181	0.9852	23.65735		
90	101.54	-0.2000	1.0206	23.99999	101.68	-0.2025	1.0212	23.39024	101.83	-0.2049	1.0217	22.80952		
95	106.49	-0.2839	1.0578	23.16110	106.64	-0.2863	1.0588	22.56226	106.78	-0.2887	1.0598	21.93207		
100	111.36	-0.3642	1.0963	22.35783	111.50	-0.3665	1.0979	21.76982	111.64	-0.3688	1.0995	21.21006		
105	116.14	-0.4405	1.1359	21.59453	116.28	-0.4427	1.1381	21.01715	116.42	-0.4449	1.1403	20.46766		
110	120.83	-0.5125	1.1763	20.87469	120.97	-0.5146	1.1791	20.30768	121.10	-0.5166	1.1819	19.76818		
115	125.44	-0.5799	1.2171	20.20103	125.57	-0.5818	1.2205	19.64402	125.70	-0.5838	1.2240	19.11416		
120	129.97	-0.6424	1.2578	19.57556	130.10	-0.6441	1.2619	19.02811	130.22	-0.6458	1.2661	18.50748		
125	134.43	-0.7000	1.2980	18.99971	134.55	-0.7015	1.3029	18.46131	134.66	-0.7030	1.3077	17.94940		
130	138.81	-0.7576	1.3373	18.47436	138.92	-0.7538	1.3428	17.94443	139.03	-0.7551	1.3482	17.44069		
135	143.13	-0.8000	1.3749	17.99999	143.23	-0.8011	1.3811	17.47790	143.33	-0.8021	1.3873	16.94810		
140	147.39	-0.8423	1.4105	17.57676	147.48	-0.8432	1.4174	17.06180	147.57	-0.8440	1.4242	16.57249		
145	151.59	-0.8795	1.4435	17.20457	151.67	-0.8802	1.4510	16.69601	151.75	-0.8809	1.4584	16.21286		
150	155.74	-0.9117	1.4733	16.88315	155.81	-0.9122	1.4814	16.38020	155.88	-0.9127	1.4893	15.90247		
155	159.85	-0.9388	1.4995	16.61216										

x = 0.043					x = 0.044					x = 0.045				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.6860	33.90067	0.00	1.0000	0.6833	33.26190	0.00	1.0000	0.6806	32.65031		
5	6.04	0.9945	0.6870	33.84721	6.05	0.9944	0.6843	33.20884	6.06	0.9944	0.6816	32.59764		
10	12.06	0.9779	0.6899	33.68768	12.09	0.9778	0.6872	33.05051	12.11	0.9777	0.6846	32.44047		
15	18.08	0.9506	0.6948	33.42463	18.11	0.9504	0.6921	32.78946	18.15	0.9503	0.6895	32.18135		
20	24.07	0.9131	0.7016	33.06224	24.11	0.9127	0.6990	32.42985	24.16	0.9124	0.6964	31.82442		
25	30.03	0.8658	0.7105	32.60613	30.09	0.8653	0.7079	31.97734	30.14	0.8648	0.7054	31.37535		
30	35.95	0.8095	0.7214	32.06349	36.02	0.8088	0.7189	31.43896	36.09	0.8081	0.7165	30.84113		
35	41.83	0.7451	0.7344	31.44235	41.91	0.7442	0.7320	30.82286	41.99	0.7433	0.7296	30.22390		
40	47.66	0.6735	0.7495	30.75132	47.75	0.6724	0.7472	30.13817	47.84	0.6712	0.7450	29.55075		
45	53.43	0.5958	0.7668	30.00204	53.53	0.5944	0.7646	29.33949	53.63	0.5930	0.7625	28.91346		
50	59.14	0.5129	0.7862	29.20304	59.25	0.5113	0.7843	28.60272	59.35	0.5098	0.7823	28.02828		
55	64.78	0.4261	0.8079	28.36546	64.89	0.4243	0.8062	27.77275	65.01	0.4225	0.8044	27.20566		
60	70.35	0.3363	0.8319	27.43984	70.47	0.3344	0.8304	26.91526	70.59	0.3324	0.8288	26.33503		
65	75.83	0.2448	0.8582	26.61648	75.96	0.2426	0.8568	26.04050	76.08	0.2405	0.8556	25.49958		
70	81.24	0.1524	0.8867	25.72527	81.37	0.1501	0.8856	25.15828	81.50	0.1478	0.8846	24.61605		
75	86.55	0.0601	0.9174	24.83547	86.69	0.0577	0.9167	24.27780	86.82	0.0554	0.9160	23.74459		
80	91.78	-0.0311	0.9503	23.95563	91.92	-0.0335	0.9500	23.40753	92.06	-0.0359	0.9497	22.86357		
85	96.92	-0.1205	0.9853	23.09347	97.06	-0.1229	0.9854	22.55511	97.20	-0.1253	0.9855	22.04056		
90	101.97	-0.2074	1.0222	22.25581	102.11	-0.2098	1.0228	21.72727	102.25	-0.2121	1.0233	21.22222		
95	106.92	-0.2911	1.0609	21.44853	107.06	-0.2934	1.0619	20.92381	107.20	-0.2957	1.0629	20.43425		
100	111.78	-0.3711	1.1010	20.67660	111.92	-0.3733	1.1026	20.16761	112.06	-0.3756	1.1042	19.68148		
105	116.55	-0.4470	1.1424	19.94410	116.69	-0.4492	1.1446	19.44488	116.82	-0.4512	1.1467	18.96780		
110	121.24	-0.5186	1.1847	19.25426	121.37	-0.5205	1.1874	18.76417	121.50	-0.5225	1.1902	18.23629		
115	125.83	-0.5854	1.2274	18.60956	125.96	-0.5872	1.2308	18.12846	126.08	-0.5890	1.2342	17.66928		
120	130.35	-0.6474	1.2702	18.01178	130.47	-0.6490	1.2742	17.53327	130.59	-0.6506	1.2783	17.08840		
125	134.78	-0.7044	1.3124	17.46212	134.89	-0.7058	1.3172	16.99775	135.01	-0.7072	1.3219	16.55474		
130	139.14	-0.7563	1.3537	16.96128	139.25	-0.7575	1.3591	16.50452	139.35	-0.7587	1.3646	16.06886		
135	143.43	-0.8031	1.3934	16.50958	143.53	-0.8042	1.3995	16.05984	143.63	-0.8052	1.4056	15.63098		
140	147.66	-0.8449	1.4309	16.10700	147.75	-0.8457	1.4377	15.63667	147.84	-0.8465	1.4444	15.20459		
145	151.83	-0.8816	1.4658	15.75331	151.91	-0.8822	1.4731	15.31572	151.99	-0.8829	1.4805	14.89858		
150	155.95	-0.9132	1.4973	15.44814	156.02	-0.9137	1.5052	15.01558	156.09	-0.9142	1.5131	14.60331		
155	160.03	-0.9399	1.5250	15.19102	160.09	-0.9402	1.5334	14.76277	160.14	-0.9405	1.5218	14.35465		
160	164.07	-0.9616	1.5484	14.98149	164.11	-0.9618	1.5573	14.52678	164.16	-0.9620	1.5661	14.12211		
165	168.08	-0.9784	1.5671	14.81905	168.11	-0.9786	1.5763	14.33714	168.15	-0.9787	1.5855	13.93515		
170	172.06	-0.9904	1.5806	14.70334	172.09	-0.9905	1.5901	14.26342	172.11	-0.9905	1.5996	13.83336		
175	176.04	-0.9976	1.5889	14.63404	176.05	-0.9976	1.5985	14.21532	176.06	-0.9976	1.6081	13.81642		
180	180.00	-1.0000	1.5917	14.61096	180.00	-1.0000	1.6013	14.19265	180.00	-1.0000	1.6110	13.79413		

x = 0.046					x = 0.047					x = 0.048				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.6780	32.05418	0.00	1.0000	0.6754	31.50131	0.00	1.0000	0.6729	30.96204		
5	6.07	0.9944	0.6790	32.01138	6.08	0.9944	0.6764	31.44397	6.09	0.9943	0.6739	30.91045		
10	12.13	0.9777	0.6819	31.85583	12.16	0.9776	0.6790	31.29501	12.18	0.9775	0.6769	30.75654		
15	18.18	0.9501	0.6869	31.59357	18.22	0.9499	0.6844	31.03955	18.25	0.9497	0.6819	30.50283		
20	24.21	0.9121	0.6939	31.24425	24.25	0.9117	0.6914	30.69773	24.30	0.9114	0.6890	30.15344		
25	30.20	0.8643	0.7029	30.79849	30.26	0.8638	0.7005	30.24519	30.31	0.8633	0.6981	29.71400		
30	36.16	0.8074	0.7141	30.26829	36.22	0.8067	0.7117	29.71887	36.29	0.8060	0.7094	29.19145		
35	42.07	0.7424	0.7273	29.66176	42.14	0.7415	0.7251	29.11630	42.22	0.7406	0.7228	28.59387		
40	47.92	0.6701	0.7428	28.99797	48.01	0.6690	0.7406	28.44829	48.10	0.6679	0.7385	27.93028		
45	53.72	0.5917	0.7604	28.23666	53.82	0.5904	0.7584	27.72277	53.91	0.5890	0.7564	27.21037		
50	59.46	0.5082	0.7804	27.47805	59.56	0.5066	0.7785	26.95051	59.66	0.5051	0.7766	26.44427		
55	65.12	0.4207	0.8027	26.66254	65.23	0.4190	0.8010	26.14139	65.34	0.4173	0.7993	25.64231		
60	70.70	0.3304	0.8273	25.82052	70.82	0.3285	0.8258	25.30722	70.94	0.3266	0.8243	24.81477		
65	76.21	0.2384	0.8543	24.96210	76.33	0.2363	0.8530	24.45639	76.45	0.2342	0.8518	23.97168		
70	81.63	0.1456	0.8836	24.09599	81.75	0.1434	0.8827	23.53962	81.88	0.1412	0.8817	23.12260		
75	86.96	0.0531	0.9154	23.23424	87.09	0.0508	0.9147	22.74531	87.22	0.0485	0.9140	22.27647		
80	92.19	-0.0383	0.9494	22.38218	92.33	-0.0406	0.9490	21.90192	92.46	-0.0429	0.9488	21.41448		
85	97.34	-0.1277	0.9856	21.54828	97.47	-0.1300	0.9857	21.07685	97.61	-0.1324	0.9858	20.62496		
90	102.38	-0.2145	1.0238	20.73912	102.52	-0.2168	1.0244	20.27659	102.66	-0.2191	1.0249	19.83333		
95	107.34	-0.2980	1.0640	19.96035	107.47	-0.3002	1.0650	19.50672	107.61	-0.3025	1.0660	19.07208		
100	112.19	-0.3777	1.1057	19.21669	112.33	-0.3799	1.1073	18.77188	112.46	-0.3820	1.1088	18.34579		
105	116.96	-0.4533	1.1489	18.51136	117.09	-0.4554	1.1510	18.07582	117.22	-0.4574	1.1531	17.65813		
110	121.63	-0.5244	1.1929	17.84917	121.75	-0.5263	1.1957	17.42147	121.88	-0.5282	1.1984	17.01196		
115	126.21	-0.5907	1.2376	17.23057	126.33	-0.5925	1.2410	16.81101	126.45	-0.5942	1.2443	16.40940		
120	130.70	-0.6522	1.2823	16.65774	130.82	-0.6537	1.2864	16.24596	130.94	-0.6552	1.2904	15.85188		
125	135.12	-0.7086	1.3266	16.13167	135.23	-0.7099	1.3313	15.72726	135.34	-0.7113	1.3360	15.34031		
130	139.46	-0.7599	1.3700	15.65291	139.56	-0.7611	1.3753	15.25537	139.66	-0.7622	1.3807	14.87509		
135	143.72	-0.8062	1.4117	15.22159	143.82	-0.8071	1.4177	14.83041	143.91	-0.8081	1.4237	14.45629		
140	147.92	-0.8473	1.4511	14.83758	148.01	-0.8481	1.4578	14.45220	148.10	-0.8489	1.4645	14.08367		
145	152.07	-0.8835	1.4878	14.50053	152.14	-0.8841	1.4951	14.12033	152.22	-0.8847	1.5024	13.75693		
150	156.16	-0.9147	1.5210	14.20997	156.22	-0.9151	1.5289	13.83431	156.29	-0.9156	1.5367	13.47521		
155	160.20	-0.9409	1.5502	13.96534	160.26									

x = 0.049					x = 0.050					x = 0.051				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6704	30.44324	0.00	1.0000	0.6679	29.94427	0.00	1.0000	0.6655	29.46399		
5	6.11	0.9943	0.6714	30.39199	6.12	0.9943	0.6689	29.89335	6.13	0.9943	0.6665	29.41339		
10	12.20	0.9774	0.6744	30.23910	12.23	0.9773	0.6720	29.74144	12.25	0.9772	0.6696	29.26243		
15	18.28	0.9495	0.6794	29.98707	18.32	0.9493	0.6770	29.49105	18.35	0.9491	0.6747	29.01363		
20	24.34	0.9111	0.6866	29.64004	24.39	0.9108	0.6842	29.14629	24.43	0.9105	0.6818	28.67108		
25	30.37	0.8628	0.6958	29.20360	30.42	0.8623	0.6934	28.71277	30.48	0.8618	0.6911	28.24039		
30	36.35	0.8054	0.7071	28.68470	36.42	0.8047	0.7048	28.19740	36.48	0.8040	0.7026	27.72844		
35	42.29	0.7397	0.7206	28.09139	42.37	0.7388	0.7184	27.60823	42.44	0.7380	0.7163	27.14328		
40	48.18	0.6668	0.7364	27.43266	48.26	0.6657	0.7343	26.95421	48.35	0.6646	0.7323	26.49383		
45	54.01	0.5877	0.7544	26.71818	54.10	0.5864	0.7525	26.24500	54.19	0.5851	0.7505	25.78972		
50	59.76	0.5036	0.7748	25.95804	59.86	0.5021	0.7730	25.49064	59.96	0.5006	0.7712	25.04098		
55	65.45	0.4155	0.7976	25.16254	65.55	0.4138	0.7960	24.70140	65.66	0.4121	0.7944	24.25782		
60	71.05	0.3247	0.8228	24.34191	71.17	0.3228	0.8214	23.88748	71.28	0.3210	0.8200	23.45040		
65	76.57	0.2322	0.8506	23.50613	76.69	0.2302	0.8494	23.05878	76.81	0.2282	0.8482	22.62859		
70	82.01	0.1391	0.8807	22.66470	82.13	0.1369	0.8798	22.22478	82.25	0.1348	0.8789	21.80175		
75	87.35	0.0463	0.9134	21.82650	87.47	0.0441	0.9128	21.39428	87.60	0.0419	0.9121	20.97875		
80	92.59	-0.0452	0.9485	20.99966	92.72	-0.0475	0.9482	20.57533	92.85	-0.0497	0.9479	20.16748		
85	97.74	-0.1347	0.9859	20.13142	97.87	-0.1369	0.9860	19.77514	98.00	-0.1392	0.9861	19.37511		
90	102.79	-0.2214	1.0254	19.40816	102.92	-0.2236	1.0260	18.99999	103.05	-0.2258	1.0265	18.60734		
95	107.74	-0.3047	1.0670	18.65528	107.87	-0.3069	1.0680	18.25523	108.00	-0.3090	1.0691	17.87095		
100	112.59	-0.3842	1.1104	17.93727	112.72	-0.3862	1.1119	17.54527	112.85	-0.3883	1.1135	17.16881		
105	117.35	-0.4594	1.1552	17.25776	117.47	-0.4613	1.1573	16.87366	117.60	-0.4633	1.1594	16.50487		
110	122.01	-0.5300	1.2011	16.61953	122.13	-0.5318	1.2038	16.24312	122.25	-0.5336	1.2065	15.88180		
115	126.57	-0.5958	1.2477	16.02461	126.69	-0.5975	1.2510	15.65563	126.81	-0.5992	1.2543	15.30151		
120	131.05	-0.6567	1.2944	15.47441	131.17	-0.6582	1.2984	15.11251	131.28	-0.6597	1.3023	14.76528		
125	135.45	-0.7126	1.3407	14.96974	135.55	-0.7139	1.3453	14.61455	135.66	-0.7152	1.3500	14.27381		
130	139.76	-0.7634	1.3860	14.51098	139.86	-0.7645	1.3914	14.16205	139.96	-0.7656	1.3967	13.82740		
135	144.01	-0.8091	1.4297	14.09814	144.10	-0.8100	1.4357	13.75500	144.19	-0.8109	1.4417	13.42596		
140	148.18	-0.8497	1.4712	13.73056	148.26	-0.8505	1.4778	13.39308	148.35	-0.8512	1.4484	13.06914		
145	152.29	-0.8853	1.5097	13.40897	152.37	-0.8860	1.5169	13.07581	152.44	-0.8865	1.5241	12.75644		
150	156.35	-0.9160	1.5446	13.13163	156.42	-0.9165	1.5524	12.80259	156.48	-0.9169	1.5602	12.48724		
155	160.37	-0.9419	1.5753	12.89830	160.42	-0.9422	1.5836	12.57280	160.48	-0.9425	1.5919	12.26087		
160	164.34	-0.9629	1.6013	12.70838	164.39	-0.9631	1.6100	12.38579	164.43	-0.9633	1.6188	12.07669		
165	168.28	-0.9792	1.6220	12.56131	168.32	-0.9793	1.6311	12.24100	168.35	-0.9794	1.6402	11.93411		
170	172.20	-0.9908	1.6371	12.45661	172.23	-0.9908	1.6465	12.13795	172.25	-0.9909	1.6558	11.83264		
175	176.11	-0.9977	1.6463	12.39395	176.12	-0.9977	1.6558	12.07626	176.13	-0.9977	1.6653	11.77191		
180	180.00	-1.0000	1.6494	12.37308	180.00	-1.0000	1.6590	12.05573	180.00	-1.0000	1.6685	11.75169		

x = 0.052					x = 0.053					x = 0.054				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6631	29.00135	0.00	1.0000	0.6607	28.55537	0.00	1.0000	0.6584	28.12515		
5	6.14	0.9943	0.6641	28.95106	6.15	0.9942	0.6618	28.50538	6.16	0.9942	0.6595	28.07545		
10	12.27	0.9772	0.6672	28.80102	12.29	0.9771	0.6649	28.35624	12.31	0.9770	0.6626	27.92718		
15	18.38	0.9490	0.6723	28.55376	18.42	0.9488	0.6700	28.11047	18.45	0.9486	0.6677	27.68826		
20	24.47	0.9102	0.6795	28.21336	24.52	0.9098	0.6773	27.77215	24.56	0.9095	0.6750	27.34656		
25	30.53	0.8614	0.6889	27.78540	30.58	0.8609	0.6867	27.34686	30.64	0.8604	0.6845	26.92385		
30	36.55	0.8034	0.7004	27.27678	36.61	0.8027	0.6983	26.84146	36.67	0.8021	0.6961	26.42159		
35	42.52	0.7371	0.7142	26.69551	42.59	0.7362	0.7121	26.26397	42.66	0.7354	0.7101	25.94777		
40	48.43	0.6636	0.7302	26.05050	48.51	0.6625	0.7283	25.62327	48.59	0.6614	0.7263	25.21126		
45	54.28	0.5838	0.7486	25.35135	54.37	0.5826	0.7468	24.92893	54.46	0.5813	0.7449	24.52160		
50	60.06	0.4991	0.7695	24.60806	60.16	0.4976	0.7677	24.19093	60.25	0.4962	0.7660	23.78874		
55	65.77	0.4105	0.7928	23.83080	65.87	0.4088	0.7912	23.41941	65.97	0.4072	0.7896	23.02279		
60	71.39	0.3191	0.8186	23.02969	71.50	0.3173	0.8172	22.62444	71.61	0.3155	0.8159	22.23379		
65	76.93	0.2262	0.8470	22.21456	77.04	0.2242	0.8458	21.81580	77.16	0.2223	0.8447	21.43146		
70	82.37	0.1327	0.8780	21.39476	82.49	0.1306	0.8771	21.00280	82.61	0.1286	0.8762	20.62507		
75	87.72	0.0397	0.9115	20.57898	87.85	0.0375	0.9109	20.19407	87.97	0.0354	0.9103	19.82321		
80	92.98	-0.0519	0.9476	19.77517	93.10	-0.0541	0.9474	19.39750	93.23	-0.0563	0.9471	19.03368		
85	98.13	-0.1414	0.9862	18.99038	98.26	-0.1436	0.9863	18.62009	98.39	-0.1458	0.9864	18.26345		
90	103.18	-0.2280	1.0271	18.23076	103.31	-0.2302	1.0276	17.86792	103.44	-0.2324	1.0281	17.51851		
95	108.13	-0.3112	1.0701	17.50153	108.26	-0.3133	1.0711	17.14613	108.39	-0.3154	1.0721	16.80396		
100	112.98	-0.3904	1.1150	16.80698	113.10	-0.3924	1.1165	16.45895	113.23	-0.3944	1.1180	16.12396		
105	117.72	-0.4652	1.1615	16.15050	117.85	-0.4671	1.1636	15.80972	117.97	-0.4690	1.1656	15.48177		
110	122.37	-0.5354	1.2092	15.53468	122.49	-0.5372	1.2118	15.20095	122.61	-0.5390	1.2145	14.87987		
115	126.93	-0.6008	1.2576	14.96139	127.04	-0.6024	1.2609	14.63446	127.16	-0.6040	1.2642	14.31999		
120	131.39	-0.6612	1.3063	14.43184	131.50	-0.6626	1.3102	14.11140	131.61	-0.6641	1.3142	13.80324		
125	135.77	-0.7165	1.3546	13.94669	135.87	-0.7178	1.3592	13.63239	135.97	-0.7190	1.3638	13.33020		
130	140.06	-0.7667	1.4020	13.50618	140.16	-0.7678	1.4032	13.19761	140.25	-0.7689	1.4125	12.90099		
135	144.28	-0.8119	1.4477	13.11018	144.37	-0.8128	1.4536	12.80691	144.46	-0.8137	1.4595	12.41543		
140	148.43	-0.8520	1.4910	12.75833	148.51	-0.8527	1.4976	12.45987	148.59	-0.8535	1.5042	12.17307		
145	152.52	-0.8871	1.5314	12.45007	152.59	-0.8877	1.5386	12.15592	152.66	-0.8883	1.5458	11.87330		
150	156.55	-0.9174	1.5680	12.18475	156.61	-0.9178	1.5757	11.89438	156.67	-0.9183	1.5835	11.61544		
155	160.53	-0.9428	1.6002	11.96171	160.58	-0.9431	1.6085	11.67457	160					

x = 0.055					x = 0.056					x = 0.057				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6562	27.70985	0.00	1.0000	0.6539	27.30869	0.00	1.0000	0.6517	26.92094		
5	6.17	0.9942	0.6572	27.66043	6.18	0.9942	0.6549	27.25954	6.19	0.9942	0.6527	26.87206		
10	12.33	0.9769	0.6603	27.51301	12.36	0.9768	0.6581	27.11295	12.38	0.9768	0.6559	26.72627		
15	18.48	0.9484	0.6655	27.27010	18.51	0.9483	0.6633	26.87140	18.54	0.9481	0.6611	26.48606		
20	24.60	0.9092	0.6728	26.93577	24.64	0.9089	0.6707	26.53838	24.68	0.9086	0.6685	26.15549		
25	30.69	0.8600	0.6823	26.51557	30.74	0.8595	0.6802	26.12123	30.79	0.8590	0.6781	25.74011		
30	36.73	0.8014	0.6940	26.01836	36.80	0.8009	0.6920	25.62498	36.86	0.8001	0.6899	25.24675		
35	42.73	0.7346	0.7080	25.44610	42.80	0.7337	0.7060	25.05819	42.87	0.7329	0.7041	24.68333		
40	48.67	0.6604	0.7244	24.81366	48.75	0.6594	0.7225	24.42971	48.83	0.6583	0.7206	24.05870		
45	54.55	0.5801	0.7431	24.12855	54.63	0.5788	0.7413	23.74902	54.72	0.5776	0.7395	23.38233		
50	60.35	0.4947	0.7643	23.40069	60.44	0.4933	0.7627	23.02603	60.54	0.4918	0.7610	22.66407		
55	66.06	0.4055	0.7881	22.64016	66.18	0.4039	0.7866	22.27077	66.28	0.4023	0.7851	21.91395		
60	71.72	0.3137	0.8145	21.85696	71.83	0.3119	0.8132	21.49322	71.93	0.3101	0.8119	21.14189		
65	77.27	0.2203	0.8436	21.06073	77.38	0.2184	0.8425	20.70301	77.50	0.2165	0.8414	20.35750		
70	82.73	0.1265	0.8753	20.26032	82.85	0.1245	0.8745	19.90932	82.96	0.1225	0.8736	19.56990		
75	88.09	0.0333	0.9098	19.45563	88.21	0.0312	0.9092	19.12062	88.33	0.0291	0.9086	18.78754		
80	93.35	-0.0585	0.9469	18.63236	93.48	-0.0606	0.9466	18.34463	93.60	-0.0628	0.9464	18.01305		
85	98.51	-0.1480	0.9865	17.81370	98.64	-0.1501	0.9867	17.56817	98.76	-0.1523	0.9868	17.26821		
90	103.56	-0.2345	1.0287	17.01811	103.69	-0.2366	1.0292	16.85714	103.81	-0.2387	1.0298	16.54385		
95	108.51	-0.3175	1.0731	16.24743	108.64	-0.3195	1.0741	16.15649	108.76	-0.3216	1.0751	15.84989		
100	113.35	-0.3964	1.1195	15.50128	113.48	-0.3984	1.1211	15.49026	113.60	-0.4003	1.1226	15.19028		
105	118.09	-0.4709	1.1677	14.81635	118.21	-0.4728	1.1698	14.86160	118.33	-0.4746	1.1718	14.56812		
110	122.73	-0.5407	1.2172	14.17072	122.85	-0.5424	1.2198	14.27287	122.96	-0.5441	1.2224	13.98572		
115	127.27	-0.6056	1.2675	13.56128	127.38	-0.6072	1.2707	13.72569	127.50	-0.6087	1.2740	13.44463		
120	131.72	-0.6655	1.3181	13.00607	131.83	-0.6669	1.3220	13.22106	131.93	-0.6683	1.3259	12.94582		
125	136.08	-0.7203	1.3684	12.50393	136.18	-0.7215	1.3730	12.75946	136.28	-0.7227	1.3775	12.48372		
130	140.35	-0.7700	1.4178	12.05164	140.44	-0.7710	1.4230	12.34095	140.54	-0.7720	1.4282	12.07635		
135	144.55	-0.8146	1.4655	11.63508	144.63	-0.8155	1.4714	11.95626	144.72	-0.8163	1.4773	11.70539		
140	148.67	-0.8542	1.5108	11.25727	148.75	-0.8549	1.5173	11.63137	148.83	-0.8556	1.5239	11.37631		
145	152.73	-0.8889	1.5529	11.00157	152.80	-0.8894	1.5601	11.34013	152.87	-0.8900	1.5673	11.08842		
150	156.73	-0.9187	1.5913	11.34728	156.80	-0.9191	1.5990	11.08930	156.86	-0.9195	1.6067	10.84097		
155	160.69	-0.9437	1.6250	11.13364	160.74	-0.9440	1.6333	10.87863	160.79	-0.9443	1.6415	10.63318		
160	164.60	-0.9641	1.6536	10.95996	164.64	-0.9643	1.6623	10.70739	164.68	-0.9645	1.6709	10.46431		
165	168.48	-0.9799	1.6764	10.82559	168.51	-0.9800	1.6855	10.57493	168.54	-0.9801	1.6945	10.33371		
170	172.33	-0.9911	1.6931	10.73001	172.36	-0.9911	1.7024	10.48072	172.38	-0.9912	1.7117	10.24083		
175	176.17	-0.9978	1.7032	10.67282	176.18	-0.9978	1.7127	10.42436	176.19	-0.9978	1.7221	10.18527		
180	180.00	-1.0000	1.7066	10.65379	180.00	-1.0000	1.7161	10.40360	180.00	-1.0000	1.7256	10.16678		

x = 0.058					x = 0.059					x = 0.060				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6495	26.54593	0.00	1.0000	0.6473	26.18302	0.00	1.0000	0.6452	25.83163		
5	6.20	0.9941	0.6505	26.49731	6.21	0.9941	0.6484	26.13466	6.22	0.9941	0.6463	25.78352		
10	12.40	0.9767	0.6537	26.35230	12.42	0.9766	0.6516	25.99041	12.44	0.9765	0.6494	25.64000		
15	18.57	0.9479	0.6590	26.11338	18.60	0.9477	0.6568	25.75275	18.63	0.9476	0.6548	25.40358		
20	24.72	0.9083	0.6664	25.78463	24.77	0.9080	0.6643	25.42376	24.81	0.9077	0.6622	25.07830		
25	30.84	0.8586	0.6760	25.37156	30.89	0.8581	0.6740	25.01494	30.94	0.8577	0.6720	24.66967		
30	36.92	0.7995	0.6879	24.88100	36.98	0.7989	0.6859	24.52711	37.03	0.7983	0.6840	24.18450		
35	42.94	0.7321	0.7021	24.32087	43.01	0.7313	0.7002	23.97018	43.08	0.7304	0.6983	23.63069		
40	48.91	0.6573	0.7187	23.69939	48.98	0.6563	0.7169	23.35295	49.06	0.6553	0.7151	23.01702		
45	54.80	0.5764	0.7378	23.02781	54.89	0.5751	0.7361	22.68485	54.97	0.5739	0.7343	22.35290		
50	60.63	0.4904	0.7594	22.31416	60.72	0.4890	0.7578	21.97570	60.82	0.4876	0.7562	21.64813		
55	66.38	0.4007	0.7836	21.56904	66.48	0.3991	0.7822	21.23545	66.57	0.3975	0.7806	20.91263		
60	72.04	0.3084	0.8106	20.80233	72.14	0.3066	0.8093	20.47397	72.25	0.3049	0.8081	20.15623		
65	77.61	0.2146	0.8403	20.02362	77.72	0.2127	0.8392	19.70078	77.83	0.2109	0.8382	19.38843		
70	83.08	0.1205	0.8728	19.24196	83.19	0.1185	0.8720	18.92491	83.31	0.1165	0.8711	18.61822		
75	88.45	0.0270	0.9081	18.46576	88.57	0.0250	0.9075	18.15472	88.69	0.0229	0.9070	17.85385		
80	93.72	-0.0649	0.9462	17.70261	93.84	-0.0670	0.9459	17.39774	93.96	-0.0690	0.9457	17.10293		
85	98.86	-0.1544	0.9869	16.95922	99.00	-0.1565	0.9871	16.66064	99.12	-0.1586	0.9872	16.37197		
90	103.94	-0.2408	1.0303	16.24137	104.06	-0.2429	1.0309	16.34915	104.18	-0.2449	1.0314	16.06666		
95	108.88	-0.3236	1.0761	15.55332	109.00	-0.3256	1.0771	15.26804	109.12	-0.3276	1.0781	14.99174		
100	113.72	-0.4023	1.1241	14.90076	113.84	-0.4042	1.1256	14.62117	113.96	-0.4061	1.1271	14.35101		
105	118.45	-0.4764	1.1739	14.28494	118.57	-0.4782	1.1759	14.01153	118.69	-0.4800	1.1779	13.74735		
110	123.08	-0.5458	1.2251	13.70870	123.19	-0.5475	1.2277	13.44129	123.31	-0.5491	1.2303	13.18302		
115	127.61	-0.6102	1.2772	13.17355	127.72	-0.6118	1.2805	12.91194	127.83	-0.6133	1.2837	12.65932		
120	132.04	-0.6696	1.3298	12.68042	132.14	-0.6710	1.3337	12.42433	132.25	-0.6723	1.3375	12.17709		
125	136.38	-0.7239	1.3821	12.22967	136.48	-0.7251	1.3866	11.97880	136.57	-0.7263	1.3912	11.73665		
130	140.63	-0.7731	1.4335	11.82130	140.72	-0.7741	1.4387	11.57530	140.82	-0.7751	1.4439	11.33730		
135	144.80	-0.8172	1.4832	11.45495	144.89	-0.8180	1.4890	11.21344	144.97	-0.8189	1.4949	10.99042		
140	148.91	-0.8563	1.5304	11.13006	148.98	-0.8570	1.5369	10.89264	149.06	-0.8577	1.5435	10.66360		
145	152.94	-0.8905	1.5744	10.84592	153.01	-0.8911	1.5816	10.61216	153.08	-0.8916	1.5887	10.38668		
150	156.92	-0.9199	1.6144	10.60176	156.98	-0.9203	1.6222	10.37119	157.03	-0.9207	1.6299	10.14883		
155	160.84	-0.9446	1.6497	10.39677	160.89	-0.9449	1.6580	10.16894	160					

$x = 0.061$					$x = 0.062$					$x = 0.063$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.6431	25.49121	0.00	1.0000	0.6410	25.16123	0.00	1.0000	0.6390	24.84121	0.00	24.84121
5	6.23	0.9941	0.6442	25.44333	6.24	0.9941	0.6421	25.11358	6.25	0.9940	0.6400	24.79379	6.26	24.79379
10	12.46	0.9765	0.6474	25.30054	12.48	0.9764	0.6453	24.97149	12.50	0.9763	0.6433	24.65239	12.52	24.65239
15	18.67	0.9474	0.6527	25.06531	18.70	0.9472	0.6507	24.73743	18.72	0.9471	0.6486	24.41946	18.74	24.41946
20	24.85	0.9074	0.6602	24.74170	24.89	0.9072	0.6582	24.41545	24.92	0.9069	0.6562	24.09907	25.00	24.09907
25	30.99	0.8572	0.6700	24.33521	31.04	0.8568	0.6680	24.01104	31.09	0.8564	0.6661	23.69669	31.14	23.69669
30	37.09	0.7977	0.6820	23.85263	37.15	0.7970	0.6801	23.53099	37.21	0.7964	0.6782	23.21911	37.26	23.21911
35	43.14	0.7296	0.6964	23.30185	43.21	0.7288	0.6946	22.98319	43.28	0.7280	0.6928	22.67420	43.34	22.67420
40	49.13	0.6543	0.7133	22.69166	49.21	0.6533	0.7115	22.37637	49.28	0.6523	0.7098	22.07068	49.34	22.07068
45	55.06	0.5727	0.7327	22.03143	55.14	0.5716	0.7310	21.71992	55.22	0.5704	0.7293	21.41792	55.29	21.41792
50	60.91	0.4852	0.7546	21.33092	61.00	0.4849	0.7531	21.02358	61.09	0.4835	0.7516	20.72565	61.16	20.72565
55	66.67	0.3950	0.7793	20.60005	66.77	0.3944	0.7779	20.29723	66.86	0.3929	0.7766	20.00371	66.93	20.00371
60	72.35	0.3032	0.8068	19.84362	72.45	0.3015	0.8056	19.55054	72.55	0.2998	0.8044	19.26184	72.62	19.26184
65	77.93	0.2090	0.8371	19.08608	78.04	0.2072	0.8361	18.79323	78.15	0.2054	0.8351	18.50944	78.22	18.50944
70	83.42	0.1146	0.8703	18.32137	83.53	0.1127	0.8695	18.03390	83.64	0.1107	0.8688	17.75536	83.71	17.75536
75	88.80	0.0209	0.9065	17.56275	88.92	0.0189	0.9059	17.28086	89.03	0.0169	0.9054	17.00778	89.10	17.00778
80	94.08	-0.0711	0.9455	16.81768	94.19	-0.0731	0.9453	16.54153	94.31	-0.0752	0.9451	16.27404	94.38	16.27404
85	99.24	-0.1606	0.9874	16.03270	99.36	-0.1627	0.9875	15.82239	99.48	-0.1647	0.9877	15.56062	99.55	15.56062
90	104.30	-0.2470	1.0320	15.39344	104.42	-0.2490	1.0325	15.12903	104.54	-0.2510	1.0331	14.87301	104.61	14.87301
95	109.24	-0.3296	1.0791	14.72456	109.36	-0.3315	1.0801	14.46605	109.48	-0.3335	1.0811	14.21579	109.55	14.21579
100	114.08	-0.4080	1.1286	14.08981	114.19	-0.4098	1.1300	13.83714	114.31	-0.4117	1.1315	13.59259	114.38	13.59259
105	118.80	-0.4818	1.1800	13.43207	118.92	-0.4835	1.1820	13.24514	119.03	-0.4853	1.1840	13.00620	119.10	13.00620
110	123.42	-0.5508	1.2329	12.93342	123.53	-0.5524	1.2355	12.69207	123.64	-0.5540	1.2381	12.45857	123.71	12.45857
115	127.93	-0.6148	1.2869	12.41523	128.04	-0.6162	1.2901	12.17925	128.15	-0.6177	1.2934	11.95101	128.22	11.95101
120	132.35	-0.6737	1.3414	11.93826	132.45	-0.6750	1.3453	11.70742	132.55	-0.6763	1.3491	11.48418	132.62	11.48418
125	136.67	-0.7274	1.3957	11.50278	136.77	-0.7286	1.4002	11.27678	136.86	-0.7297	1.4047	11.05827	136.93	11.05827
130	140.91	-0.7751	1.4491	11.10366	141.01	-0.7771	1.4543	10.88718	141.09	-0.7781	1.4595	10.67308	141.16	10.67308
135	145.06	-0.8197	1.5008	10.75545	145.14	-0.8205	1.5066	10.53814	145.22	-0.8214	1.5125	10.32810	145.29	10.32810
140	149.13	-0.8584	1.5500	10.44251	149.21	-0.8590	1.5565	10.22898	149.28	-0.8597	1.5630	10.02644	149.35	10.02644
145	153.14	-0.8921	1.5958	10.16906	153.21	-0.8927	1.6030	9.95891	153.28	-0.8932	1.6101	9.75587	153.35	9.75587
150	157.09	-0.9211	1.6376	9.93425	157.15	-0.9215	1.6453	9.72707	157.21	-0.9219	1.6529	9.52692	157.28	9.52692
155	160.99	-0.9455	1.6744	9.73725	161.04	-0.9457	1.6826	9.53260	161.09	-0.9460	1.6908	9.33491	161.16	9.33491
160	164.85	-0.9652	1.7055	9.57727	164.89	-0.9654	1.7142	9.37470	164.92	-0.9656	1.7229	9.17905	164.99	9.17905
165	168.67	-0.9805	1.7305	9.45363	168.70	-0.9806	1.7395	9.25268	168.72	-0.9807	1.7486	9.05862	168.79	9.05862
170	172.46	-0.9913	1.7488	9.36573	172.48	-0.9914	1.7580	9.16596	172.50	-0.9914	1.7673	8.97303	172.57	8.97303
175	176.23	-0.9978	1.7598	9.31317	176.24	-0.9979	1.7693	9.11410	176.25	-0.9979	1.7787	8.92185	176.32	8.92185
180	180.00	-1.0000	1.7636	9.29568	180.00	-1.0000	1.7730	9.09684	180.00	-1.0000	1.7825	8.90483	180.00	8.90483

$x = 0.064$					$x = 0.065$					$x = 0.066$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.6370	24.53069	0.00	1.0000	0.6350	24.22926	0.00	1.0000	0.6330	23.93650		
5	6.26	0.9940	0.6380	24.48350	6.27	0.9940	0.6360	24.18229	6.28	0.9940	0.6341	23.88974		
10	12.52	0.9762	0.6413	24.34277	12.54	0.9762	0.6393	24.04220	12.56	0.9761	0.6373	23.75029		
15	18.75	0.9469	0.6467	24.11095	18.78	0.9467	0.6447	23.81147	18.81	0.9466	0.6428	23.52062		
20	24.96	0.9066	0.6543	23.79211	25.00	0.9063	0.6523	23.49414	25.04	0.9060	0.6504	23.20476		
25	31.14	0.8559	0.6641	23.39171	31.19	0.8555	0.6622	23.09568	31.23	0.8551	0.6604	22.80819		
30	37.27	0.7958	0.6763	22.91554	37.32	0.7952	0.6745	22.62285	37.38	0.7946	0.6727	22.33766		
35	43.34	0.7273	0.6910	22.37444	43.41	0.7265	0.6892	22.08351	43.47	0.7257	0.6874	21.80101		
40	49.36	0.6513	0.7080	21.77415	49.43	0.6503	0.7063	21.48636	49.51	0.6494	0.7047	21.20693		
45	55.30	0.5692	0.7277	21.12500	55.39	0.5680	0.7261	20.84073	55.47	0.5669	0.7245	20.56474		
50	61.17	0.4821	0.7501	20.43669	61.26	0.4808	0.7486	20.15630	61.35	0.4795	0.7471	19.88410		
55	66.96	0.3914	0.7752	19.71906	67.05	0.3899	0.7738	19.44288	67.15	0.3883	0.7725	19.17478		
60	72.66	0.2981	0.8032	18.98181	72.76	0.2964	0.8020	18.71013	72.86	0.2948	0.8008	18.44644		
65	78.25	0.2036	0.8341	18.23429	78.36	0.2018	0.8331	17.96740	78.46	0.2000	0.8321	17.70838		
70	83.75	0.1088	0.8680	17.48534	83.86	0.1069	0.8672	17.22346	83.97	0.1051	0.8665	16.96934		
75	89.14	0.0149	0.9049	16.74308	89.26	0.0130	0.9044	16.48640	89.37	0.0110	0.9039	16.23737		
80	94.43	-0.0772	0.9449	16.01482	94.54	-0.0792	0.9447	15.76349	94.66	-0.0812	0.9445	15.51959		
85	99.60	-0.1667	0.9878	15.30697	99.71	-0.1687	0.9880	15.06109	99.83	-0.1707	0.9881	14.82261		
90	104.65	-0.2530	1.0336	14.62499	104.77	-0.2550	1.0342	14.38461	104.89	-0.2569	1.0347	14.15151		
95	109.60	-0.3354	1.0821	13.97340	109.71	-0.3373	1.0831	13.73852	109.83	-0.3392	1.0841	13.51079		
100	114.43	-0.4135	1.1330	13.35578	114.54	-0.4153	1.1345	13.12635	114.66	-0.4172	1.1360	12.90395		
105	119.14	-0.4870	1.1860	12.77486	119.26	-0.4887	1.1880	12.55077	119.37	-0.4904	1.1900	12.33360		
110	123.75	-0.5556	1.2407	12.23256	123.86	-0.5572	1.2433	12.01368	123.97	-0.5588	1.2459	11.80160		
115	128.25	-0.6192	1.2966	11.73012	128.36	-0.6206	1.2998	11.51625	128.46	-0.6220	1.3029	11.30907		
120	132.66	-0.6776	1.3530	11.26818	132.76	-0.6789	1.3568	11.05909	132.86	-0.6801	1.3606	10.85658		
125	136.96	-0.7309	1.4092	10.84689	137.05	-0.7320	1.4137	10.64231	137.15	-0.7331	1.4182	10.44420		
130	141.17	-0.7791	1.4646	10.46600	141.26	-0.7800	1.4698	10.26563	141.35	-0.7810	1.4750	10.07163		
135	145.30	-0.8222	1.5183	10.12500	145.39	-0.8230	1.5242	9.92949	145.47	-0.8238	1.5300	9.73828		
140	149.36	-0.8604	1.5695	9.82314	149.43	-0.8610	1.5759	9.63016	149.51	-0.8617	1.5824	9.44339		
145	153.34	-0.8937	1.6172	9.55959	153.41	-0.8942	1.6243	9.36975	153.47	-0.8947	1.6314	9.18606		
150	157.27	-0.9223	1.6606	9.33346	157.32	-0.9227	1.6683	9.14638	157.38	-0.9231	1.6760	8.96537		
155	161.14	-0.9463	1.6990	9.14386	161.19	-0.9466	1.7072	8.95913	161.23	-0.9468	1.7154	8.78041		
160	164.96	-0.9658	1.7315	8.98998	165.00	-0.9659	1.7402	8.80718	165.04	-0.9661	1.7488	8.63036		
165	168.75	-0.9808	1.7576	8.87110	168.78	-0.9809	1.7666	8.68981	168.81	-0.9810	1.7756	8.51446		
170	172.52	-0.9915	1.7766	8.78662	172.54	-0.9915	1.7858	8.60641	172.56	-0.9916	1.7951	8.43212		
175	176.26	-0.9979	1.7881	8.73611	176.27	-0.9979	1.7975	8.55656	176.28	-0.9979	1.8070	8.38290		
180	180.00	-1.0000	1.7920	8.71931	180.00	-1.0000	1.8015	8.53997	180.00	-1.0000	1.8110	8.36563		

$$\frac{2}{x} = 0.067$$

$$\frac{2}{x} = 0.068$$

$$\frac{2}{x} = 0.069$$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.6310	23.65205	0.00	1.0000	0.6291	23.37553	0.00	1.0000	0.6272	23.10662
5	6.29	0.9940	0.6321	23.60549	6.30	0.9940	0.6302	23.32918	6.31	0.9939	0.6283	23.06047
10	12.58	0.9760	0.6354	23.46555	12.60	0.9759	0.6335	23.13096	12.61	0.9759	0.6316	22.92284
15	18.84	0.9464	0.6408	23.23503	18.87	0.9463	0.6389	22.96333	18.90	0.9461	0.6371	22.89620
20	25.08	0.9057	0.6485	22.92561	25.12	0.9054	0.6467	22.65032	25.15	0.9052	0.6448	22.38456
25	31.28	0.8546	0.6585	22.52898	31.33	0.8542	0.6567	22.25739	31.37	0.8538	0.6549	21.99340
30	37.44	0.7940	0.6709	22.06019	37.49	0.7934	0.6691	21.75129	37.55	0.7929	0.6673	21.52944
35	43.54	0.7243	0.6857	21.52657	43.60	0.7241	0.6839	21.25394	43.67	0.7234	0.6822	21.00049
40	49.58	0.6484	0.7030	20.93549	49.65	0.6475	0.7013	20.67170	49.72	0.6465	0.6997	20.41522
45	55.55	0.5657	0.7229	20.25165	55.63	0.5646	0.7214	20.03615	55.70	0.5635	0.7198	19.78288
50	61.44	0.4781	0.7456	19.61972	61.52	0.4768	0.7442	19.36232	61.61	0.4755	0.7428	19.11310
55	67.24	0.3866	0.7712	18.91442	67.33	0.3854	0.7698	18.66145	67.43	0.3839	0.7685	18.41557
60	72.95	0.2931	0.7996	18.19035	73.05	0.2915	0.7985	17.94104	73.15	0.2899	0.7973	17.69987
65	78.57	0.1982	0.8311	17.45699	78.67	0.1965	0.8302	17.21200	78.77	0.1947	0.8292	16.97521
70	84.08	0.1032	0.8657	16.72264	84.16	0.1013	0.8650	16.45363	84.29	0.0995	0.8643	16.25022
75	89.48	0.0091	0.9035	15.93564	89.59	0.0072	0.9030	15.76030	89.70	0.0053	0.9025	15.53285
80	94.77	-0.0831	0.9443	15.23307	94.88	-0.0851	0.9442	15.05334	94.99	-0.0870	0.9440	14.83019
85	99.94	-0.1727	0.9883	14.51121	100.06	-0.1746	0.9885	14.36658	100.17	-0.1766	0.9886	14.14841
90	105.00	-0.2588	1.0353	13.72537	105.12	-0.2608	1.0358	13.70558	105.23	-0.2627	1.0364	13.49275
95	109.94	-0.3411	1.0851	13.25991	110.06	-0.3430	1.0861	13.07556	110.17	-0.3448	1.0871	12.86747
100	114.77	-0.4190	1.1375	12.69523	114.88	-0.4207	1.1389	12.47903	114.99	-0.4225	1.1404	12.27593
105	119.48	-0.4921	1.1921	12.11305	119.59	-0.4938	1.1941	11.31860	119.70	-0.4954	1.1961	11.72060
110	124.08	-0.5603	1.2485	11.53601	124.18	-0.5619	1.2510	11.33663	124.29	-0.5634	1.2536	11.20319
115	128.57	-0.6234	1.3061	11.10827	128.67	-0.6248	1.3093	10.91358	128.77	-0.6262	1.3125	10.72472
120	132.95	-0.6814	1.3645	10.66035	133.05	-0.6827	1.3668	10.47012	133.15	-0.6839	1.3721	10.28563
125	137.24	-0.7342	1.4227	10.20223	137.33	-0.7353	1.4272	10.06626	137.43	-0.7364	1.4317	9.88989
130	141.44	-0.7819	1.4801	9.75373	141.52	-0.7829	1.4853	9.70164	141.61	-0.7838	1.4904	9.52511
135	145.55	-0.8246	1.5358	9.31403	145.63	-0.8264	1.5416	9.37561	145.70	-0.8261	1.5474	9.20262
140	149.58	-0.8623	1.5889	8.88254	149.65	-0.8629	1.5954	8.63736	149.72	-0.8636	1.6019	8.41758
145	153.54	-0.8952	1.6385	8.45821	153.60	-0.8957	1.6456	8.38536	153.67	-0.8962	1.6527	8.66905
150	157.44	-0.9235	1.6837	8.04015	157.49	-0.9238	1.6914	8.62047	157.55	-0.9242	1.6990	8.45507
155	161.28	-0.9471	1.7236	8.60744	161.33	-0.9474	1.7318	8.43994	161.37	-0.9476	1.7400	8.27763
160	165.08	-0.9663	1.7575	8.45123	165.12	-0.9665	1.7661	8.23353	165.15	-0.9666	1.7748	8.13303
165	168.84	-0.9811	1.7846	8.34477	168.87	-0.9812	1.7936	8.18049	168.90	-0.9813	1.8026	8.02136
170	172.58	-0.9916	1.8044	8.26347	172.60	-0.9917	1.8136	8.10019	172.61	-0.9917	1.8229	7.94205
175	176.29	-0.9979	1.8164	8.21487	176.30	-0.9979	1.8256	8.05220	176.31	-0.9979	1.8353	7.89465
180	180.00	-1.0000	1.8205	8.19870	180.00	-1.0000	1.8299	8.03623	180.00	-1.0000	1.8394	7.87888

$$\frac{2}{x} = 0.070$$

$$\frac{2}{x} = 0.071$$

$$\frac{2}{x} = 0.072$$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.6253	22.84500	0.00	1.0000	0.6235	22.59037	0.00	1.0000	0.6216	22.34245
5	6.32	0.9939	0.6264	22.79504	6.33	0.9939	0.6246	22.54460	6.34	0.9939	0.6227	22.29686
10	12.63	0.9758	0.6297	22.66199	12.65	0.9757	0.6279	22.40812	12.67	0.9756	0.6260	22.16093
15	18.93	0.9459	0.6352	22.43631	18.95	0.9458	0.6334	22.18338	18.98	0.9456	0.6316	21.93712
20	25.19	0.9049	0.6430	22.12602	25.23	0.9046	0.6412	21.87441	25.27	0.9043	0.6394	21.62943
25	31.42	0.8534	0.6531	21.73658	31.47	0.8530	0.6513	21.48665	31.51	0.8525	0.6496	21.24332
30	37.60	0.7923	0.6656	21.27471	37.66	0.7917	0.6639	21.02683	37.71	0.7911	0.6622	20.78550
35	43.73	0.7226	0.6806	20.74822	43.79	0.7219	0.6789	20.50274	43.85	0.7211	0.6772	20.26376
40	49.79	0.6456	0.6981	20.16576	49.86	0.6446	0.6965	19.92302	49.93	0.6437	0.6949	19.68872
45	55.78	0.5623	0.7183	19.53656	55.86	0.5612	0.7168	19.29690	55.94	0.5601	0.7153	19.06361
50	61.69	0.4742	0.7413	18.87024	61.78	0.4729	0.7399	18.63396	61.86	0.4716	0.7386	18.40399
55	67.52	0.3824	0.7673	18.17647	67.61	0.3810	0.7660	17.94387	67.70	0.3795	0.7647	17.71750
60	73.25	0.2883	0.7962	17.46480	73.34	0.2867	0.7951	17.23615	73.44	0.2851	0.7940	17.01365
65	78.87	0.1930	0.8283	16.74441	78.97	0.1912	0.8273	16.51994	79.07	0.1895	0.8264	16.30154
70	84.40	0.0977	0.8635	16.02392	84.50	0.0958	0.8628	15.80384	84.60	0.0940	0.8621	15.58974
75	89.81	0.0034	0.9020	15.31120	89.91	0.0015	0.9016	15.09569	90.02	-0.0004	0.9011	14.88606
80	95.10	-0.0889	0.9438	14.61333	95.21	-0.0909	0.9436	14.40251	95.32	-0.0928	0.9435	14.19748
85	100.28	-0.1785	0.9888	13.93644	100.39	-0.1804	0.9890	13.73041	100.50	-0.1823	0.9892	13.53006
90	105.34	-0.2646	1.0370	13.28571	105.45	-0.2665	1.0375	13.08450	105.56	-0.2683	1.0381	12.88888
95	110.28	-0.3466	1.0881	12.66536	110.39	-0.3485	1.0890	12.46898	110.50	-0.3503	1.0900	12.27809
100	115.10	-0.4242	1.1419	12.07870	115.21	-0.4260	1.1433	11.86710	115.32	-0.4277	1.1448	11.70090
105	119.81	-0.4971	1.1981	11.52816	119.91	-0.4987	1.2000	11.34126	120.02	-0.5003	1.2020	11.15966
110	124.40	-0.5649	1.2562	11.01542	124.50	-0.5664	1.2587	10.83308	124.60	-0.5679	1.2613	10.65594
115	128.87	-0.6276	1.3157	10.54143	128.97	-0.6290	1.3188	10.36349	129.07	-0.6303	1.3220	10.19065
120	133.25	-0.6851	1.3759	10.10662	133.34	-0.6863	1.3797	9.93286	133.44	-0.6876	1.3835	9.76412
125	137.52	-0.7375	1.4361	9.71091	137.61	-0.7385	1.4406	9.54110	137.70	-0.7396	1.4451	9.37623
130	141.69	-0.7847	1.4956	9.35389	141.78	-0.7856	1.5007	9.18776	141.86	-0.7865	1.5058	9.02649
135	145.78	-0.8269	1.5533	9.03488	145.86	-0.8277	1.5591	8.87211	145.94	-0.8284	1.5649	8.71416
140	149.79	-0.8642	1.6083	8.75296	149.86	-0.8648	1.6148	8.59329	149.93	-0.8654	1.6213	8.43335
145	153.73	-0.8967	1.6598	8.50724	153.79	-0.8972	1.6669	8.35031	153.85	-0.8977	1.6740	8.19805
150	157.60	-0.9246	1.7067	8.29671	157.66	-0.9249	1.7144	8.14218	157.71	-0.9253	1.7221	7.99227
155	161.42	-0.9479	1.7482	8.12042	161.47	-0.9481	1.7564	7.96794	161.51	-0.9484	1.7646	7.82003
160	165.19	-0.9668	1.7834	7.97749	165.23	-0.9670	1.7921	7.82669	165.27	-0.9671	1.8007	7.68043
165	168.93	-0.9814	1.8116	7.86716	168.95	-0.9815	1.8206	7.71768	168.98	-0.9816	1.8296	7.57271
170	172.63	-0.9917	1.8322	7.78882	172.65	-0.9918	1.8415	7.64028	172.67	-0.9918	1.8508	7.49623
175	176.32	-0.9979	1.8447	7.74200	176.33	-0.9980	1.8542	7.59403	176.34	-0.9980	1.8636	7.45053
180	180.00	-1.0000	1.8489	7.72642	180.00	-1.0000	1.8584	7.57864	180.00	-1.0000	1.8680	7.43553

x = 0.073					x = 0.074					x = 0.075				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6198	22.10096	0.00	1.0000	0.6180	21.86566	0.00	1.0000	0.6162	21.63630		
5	6.35	0.9939	0.6209	22.03556	6.36	0.9938	0.6191	21.82043	6.37	0.9938	0.6174	21.59125		
10	12.69	0.9756	0.6242	21.92017	12.71	0.9755	0.6225	21.68557	12.73	0.9754	0.6207	21.45691		
15	19.04	0.9455	0.6296	21.69726	19.04	0.9453	0.6280	21.46354	19.06	0.9452	0.6263	21.23574		
20	25.30	0.9041	0.6377	21.39033	25.34	0.9038	0.6359	21.15835	25.37	0.9035	0.6342	20.93175		
25	31.56	0.8521	0.6479	21.00633	31.60	0.8517	0.6461	20.77543	31.65	0.8513	0.6445	20.55038		
30	37.76	0.7905	0.6605	20.55047	37.82	0.7900	0.6588	20.32149	37.87	0.7894	0.6572	20.09831		
35	43.92	0.7204	0.6756	20.03103	43.98	0.7196	0.6740	19.80430	44.04	0.7189	0.6724	19.58333		
40	50.00	0.6428	0.6934	19.45662	50.07	0.6418	0.6918	19.23246	50.14	0.6409	0.6903	19.01401		
45	56.01	0.5590	0.7138	18.83645	56.09	0.5579	0.7124	18.61518	56.17	0.5568	0.7109	18.39956		
50	61.95	0.4703	0.7372	18.18008	62.03	0.4690	0.7358	17.96198	62.11	0.4678	0.7345	17.74948		
55	67.79	0.3781	0.7635	17.49712	67.88	0.3765	0.7623	17.28248	67.96	0.3752	0.7610	17.07336		
60	73.53	0.2835	0.7929	16.79705	73.63	0.2819	0.7918	16.58612	73.72	0.2803	0.7907	16.38063		
65	79.17	0.1878	0.8255	16.08896	79.27	0.1861	0.8246	15.38196	79.37	0.1844	0.8237	15.18033		
70	84.71	0.0922	0.8614	15.38137	84.81	0.0904	0.8607	15.17850	84.91	0.0887	0.8600	14.98092		
75	90.13	-0.0022	0.9007	14.68207	90.23	-0.0041	0.9002	14.48349	90.34	-0.0059	0.8998	14.29012		
80	95.43	-0.0946	0.9433	13.99800	95.54	-0.0965	0.9432	13.80384	95.65	-0.0984	0.9430	13.61479		
85	100.61	-0.1842	0.9893	13.33516	100.72	-0.1861	0.9895	13.14551	100.83	-0.1879	0.9897	12.96087		
90	105.68	-0.2702	1.0386	12.69863	105.79	-0.2720	1.0392	12.51351	105.89	-0.2739	1.0398	12.33333		
95	110.61	-0.3521	1.0910	12.09247	110.72	-0.3539	1.0920	11.91190	110.83	-0.3556	1.0930	11.73617		
100	115.43	-0.4294	1.1463	11.51987	115.54	-0.4311	1.1477	11.34380	115.65	-0.4328	1.1492	11.17248		
105	120.13	-0.5019	1.2040	10.98313	120.23	-0.5035	1.2060	10.81147	120.34	-0.5051	1.2080	10.64449		
110	124.71	-0.5694	1.2638	10.48379	124.81	-0.5709	1.2664	10.31643	124.91	-0.5723	1.2689	10.15365		
115	129.17	-0.6317	1.3251	10.02272	129.27	-0.6330	1.3283	9.85948	129.37	-0.6343	1.3315	9.70075		
120	133.53	-0.6888	1.3873	9.60021	133.63	-0.6899	1.3911	9.44090	133.72	-0.6911	1.3949	9.28603		
125	137.79	-0.7406	1.4495	9.21610	137.88	-0.7417	1.4540	9.06050	137.96	-0.7427	1.4584	8.90926		
130	141.95	-0.7874	1.5110	8.86988	142.03	-0.7883	1.5161	8.71174	142.11	-0.7892	1.5212	8.55989		
135	146.01	-0.8292	1.5707	8.56080	146.09	-0.8299	1.5765	8.41184	146.17	-0.8307	1.5823	8.28710		
140	150.00	-0.8660	1.6277	8.28793	150.07	-0.8666	1.6342	8.14186	150.14	-0.8672	1.6407	7.99994		
145	153.92	-0.8981	1.6811	8.05027	153.98	-0.8986	1.6882	7.90677	154.04	-0.8991	1.6953	7.76737		
150	157.76	-0.9256	1.7298	7.84679	157.82	-0.9260	1.7374	7.70554	157.87	-0.9263	1.7451	7.56835		
155	161.56	-0.9486	1.7728	7.67650	161.60	-0.9489	1.7810	7.53717	161.65	-0.9491	1.7892	7.40186		
160	165.30	-0.9673	1.8094	7.53852	165.34	-0.9674	1.8180	7.40077	165.37	-0.9676	1.8267	7.26700		
165	169.01	-0.9817	1.8387	7.43205	169.04	-0.9818	1.8477	7.29553	169.06	-0.9818	1.8567	7.16298		
170	172.69	-0.9919	1.8601	7.35648	172.71	-0.9919	1.8694	7.22084	172.73	-0.9920	1.8787	7.08914		
175	176.35	-0.9980	1.8731	7.31132	176.36	-0.9980	1.8826	7.17621	176.37	-0.9980	1.8920	7.04504		
180	180.00	-1.0000	1.8775	7.29630	180.00	-1.0000	1.8870	7.16137	180.00	-1.0000	1.8965	7.03037		

x = 0.076					x = 0.077					x = 0.078				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.6145	21.41266	0.00	1.0000	0.6128	21.19451	0.00	1.0000	0.6110	20.98166		
5	6.38	0.9938	0.6156	21.36777	6.39	0.9938	0.6139	21.14979	6.39	0.9938	0.6122	20.93711		
10	12.74	0.9754	0.6190	21.23394	12.76	0.9753	0.6172	21.01646	12.78	0.9752	0.6155	20.80426		
15	19.09	0.9450	0.6246	21.01362	19.12	0.9448	0.6229	20.79697	19.15	0.9447	0.6212	20.58558		
20	25.41	0.9033	0.6325	20.71081	25.45	0.9030	0.6308	20.49532	25.48	0.9027	0.6291	20.28507		
25	31.69	0.8509	0.6428	20.33095	31.73	0.8505	0.6411	20.11694	31.78	0.8501	0.6395	19.90814		
30	37.92	0.7888	0.6555	19.88073	37.98	0.7883	0.6539	19.66852	38.03	0.7877	0.6523	19.46148		
35	44.10	0.7182	0.6708	19.36790	44.16	0.7174	0.6693	19.15781	44.22	0.7167	0.6677	18.95285		
40	50.21	0.6400	0.6888	18.80106	50.27	0.6391	0.6873	18.59339	50.34	0.6382	0.6858	18.39080		
45	56.24	0.5557	0.7095	18.18937	56.32	0.5546	0.7081	17.98441	56.39	0.5535	0.7067	17.78448		
50	62.19	0.4665	0.7331	17.54234	62.27	0.4653	0.7318	17.34037	62.35	0.4640	0.7305	17.14338		
55	68.05	0.3738	0.7598	16.86954	68.14	0.3724	0.7586	16.67083	68.23	0.3710	0.7574	16.47702		
60	73.81	0.2788	0.7897	16.18038	73.90	0.2772	0.7886	15.98515	74.00	0.2757	0.7876	15.79477		
65	79.47	0.1828	0.8228	15.48386	79.57	0.1811	0.8220	15.29234	79.66	0.1795	0.8211	15.10560		
70	85.01	0.0869	0.8594	14.78842	85.11	0.0852	0.8587	14.60079	85.22	0.0834	0.8580	14.41787		
75	90.44	-0.0077	0.8994	14.10174	90.55	-0.0096	0.8990	13.91816	90.65	-0.0114	0.8985	13.73921		
80	95.75	-0.1002	0.9429	13.43066	95.86	-0.1021	0.9428	13.25125	95.96	-0.1039	0.9426	13.07638		
85	100.94	-0.1898	0.9899	12.78106	101.05	-0.1916	0.9901	12.60590	101.15	-0.1934	0.9903	12.43519		
90	106.00	-0.2757	1.0403	12.15789	106.11	-0.2775	1.0409	11.98701	106.22	-0.2793	1.0414	11.82051		
95	110.94	-0.3574	1.0940	11.56510	111.05	-0.3591	1.0950	11.39650	111.15	-0.3609	1.0959	11.23621		
100	115.75	-0.4345	1.1506	11.00574	115.86	-0.4362	1.1521	10.84339	115.96	-0.4378	1.1536	10.68526		
105	120.44	-0.5067	1.2100	10.48199	120.55	-0.5082	1.2119	10.32380	120.65	-0.5098	1.2139	10.16976		
110	125.01	-0.5738	1.2715	9.99528	125.11	-0.5752	1.2740	9.84113	125.21	-0.5766	1.2765	9.69106		
115	129.47	-0.6357	1.3346	9.54635	129.57	-0.6370	1.3377	9.39610	129.66	-0.6383	1.3409	9.24984		
120	133.81	-0.6923	1.3987	9.13541	133.90	-0.6935	1.4024	8.98886	134.00	-0.6946	1.4062	8.84624		
125	138.05	-0.7437	1.4629	8.76220	138.14	-0.7448	1.4673	8.61915	138.23	-0.7458	1.4718	8.47996		
130	142.19	-0.7901	1.5263	8.42615	142.27	-0.7909	1.5315	8.28635	142.35	-0.7918	1.5366	8.15034		
135	146.24	-0.8314	1.5881	8.12641	146.32	-0.8321	1.5939	7.98961	146.39	-0.8328	1.5997	7.85654		
140	150.21	-0.8678	1.6471	7.86202	150.27	-0.8684	1.6536	7.72793	150.34	-0.8690	1.6600	7.59752		
145	154.10	-0.8995	1.7024	7.63192	154.16	-0.9000	1.7095	7.50025	154.22	-0.9005	1.7166	7.37222		
150	157.92	-0.9267	1.7528	7.43506	157.98	-0.9270	1.7605	7.30550	158.03	-0.9274	1.7682	7.17954		
155	161.69	-0.9494	1.7975	7.27041	161.73	-0.9496	1.8057	7.14266	161.78	-0.9499	1.8139	7.01846		
160	165.41													

$x = 0.079$					$x = 0.080$					$x = 0.081$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.6093	20.77391	0.00	1.0000	0.6076	20.57107	0.00	1.0000	0.6060	20.37296	0.00	1.0000
5	6.40	0.9938	0.6105	20.72951	6.41	0.9937	0.6088	20.52683	6.42	0.9937	0.6071	20.32988	6.43	0.9937
10	12.80	0.9757	0.6138	20.59715	12.82	0.9751	0.6122	20.39493	12.83	0.9750	0.6105	20.19744	12.84	0.9750
15	19.17	0.9445	0.6195	20.37326	19.20	0.9444	0.6178	20.17753	19.22	0.9442	0.6162	19.98110	19.23	0.9442
20	25.52	0.9025	0.6275	20.07986	25.55	0.9022	0.6258	19.87551	25.59	0.9019	0.6242	19.68385	25.62	0.9019
25	31.82	0.8497	0.6379	19.70435	31.87	0.8493	0.6363	19.50540	31.91	0.8489	0.6347	19.31111	31.94	0.8489
30	38.08	0.7872	0.6507	19.25543	38.13	0.7866	0.6492	19.06218	38.18	0.7861	0.6476	18.96385	38.21	0.7861
35	44.28	0.7160	0.6662	18.75293	44.34	0.7152	0.6647	18.51757	44.40	0.7145	0.6632	18.36889	44.45	0.7145
40	50.41	0.6373	0.6843	18.14310	50.48	0.6364	0.6829	18.00012	50.54	0.6355	0.6814	17.81165	50.59	0.6355
45	56.46	0.5525	0.7053	17.18940	56.54	0.5514	0.7039	17.39398	56.61	0.5503	0.7026	17.12105	56.68	0.5503
50	62.43	0.4628	0.7292	16.25117	62.51	0.4615	0.7280	16.78357	62.59	0.4603	0.7267	16.58042	62.66	0.4603
55	68.31	0.3695	0.7563	15.25754	68.40	0.3682	0.7551	16.10341	68.48	0.3668	0.7540	15.92327	68.55	0.3668
60	74.09	0.2742	0.7866	15.00905	74.18	0.2726	0.7855	15.42782	74.27	0.2711	0.7845	15.25032	74.34	0.2711
65	79.76	0.1778	0.8202	14.92345	79.85	0.1762	0.8194	14.74572	79.95	0.1745	0.8185	14.57225	80.02	0.1745
70	85.31	0.0817	0.8574	14.23946	85.41	0.0800	0.8567	14.06541	85.51	0.0782	0.8561	13.89555	85.61	0.0782
75	90.75	-0.0131	0.8981	13.56470	90.86	-0.0149	0.8977	13.33447	90.96	-0.0167	0.8973	13.22837	91.06	-0.0167
80	96.07	-0.1057	0.9425	12.90583	96.17	-0.1075	0.9424	12.73959	96.28	-0.1093	0.9422	12.57735	96.38	-0.1093
85	101.26	-0.1953	0.9905	12.26878	101.37	-0.1971	0.9907	12.10650	101.47	-0.1989	0.9909	11.94820	101.57	-0.1989
90	106.32	-0.2811	1.0420	11.65822	106.43	-0.2828	1.0426	11.50000	106.54	-0.2846	1.0431	11.34567	106.64	-0.2846
95	111.26	-0.3626	1.0969	11.07305	111.37	-0.3643	1.0979	10.92387	111.47	-0.3660	1.0989	10.77353	111.57	-0.3660
100	116.07	-0.4395	1.1550	10.53118	116.17	-0.4411	1.1565	10.38102	116.28	-0.4427	1.1579	10.23462	116.38	-0.4427
105	120.75	-0.5113	1.2159	10.01970	120.86	-0.5129	1.2179	9.87347	120.96	-0.5144	1.2198	9.73093	121.06	-0.5144
110	125.31	-0.5781	1.2791	9.54489	125.41	-0.5795	1.2816	9.40249	125.51	-0.5809	1.2841	9.26371	125.61	-0.5809
115	129.76	-0.6395	1.3440	9.10743	129.85	-0.6408	1.3472	8.96870	129.95	-0.6421	1.3503	8.83353	130.05	-0.6421
120	134.09	-0.6958	1.4100	8.70739	134.18	-0.6969	1.4138	8.57217	134.27	-0.6980	1.4176	8.44043	134.37	-0.6980
125	138.31	-0.7468	1.4762	8.34447	138.40	-0.7478	1.4806	8.21254	138.48	-0.7487	1.4851	8.08404	138.57	-0.7487
130	142.43	-0.7926	1.5417	8.01798	142.51	-0.7935	1.5468	7.88913	142.59	-0.7943	1.5519	7.76364	142.67	-0.7943
135	146.46	-0.8335	1.6055	7.72705	146.54	-0.8342	1.6113	7.60102	146.61	-0.8349	1.6171	7.47830	146.68	-0.8349
140	150.41	-0.8696	1.6665	7.47065	150.48	-0.8701	1.6730	7.34717	150.54	-0.8707	1.6795	7.22696	150.61	-0.8707
145	154.28	-0.9009	1.7237	7.24767	154.34	-0.9014	1.7308	7.12647	154.40	-0.9018	1.7379	7.00850	154.46	-0.9018
150	158.08	-0.9277	1.7759	7.05702	158.13	-0.9280	1.7836	6.93782	158.18	-0.9284	1.7913	6.82180	158.23	-0.9284
155	161.82	-0.9501	1.8222	6.89768	161.87	-0.9503	1.8304	6.78017	161.91	-0.9506	1.8386	6.66582	161.95	-0.9506
160	165.52	-0.9682	1.8615	6.76869	165.55	-0.9684	1.8702	6.63258	165.59	-0.9685	1.8789	6.53959	165.62	-0.9685
165	169.17	-0.9822	1.8930	6.66324	169.20	-0.9823	1.9020	6.55422	169.22	-0.9824	1.9111	6.44231	169.24	-0.9824
170	172.80	-0.9921	1.9160	6.59869	172.82	-0.9921	1.9254	6.48445	172.83	-0.9922	1.9347	6.37330	172.84	-0.9922
175	176.40	-0.9980	1.9300	6.55656	176.41	-0.9980	1.9396	6.44279	176.42	-0.9981	1.9491	6.33210	176.43	-0.9981
180	180.00	-1.0000	1.9348	6.54255	180.00	-1.0000	1.9443	6.42893	180.00	-1.0000	1.9539	6.31840	180.00	-1.0000

$x = 0.082$					$x = 0.083$					$x = 0.084$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.6043	20.17942	0.00	1.0000	0.6027	19.99029	0.00	1.0000	0.6011	19.80542	0.00	1.0000
5	6.43	0.9937	0.6055	20.13549	6.44	0.9937	0.6038	19.94650	6.45	0.9937	0.6022	19.76177	6.46	0.9937
10	12.85	0.9750	0.6089	20.00450	12.87	0.9749	0.6072	19.81596	12.88	0.9748	0.6056	19.63166	12.89	0.9748
15	19.25	0.9441	0.6146	19.78891	19.28	0.9439	0.6130	19.60111	19.30	0.9438	0.6114	19.41753	19.31	0.9438
20	25.62	0.9017	0.6226	19.49271	25.65	0.9014	0.6210	19.30593	25.69	0.9012	0.6195	19.12336	25.72	0.9012
25	31.95	0.8485	0.6331	19.12131	31.99	0.8481	0.6315	18.93585	32.04	0.8477	0.6300	18.75457	32.08	0.8477
30	38.23	0.7855	0.6461	18.68139	38.28	0.7850	0.6445	18.49753	38.33	0.7844	0.6430	18.31782	38.37	0.7844
35	44.45	0.7138	0.6617	18.18065	44.51	0.7131	0.6602	17.39587	44.57	0.7124	0.6587	17.82081	44.62	0.7124
40	50.61	0.6346	0.6800	17.62764	50.67	0.6338	0.6786	17.44782	50.74	0.6329	0.6772	17.27207	50.80	0.6329
45	56.68	0.5493	0.7012	17.03147	56.75	0.5482	0.6999	16.85406	56.83	0.5472	0.6985	16.68069	56.90	0.5472
50	62.67	0.4591	0.7254	16.40155	62.75	0.4579	0.7242	16.22681	62.83	0.4567	0.7229	16.05606	62.91	0.4567
55	68.57	0.3654	0.7528	15.74736	68.65	0.3641	0.7517	15.57553	68.73	0.3627	0.7506	15.40763	68.81	0.3627
60	74.36	0.2696	0.7835	15.07818	74.45	0.2681	0.7825	14.90947	74.54	0.2666	0.7815	14.74463	74.62	0.2666
65	80.04	0.1729	0.8177	14.40289	80.14	0.1713	0.8169	14.23749	80.23	0.1697	0.8161	14.07591	80.31	0.1697
70	85.61	0.0765	0.8555	13.72974	85.71	0.0749	0.8548	13.56732	85.80	0.0732	0.8542	13.40956	85.89	0.0732
75	91.06	-0.0185	0.8969	13.06624	91.16	-0.0202	0.8965	12.90794	91.26	-0.0219	0.8961	12.75334	91.35	-0.0219
80	96.38	-0.1111	0.9421	12.41901	96.48	-0.1129	0.9420	12.26444	96.58	-0.1147	0.9419	12.11350	96.67	-0.1147
85	101.57	-0.2006	0.9911	11.79374	101.68	-0.2024	0.9913	11.64297	101.78	-0.2042	0.9915	11.49577	101.87	-0.2042
90	106.64	-0.2864	1.0437	11.19512	106.74	-0.2881	1.0443	11.04819	106.85	-0.2898	1.0448	10.90476	106.94	-0.2898
95	111.57	-0.3677	1.0999	10.62683	111.68	-0.3694	1.1009	10.48379	111.78	-0.3711	1.1019	10.34413	111.87	-0.3711
100	116.38	-0.4443	1.1594	10.09184	116.48	-0.4459	1.1608	9.95255	116.58	-0.4475	1.1623	9.81663	116.67	-0.4475
105	121.06	-0.5159	1.2218	9.59195	121.16	-0.5174	1.2238	9.45639	121.26	-0.5189	1.2257	9.32413	121.35	-0.5189
110	125.61	-0.5823	1.2867	9.12841	125.71	-0.5836	1.2892	8.99647	125.80	-0.5850	1.2917	8.86777	125.89	-0.5850
115	130.04	-0.6433	1.3534	8.70177	130.14	-0.6446	1.3566	8.57332	130.23	-0.6458	1.3597	8.44803	130.31	-0.6458
120	134.36	-0.6991	1.4213	8.31205	134.45	-0.7003	1.4251	8.18691	134.54	-0.7014	1.4289	8.06498	134.62	-0.7014
125	138.57	-0.7497	1.4895	7.95884	138.65	-0.7507	1.4940	7.83681	138.73	-0.7517	1.4984	7.71785	138.81	-0.7517
130	142.67	-0.7952	1.5571	7.64139	142.75	-0.7960	1.5622	7.52227	142.83	-0.7968	1.5673	7.40616	142.91	-0.7968
135	146.68	-0.8356	1.6229	7.35877	146.75	-0.8363	1.6287	7.24232	146.83	-0.8370	1.6345	7.12883	146.91	-0.8370
140	150.61	-0.8713	1.6859	7.10990	150.67	-0.8716	1.6924	6.99586	150.74	-0.8724	1.6989	6.88474	150.81	-0.8724
145	154.45	-0.9022	1.7450	6.89363	154.51	-0.9027	1.7521	6.78175	154.57	-0.9031	1.7593	6.67275	154.64	-0.9031
150	158.23	-0.9287	1.7990	6.70886	158.28	-0.9290	1.8068	6.59886	158.33	-0.9293	1.8145	6.49170	158.38	-0.9293
155	161.95	-0.9508	1.8469	6.55450	161.99	-0.9510	1.8552	6.44611	162.04	-0.9512	1.8634	6.34052	162.08	-0.9512

$x^2 = 0.085$					$x^2 = 0.086$					$x^2 = 0.087$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.5995	19.62465	0.00	1.0000	0.5979	19.44785	0.00	1.0000	0.5963	19.27489		
5	6.46	0.9937	0.6006	19.58115	6.46	0.9936	0.5990	19.40449	6.47	0.9936	0.5975	19.23166		
10	12.90	0.9748	0.6040	19.45146	12.92	0.9747	0.6025	19.27522	12.94	0.9746	0.6009	19.10280		
15	19.33	0.9436	0.6098	19.23804	19.35	0.9435	0.6082	19.06249	19.38	0.9433	0.6067	18.89076		
20	25.72	0.9009	0.6179	18.94486	25.76	0.9006	0.6164	18.77028	25.79	0.9004	0.6148	18.59950		
25	32.08	0.8473	0.6285	18.57734	32.12	0.8469	0.6269	18.40401	32.16	0.8466	0.6254	18.23445		
30	38.38	0.7839	0.6415	18.14213	38.43	0.7834	0.6401	17.97031	38.48	0.7828	0.6386	17.80224		
35	44.63	0.7117	0.6573	17.64693	44.68	0.7110	0.6559	17.47690	44.74	0.7103	0.6544	17.31058		
40	50.80	0.6320	0.6758	17.10027	50.87	0.6311	0.6744	16.93227	50.93	0.6303	0.6731	16.76796		
45	56.90	0.5461	0.6972	16.51122	56.97	0.5451	0.6959	16.34551	57.04	0.5441	0.6946	16.18344		
50	62.91	0.4555	0.7217	15.88916	62.98	0.4543	0.7205	15.72598	63.06	0.4531	0.7193	15.56639		
55	68.82	0.3613	0.7495	15.24353	68.90	0.3600	0.7483	15.08310	68.98	0.3587	0.7473	14.92621		
60	74.62	0.2651	0.7806	14.58354	74.71	0.2637	0.7796	14.42607	74.80	0.2622	0.7786	14.27209		
65	80.32	0.1681	0.8152	13.91801	80.41	0.1665	0.8144	13.76368	80.50	0.1650	0.8136	13.61279		
70	85.90	0.0715	0.8536	13.25513	86.00	0.0698	0.8530	13.10410	86.09	0.0682	0.8524	12.95646		
75	91.36	-0.0237	0.8958	12.60230	91.46	-0.0254	0.8954	12.45471	91.55	-0.0271	0.8950	12.31045		
80	96.69	-0.1164	0.9418	11.36607	96.79	-0.1182	0.9417	11.22202	96.89	-0.1199	0.9416	11.08123		
85	101.88	-0.2059	0.9917	11.35200	101.99	-0.2077	0.9919	11.21156	102.09	-0.2094	0.9921	11.07432		
90	106.95	-0.2915	1.0454	10.76470	107.05	-0.2933	1.0460	10.62790	107.15	-0.2950	1.0466	10.49425		
95	111.88	-0.3727	1.1028	10.20778	111.99	-0.3744	1.1038	10.07463	112.09	-0.3760	1.1048	9.94456		
100	116.69	-0.4491	1.1637	9.68395	116.79	-0.4507	1.1652	9.55440	116.89	-0.4522	1.1666	9.42788		
105	121.36	-0.5204	1.2277	9.19505	121.46	-0.5218	1.2296	9.06904	121.55	-0.5233	1.2316	8.94600		
110	125.90	-0.5864	1.2943	8.74219	126.00	-0.5877	1.2968	8.61962	126.09	-0.5891	1.2993	8.49995		
115	130.32	-0.6471	1.3628	8.32581	130.41	-0.6483	1.3659	8.20655	130.50	-0.6495	1.3691	8.09013		
120	134.62	-0.7025	1.4326	7.94586	134.71	-0.7035	1.4364	7.82974	134.80	-0.7046	1.4402	7.71641		
125	138.82	-0.7526	1.5028	7.60184	138.90	-0.7536	1.5073	7.48867	138.98	-0.7545	1.5117	7.37825		
130	142.91	-0.7976	1.5724	7.29295	142.98	-0.7984	1.5775	7.18253	143.06	-0.7993	1.5827	7.07481		
135	146.90	-0.8377	1.6403	7.01819	146.97	-0.8384	1.6461	6.91030	147.04	-0.8390	1.6519	6.80506		
140	150.80	-0.8729	1.7054	6.77643	150.87	-0.8735	1.7118	6.67083	150.93	-0.8740	1.7178	6.56784		
145	154.63	-0.9035	1.7664	6.56651	154.68	-0.9040	1.7735	6.46295	154.74	-0.9044	1.7807	6.36197		
150	158.38	-0.9297	1.8222	6.38728	158.43	-0.9300	1.8300	6.28550	158.48	-0.9303	1.8377	6.18626		
155	162.08	-0.9515	1.8717	6.23765	162.12	-0.9517	1.8800	6.13738	162.16	-0.9519	1.8883	6.03963		
160	165.72	-0.9691	1.9138	6.11664	165.76	-0.9693	1.9226	6.01762	165.79	-0.9694	1.9313	5.92109		
165	169.33	-0.9827	1.9476	6.02343	169.35	-0.9828	1.9567	5.92537	169.38	-0.9829	1.9659	5.82980		
170	172.90	-0.9923	1.9723	5.95734	172.92	-0.9924	1.9817	5.85998	172.94	-0.9924	1.9912	5.76509		
175	176.46	-0.9981	1.9874	5.91788	176.46	-0.9981	1.9969	5.82094	176.47	-0.9981	2.0066	5.72646		
180	180.00	-1.0000	1.9924	5.90476	180.00	-1.0000	2.0021	5.80796	180.00	-1.0000	2.0117	5.71362		

$x^2 = 0.088$					$x^2 = 0.089$					$x^2 = 0.090$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.5948	19.10564	0.00	1.0000	0.5932	18.93997	0.00	1.0000	0.5917	18.77778		
5	6.48	0.9936	0.5959	19.06254	6.49	0.9936	0.5944	18.89701	6.50	0.9936	0.5929	18.73495		
10	12.96	0.9746	0.5994	18.93409	12.97	0.9745	0.5978	18.76895	12.99	0.9744	0.5963	18.60727		
15	19.40	0.9432	0.6052	18.72271	19.43	0.9431	0.6036	18.55823	19.45	0.9429	0.6021	18.39720		
20	25.82	0.9001	0.6133	18.43239	25.86	0.8999	0.6118	18.26883	25.89	0.8996	0.6103	18.10871		
25	32.20	0.8462	0.6240	18.06854	32.24	0.8458	0.6225	17.90616	32.28	0.8454	0.6210	17.74719		
30	38.53	0.7823	0.6372	17.63779	38.58	0.7818	0.6357	17.47685	38.63	0.7812	0.6343	17.31929		
35	44.80	0.7096	0.6530	17.14785	44.85	0.7089	0.6516	16.98859	44.91	0.7082	0.6502	16.83269		
40	50.99	0.6294	0.6717	16.60719	51.06	0.6286	0.6704	16.44987	51.12	0.6277	0.6690	16.29587		
45	57.11	0.5431	0.6933	16.02483	57.18	0.5420	0.6921	15.86973	57.25	0.5410	0.6908	15.71787		
50	63.13	0.4519	0.7181	15.41028	63.21	0.4507	0.7169	15.25752	63.29	0.4495	0.7158	15.10802		
55	69.06	0.3573	0.7462	14.77276	69.14	0.3560	0.7451	14.62261	69.23	0.3547	0.7440	14.47557		
60	74.89	0.2607	0.7777	14.12149	74.97	0.2593	0.7768	13.97415	75.06	0.2578	0.7758	13.82998		
65	80.60	0.1634	0.8129	13.46523	80.69	0.1618	0.8121	13.32088	80.78	0.1603	0.8113	13.17963		
70	86.19	0.0665	0.8518	12.81208	86.28	0.0649	0.8512	12.67087	86.37	0.0632	0.8506	12.53272		
75	91.65	-0.0288	0.8946	12.16940	91.75	-0.0305	0.8943	12.03145	91.84	-0.0322	0.8939	11.89651		
80	96.99	-0.1216	0.9415	11.54360	97.09	-0.1233	0.9414	11.40902	97.18	-0.1251	0.9413	11.27739		
85	102.19	-0.2111	0.9923	10.94018	102.29	-0.2128	0.9925	10.80904	102.39	-0.2145	0.9927	10.68078		
90	107.26	-0.2966	1.0471	10.36363	107.36	-0.2983	1.0477	10.23595	107.46	-0.3000	1.0483	10.11111		
95	112.19	-0.3777	1.1058	9.81746	112.29	-0.3793	1.1068	9.69325	112.39	-0.3809	1.1078	9.57182		
100	116.99	-0.4538	1.1681	9.30428	117.09	-0.4553	1.1695	9.18349	117.18	-0.4569	1.1709	9.06544		
105	121.65	-0.5247	1.2336	8.82582	121.75	-0.5262	1.2355	8.70840	121.84	-0.5276	1.2375	8.59365		
110	126.19	-0.5904	1.3018	8.38309	126.28	-0.5917	1.3043	8.26894	126.37	-0.5931	1.3068	8.15747		
115	130.60	-0.6507	1.3722	7.97646	130.69	-0.6519	1.3753	7.86545	130.78	-0.6531	1.3784	7.75700		
120	134.89	-0.7057	1.4435	7.60578	134.97	-0.7068	1.4477	7.49775	135.06	-0.7078	1.4515	7.39224		
125	139.06	-0.7554	1.5161	7.27047	139.14	-0.7564	1.5206	7.16525	139.23	-0.7573	1.5250	7.06251		
130	143.13	-0.8001	1.5878	6.96969	143.21	-0.8008	1.5929	6.86709	143.29	-0.8016	1.5980	6.76691		
135	147.11	-0.8397	1.6577	6.70238	147.18	-0.8404	1.6636	6.60217	147.25	-0.8410	1.6694	6.50435		
140	150.99	-0.8746	1.7248	6.46737	151.06	-0.8751	1.7313	6.36394	151.12	-0.8756	1.7378	6.27365		
145	154.80	-0.9048	1.7878	6.26346	154.85	-0.9052	1.7950	6.16736	154.91	-0.9056	1.8021	6.07357		
150	158.53	-0.9306	1.8455	6.08948	158.58	-0.9309	1.8532	5.99506	158.63	-0.9312	1.8610	5.90293		
155	162.20	-0.9521	1.8966	5.94431	162.24	-0.9524	1.9049	5.85132	16					

	$x^2 = 0.094$				$x^2 = 0.095$				$x^2 = 0.096$			
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.5858	18.16118	0.00	1.0000	0.5843	18.01517	0.00	1.0000	0.5829	17.87164
5	6.53	0.9935	0.5869	18.11924	6.54	0.9935	0.5855	17.97296	6.55	0.9935	0.5860	17.82954
10	13.05	0.9742	0.5904	17.99306	13.07	0.9741	0.5890	17.84713	13.08	0.9740	0.5875	17.70406
15	19.55	0.9423	0.5963	17.78546	19.58	0.9422	0.5948	17.64012	19.60	0.9421	0.5934	17.49764
20	26.02	0.8986	0.6045	17.50043	26.05	0.8984	0.6031	17.35592	26.08	0.8982	0.6017	17.21425
25	32.44	0.8439	0.6153	17.14335	32.48	0.8435	0.6139	16.99990	32.52	0.8432	0.6125	16.85927
30	38.92	0.7791	0.6287	16.72095	38.97	0.7786	0.6273	16.57870	39.01	0.7781	0.6260	16.43935
35	45.13	0.7055	0.6448	16.24060	45.18	0.7048	0.6235	16.09597	45.24	0.7042	0.6222	15.36212
40	51.37	0.6243	0.6638	15.71107	51.43	0.6235	0.6226	15.07218	51.49	0.6227	0.6213	15.43605
45	57.52	0.5370	0.6859	15.14125	57.59	0.5360	0.6247	15.00433	57.66	0.5350	0.6235	14.87013
50	63.58	0.4449	0.7112	14.54044	63.66	0.4437	0.7100	14.40569	63.73	0.4426	0.7089	14.27363
55	69.55	0.3495	0.7399	13.91795	69.62	0.3482	0.7388	13.78557	69.70	0.3469	0.7378	13.65583
60	75.40	0.2521	0.7722	13.26286	75.48	0.2507	0.7413	13.15302	75.56	0.2493	0.7404	13.02579
65	81.13	0.1541	0.8083	12.64380	81.22	0.1526	0.8075	12.51667	81.31	0.1511	0.8068	12.39210
70	86.74	0.0568	0.8493	12.00974	86.84	0.0552	0.8478	11.88446	86.93	0.0536	0.8472	11.76270
75	92.23	-0.0388	0.8925	11.38486	92.32	-0.0405	0.8922	11.26357	92.41	-0.0421	0.8918	11.14473
80	97.57	-0.1318	0.9409	10.77849	97.67	-0.1335	0.9408	10.66024	97.77	-0.1351	0.9408	10.54441
85	102.78	-0.2213	0.9936	10.19486	102.88	-0.2229	0.9939	10.07373	102.98	-0.2246	0.9941	9.96697
90	107.85	-0.3066	1.0506	9.63829	107.95	-0.3082	1.0512	9.52631	108.05	-0.3098	1.0518	9.41666
95	112.78	-0.3873	1.1117	9.11211	112.88	-0.3888	1.1127	9.00328	112.98	-0.3904	1.1137	8.89674
100	117.57	-0.4629	1.1767	8.61971	117.67	-0.4644	1.1782	8.51300	117.77	-0.4659	1.1796	8.40953
105	122.23	-0.5333	1.2453	8.15965	122.32	-0.5347	1.2472	8.05700	122.41	-0.5360	1.2492	7.95854
110	126.74	-0.5982	1.3169	7.73576	126.84	-0.5995	1.3194	7.63507	126.93	-0.6008	1.3219	7.53353
115	131.13	-0.6578	1.3909	7.34722	131.22	-0.6590	1.3940	7.25038	131.31	-0.6601	1.3972	7.15565
120	135.40	-0.7120	1.4665	6.99373	135.48	-0.7130	1.4703	6.89960	135.56	-0.7140	1.4741	6.80754
125	139.55	-0.7609	1.5428	6.67460	139.62	-0.7618	1.5472	6.58302	139.70	-0.7627	1.5516	6.49346
130	143.58	-0.8047	1.6186	6.38885	143.66	-0.8055	1.6237	6.29364	143.73	-0.8062	1.6288	6.21241
135	147.52	-0.8436	1.6927	6.13534	147.59	-0.8442	1.6985	6.04830	147.66	-0.8448	1.7044	5.96320
140	151.37	-0.8777	1.7639	5.91252	151.43	-0.8782	1.7704	5.84781	151.49	-0.8787	1.7770	5.74458
145	155.13	-0.9073	1.8308	5.72003	155.18	-0.9077	1.8380	5.63670	155.24	-0.9080	1.8453	5.55525
150	158.82	-0.9324	1.8922	5.55574	158.87	-0.9327	1.9000	5.47393	158.91	-0.9330	1.9078	5.39398
155	162.44	-0.9534	1.9467	5.41882	162.49	-0.9536	1.9550	5.33831	162.52	-0.9538	1.9634	5.25963
160	166.02	-0.9704	1.9931	5.30826	166.05	-0.9705	2.0019	5.22880	166.08	-0.9706	2.0108	5.15117
165	169.55	-0.9834	2.0303	5.22319	169.58	-0.9835	2.0396	5.14456	169.60	-0.9836	2.0489	5.06775
170	173.05	-0.9927	2.0576	5.16292	173.07	-0.9927	2.0671	5.08489	173.08	-0.9927	2.0767	5.00866
175	176.53	-0.9982	2.0742	5.12697	176.54	-0.9982	2.0840	5.04929	176.55	-0.9982	2.0937	4.97341
180	180.00	-1.0000	2.0798	5.11502	180.00	-1.0000	2.0896	5.03746	180.00	-1.0000	2.0994	4.96164

x = 0.097					x = 0.098					x = 0.099				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5814	17.73089	0.00	1.0000	0.5800	17.59285	0.00	1.0000	0.5786	17.45743		
5	6.56	0.9935	0.5826	17.68891	6.56	0.9934	0.5812	17.55097	6.57	0.9934	0.5798	17.41567		
10	13.10	0.9740	0.5861	17.56377	13.12	0.9739	0.5847	17.42618	13.13	0.9738	0.5833	17.29120		
15	19.62	0.9419	0.5920	17.35792	19.65	0.9418	0.5906	17.22089	19.67	0.9416	0.5892	17.08647		
20	26.11	0.8979	0.6003	17.07533	26.15	0.8977	0.5989	16.93909	26.18	0.8974	0.5976	16.80545		
25	32.56	0.8428	0.6112	16.72139	32.60	0.8424	0.6098	16.58616	32.64	0.8421	0.6085	16.45351		
30	38.96	0.7776	0.6247	16.30271	39.01	0.7771	0.6233	16.16872	39.05	0.7766	0.6220	16.03728		
35	45.29	0.7035	0.6409	15.82696	45.34	0.7028	0.6396	15.69442	45.40	0.7022	0.6383	15.56441		
40	51.55	0.6219	0.6601	15.30258	51.61	0.6210	0.6588	15.17170	51.67	0.6202	0.6576	15.04333		
45	57.72	0.5340	0.6823	14.73856	57.79	0.5330	0.6811	14.60955	57.86	0.5321	0.6800	14.48302		
50	63.80	0.4415	0.7078	14.14416	63.88	0.4403	0.7067	14.01722	63.95	0.4392	0.7056	13.89273		
55	69.78	0.3456	0.7368	13.52966	69.86	0.3443	0.7358	13.40397	69.94	0.3431	0.7348	13.28170		
60	75.65	0.2479	0.7695	12.90108	75.73	0.2465	0.7686	12.77883	75.81	0.2451	0.7677	12.65895		
65	81.40	0.1496	0.8060	12.27002	81.48	0.1481	0.8053	12.15035	81.57	0.1466	0.8046	12.03302		
70	87.02	0.0520	0.8467	11.64339	87.11	0.0505	0.8461	11.52644	87.20	0.0489	0.8456	11.41179		
75	92.51	-0.0438	0.8915	11.02829	92.60	-0.0454	0.8912	10.91418	92.69	-0.0470	0.8908	10.80232		
80	97.86	-0.1368	0.9407	10.43094	97.96	-0.1384	0.9406	10.31975	98.05	-0.1401	0.9406	10.21077		
85	103.08	-0.2262	0.9943	9.85653	103.17	-0.2279	0.9945	9.74832	103.27	-0.2295	0.9948	9.64220		
90	108.15	-0.3114	1.0523	9.30927	108.24	-0.3130	1.0529	9.20408	108.34	-0.3146	1.0535	9.10101		
95	113.08	-0.3919	1.1147	8.79241	113.17	-0.3935	1.1156	8.69022	113.27	-0.3950	1.1166	8.59012		
100	117.86	-0.4673	1.1810	8.30823	117.96	-0.4688	1.1825	8.20902	118.05	-0.4703	1.1839	8.11186		
105	122.51	-0.5374	1.2511	7.85521	122.60	-0.5388	1.2531	7.76193	122.69	-0.5401	1.2550	7.66764		
110	127.02	-0.6021	1.3244	7.44008	127.11	-0.6033	1.3269	7.34963	127.20	-0.6046	1.3295	7.25814		
115	131.40	-0.6613	1.4003	7.06296	131.48	-0.6624	1.4034	6.97223	131.57	-0.6635	1.4065	6.88342		
120	135.65	-0.7151	1.4778	6.71747	135.73	-0.7161	1.4816	6.62933	135.81	-0.7171	1.4854	6.54306		
125	139.78	-0.7636	1.5561	6.40585	139.86	-0.7645	1.5605	6.32015	139.94	-0.7653	1.5650	6.23627		
130	143.80	-0.8070	1.6340	6.12709	143.88	-0.8077	1.6391	6.04364	143.95	-0.8085	1.6443	5.96199		
135	147.72	-0.8455	1.7102	5.87999	147.79	-0.8461	1.7161	5.79861	147.86	-0.8467	1.7220	5.71900		
140	151.55	-0.8792	1.7835	5.66327	151.61	-0.8797	1.7901	5.58376	151.67	-0.8802	1.7966	5.50599		
145	155.29	-0.9084	1.8525	5.47563	155.34	-0.9088	1.8597	5.39779	155.40	-0.9092	1.8669	5.32165		
150	158.96	-0.9333	1.9157	5.31584	159.01	-0.9336	1.9235	5.23944	159.05	-0.9339	1.9314	5.16474		
155	162.56	-0.9540	1.9718	5.18274	162.60	-0.9543	1.9803	5.10758	162.64	-0.9545	1.9887	5.03408		
160	166.11	-0.9708	2.0197	5.07531	166.15	-0.9709	2.0286	5.00116	166.18	-0.9710	2.0375	4.92866		
165	169.62	-0.9836	2.0582	4.99269	169.65	-0.9837	2.0675	4.91932	169.67	-0.9838	2.0768	4.84760		
170	173.10	-0.9928	2.0863	4.93417	173.12	-0.9928	2.0959	4.86137	173.13	-0.9928	2.1055	4.79020		
175	176.56	-0.9982	2.1035	4.89927	176.56	-0.9982	2.1133	4.82680	176.57	-0.9982	2.1231	4.75597		
180	180.00	-1.0000	2.1092	4.88767	180.00	-1.0000	2.1191	4.81532	180.00	-1.0000	2.1290	4.74459		

x = 0.100					x = 0.101					x = 0.102				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5772	17.32456	0.00	1.0000	0.5758	17.19416	0.00	1.0000	0.5745	17.06616		
5	6.58	0.9934	0.5784	17.28290	6.59	0.9934	0.5770	17.15261	6.60	0.9934	0.5756	17.02473		
10	13.15	0.9738	0.5819	17.15877	13.16	0.9737	0.5805	17.02880	13.18	0.9737	0.5792	16.90123		
15	19.69	0.9415	0.5878	16.95458	19.72	0.9414	0.5865	16.82315	19.74	0.9412	0.5851	16.69811		
20	26.21	0.8972	0.5962	16.67432	26.24	0.8969	0.5949	16.54564	26.27	0.8967	0.5935	16.41934		
25	32.68	0.8417	0.6071	16.32336	32.72	0.8413	0.6058	16.19565	32.76	0.8410	0.6045	16.07029		
30	39.10	0.7761	0.6207	15.90833	39.14	0.7756	0.6194	15.78179	39.19	0.7751	0.6181	15.65759		
35	45.45	0.7015	0.6371	15.43686	45.50	0.7009	0.6358	15.31170	45.56	0.7002	0.6345	15.18887		
40	51.73	0.6194	0.6564	14.91739	51.79	0.6186	0.6552	14.79382	51.85	0.6178	0.6539	14.67255		
45	57.92	0.5311	0.6788	14.35890	57.99	0.5301	0.6776	14.23711	58.05	0.5292	0.6765	14.11760		
50	64.02	0.4381	0.7046	13.77061	64.09	0.4370	0.7035	13.65080	64.16	0.4358	0.7024	13.53324		
55	70.01	0.3418	0.7338	13.16177	70.09	0.3405	0.7329	13.04412	70.17	0.3393	0.7319	12.92868		
60	75.89	0.2437	0.7669	12.54138	75.98	0.2423	0.7660	12.42605	76.06	0.2410	0.7652	12.31289		
65	81.65	0.1451	0.8039	11.91796	81.74	0.1437	0.8032	11.80510	81.83	0.1422	0.8025	11.69438		
70	87.29	0.0473	0.8450	11.29937	87.38	0.0458	0.8445	11.18911	87.46	0.0442	0.8440	11.08096		
75	92.79	-0.0486	0.8905	10.69265	92.88	-0.0502	0.8902	10.58511	92.97	-0.0518	0.8899	10.47963		
80	98.15	-0.1417	0.9405	10.10394	98.24	-0.1433	0.9404	9.99919	98.33	-0.1449	0.9404	9.89647		
85	103.36	-0.2311	0.9950	9.53834	103.46	-0.2327	0.9953	9.43645	103.55	-0.2343	0.9955	9.33654		
90	108.43	-0.3162	1.0541	9.00000	108.53	-0.3178	1.0547	8.90099	108.63	-0.3194	1.0553	8.80392		
95	113.36	-0.3965	1.1176	8.49203	113.46	-0.3981	1.1186	8.39591	113.55	-0.3996	1.1196	8.30168		
100	118.15	-0.4717	1.1854	8.01667	118.24	-0.4731	1.1868	7.92340	118.33	-0.4746	1.1883	7.83198		
105	122.79	-0.5415	1.2570	7.57529	122.88	-0.5428	1.2589	7.48481	122.97	-0.5442	1.2609	7.39616		
110	127.29	-0.6058	1.3320	7.16854	127.38	-0.6070	1.3345	7.08077	127.46	-0.6083	1.3370	6.99479		
115	131.65	-0.6646	1.4096	6.79646	131.74	-0.6658	1.4128	6.71130	131.83	-0.6669	1.4159	6.62788		
120	135.89	-0.7181	1.4891	6.45862	135.98	-0.7190	1.4929	6.37593	136.06	-0.7200	1.4967	6.29494		
125	140.01	-0.7662	1.5694	6.15418	140.09	-0.7670	1.5739	6.07382	140.17	-0.7679	1.5784	5.99512		
130	144.02	-0.8092	1.6494	5.88209	144.09	-0.8099	1.6546	5.80388	144.16	-0.8107	1.6598	5.72731		
135	147.92	-0.8473	1.7278	5.64110	147.99	-0.8479	1.7337	5.56486	148.05	-0.8485	1.7396	5.49024		
140	151.73	-0.8807	1.8032	5.42990	151.79	-0.8812	1.8098	5.35545	151.85	-0.8817	1.8164	5.28258		
145	155.45	-0.9096	1.8742	5.24718	155.50	-0.9100	1.8814	5.17432	155.56	-0.9104	1.8887	5.10301		
150	159.10	-0.9342	1.9393	5.09167	159.14	-0.9345	1.9472	5.02019	159.19	-0.9348	1.9551	4.95025		
155	162.68	-0.9547	1.9972	4.96221	162.72	-0.9549	2.0056	4.89191	162.76	-0.9551	2.0141	4.82312		
160	166.21	-0.9712	2.0465	4.85777										

$$x^2 = 0.103$$

$$x^2 = 0.104$$

$$x^2 = 0.105$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5731	16.34051	0.00	1.0000	0.5718	16.31712	0.00	1.0000	0.5704	16.69594
5	6.60	0.9934	0.5743	16.39917	6.61	0.9934	0.5729	16.77589	6.62	0.9933	0.5716	16.65481
10	13.19	0.9736	0.5718	16.77599	13.21	0.9735	0.5765	16.85301	13.23	0.9735	0.5752	16.53224
15	19.76	0.9411	0.5838	16.57339	19.79	0.9410	0.5824	16.45032	19.81	0.9408	0.5811	16.33065
20	26.30	0.8965	0.5922	16.29334	26.33	0.8962	0.5909	16.17360	26.36	0.8960	0.5896	16.05403
25	32.80	0.8406	0.6032	15.94723	32.83	0.8403	0.6019	15.82641	32.87	0.8399	0.6006	15.70775
30	39.23	0.7746	0.6168	15.53567	39.28	0.7741	0.6156	15.41596	39.32	0.7736	0.6143	15.29841
35	45.61	0.6996	0.6333	15.06329	45.66	0.6989	0.6321	15.24390	45.71	0.6983	0.6309	14.83365
40	51.91	0.6170	0.6528	14.55351	51.96	0.6162	0.6516	14.43664	52.02	0.6154	0.6504	14.32189
45	58.12	0.5282	0.6754	14.00023	58.18	0.5272	0.6742	13.88813	58.25	0.5263	0.6731	13.77206
50	64.23	0.4347	0.7014	13.41785	64.30	0.4336	0.7003	13.30457	64.37	0.4325	0.6993	13.19336
55	70.24	0.3380	0.7309	12.81538	70.32	0.3368	0.7300	12.70417	70.39	0.3356	0.7290	12.59499
60	76.14	0.2396	0.7643	12.20185	76.22	0.2382	0.7635	12.09256	76.30	0.2369	0.7627	11.98587
65	81.91	0.1407	0.8018	11.58574	81.99	0.1393	0.8011	11.47511	82.08	0.1378	0.8004	11.37445
70	87.55	0.0427	0.8434	10.97484	87.64	0.0412	0.8429	10.87071	87.73	0.0396	0.8424	10.76851
75	93.06	-0.0534	0.8896	10.37615	93.15	-0.0543	0.8893	10.27462	93.24	-0.0565	0.8890	10.17498
80	98.42	-0.1465	0.9403	9.79571	98.52	-0.1481	0.9403	9.69685	98.61	-0.1497	0.9402	9.59986
85	103.65	-0.2359	0.9957	9.23855	103.74	-0.2375	0.9960	9.14244	103.83	-0.2391	0.9962	9.04814
90	108.72	-0.3209	1.0559	8.70873	108.81	-0.3225	1.0564	8.61538	108.91	-0.3240	1.0570	8.52381
95	113.65	-0.4011	1.1206	8.20930	113.74	-0.4026	1.1216	8.11371	113.83	-0.4041	1.1226	8.02986
100	118.42	-0.4760	1.1897	7.74239	118.52	-0.4774	1.1911	7.65452	118.61	-0.4788	1.1926	7.56837
105	123.06	-0.5455	1.2628	7.30927	123.15	-0.5468	1.2648	7.22405	123.24	-0.5481	1.2667	7.14058
110	127.55	-0.6095	1.3395	6.91054	127.64	-0.6107	1.3420	6.82796	127.73	-0.6119	1.3445	6.74701
115	131.91	-0.6680	1.4190	6.54616	131.99	-0.6691	1.4221	6.46607	132.08	-0.6701	1.4252	6.38758
120	136.14	-0.7210	1.5064	6.21562	136.22	-0.7220	1.5042	6.13790	136.30	-0.7229	1.5080	6.06174
125	140.24	-0.7688	1.5828	5.91805	140.32	-0.7696	1.5873	5.84255	140.39	-0.7704	1.5918	5.76859
130	144.23	-0.8114	1.6649	5.65233	144.30	-0.8121	1.6701	5.77889	144.37	-0.8128	1.6753	5.50696
135	148.12	-0.8491	1.7455	5.41718	148.18	-0.8497	1.7513	5.34563	148.25	-0.8503	1.7572	5.27556
140	151.91	-0.8822	1.8230	5.21126	151.96	-0.8827	1.8296	5.14142	152.02	-0.8831	1.8362	5.07303
145	155.61	-0.9107	1.8960	5.03322	155.66	-0.9111	1.9033	4.96490	155.71	-0.9115	1.9105	4.89800
150	159.23	-0.9350	1.9630	4.88180	159.28	-0.9353	1.9709	4.81480	159.32	-0.9356	1.9789	4.74921
155	162.80	-0.9553	2.0226	4.75581	162.83	-0.9554	2.0311	4.68994	162.87	-0.9556	2.0396	4.62544
160	166.30	-0.9716	2.0734	4.65422	166.33	-0.9717	2.0824	4.58926	166.36	-0.9718	2.0914	4.52567
165	169.76	-0.9841	2.1143	4.57614	169.79	-0.9842	2.1237	4.51189	169.81	-0.9842	2.1331	4.44901
170	173.19	-0.9930	2.1442	4.52087	173.21	-0.9930	2.1539	4.45714	173.23	-0.9930	2.1636	4.39477
175	176.60	-0.9982	2.1625	4.48792	176.61	-0.9983	2.1724	4.42450	176.62	-0.9983	2.1823	4.36242
180	180.00	-1.0000	2.1686	4.47697	180.00	-1.0000	2.1786	4.41365	180.00	-1.0000	2.1885	4.35168

$$x^2 = 0.106$$

$$x^2 = 0.107$$

$$x^2 = 0.108$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5691	16.57691	0.00	1.0000	0.5678	16.45997	0.00	1.0000	0.5665	16.34507
5	6.63	0.9933	0.5703	16.53586	6.63	0.9933	0.5690	16.41904	6.64	0.9933	0.5677	16.30423
10	13.24	0.9734	0.5738	16.41360	13.26	0.9734	0.5725	16.29706	13.27	0.9733	0.5712	16.18253
15	19.83	0.9407	0.5798	16.21252	19.86	0.9405	0.5785	16.09646	19.88	0.9404	0.5772	15.96822
20	26.39	0.8958	0.5883	15.93659	26.42	0.8955	0.5870	15.82122	26.45	0.8953	0.5857	15.70785
25	32.91	0.8395	0.5993	15.59120	32.95	0.8392	0.5981	15.47570	32.98	0.8388	0.5968	15.36420
30	39.37	0.7731	0.6131	15.18295	39.41	0.7726	0.6118	15.06953	39.46	0.7721	0.6106	14.95808
35	45.76	0.6976	0.6296	14.71947	45.81	0.6970	0.6284	14.60731	45.87	0.6964	0.6272	14.49711
40	52.08	0.6146	0.6492	14.20513	52.14	0.6138	0.6481	14.09347	52.20	0.6130	0.6469	13.98970
45	58.31	0.5253	0.6720	13.66101	58.37	0.5244	0.6709	13.55193	58.44	0.5234	0.6698	13.44477
50	64.44	0.4314	0.6982	13.08414	64.51	0.4303	0.6972	12.97658	64.58	0.4292	0.6962	12.87150
55	70.47	0.3343	0.7281	12.48777	70.54	0.3331	0.7272	12.86248	70.62	0.3319	0.7262	12.76905
60	76.38	0.2355	0.7618	11.88082	76.46	0.2342	0.7610	11.77765	76.54	0.2328	0.7602	11.67632
65	82.16	0.1364	0.7997	11.27170	82.25	0.1349	0.7990	11.17080	82.33	0.1335	0.7983	11.07171
70	87.81	0.0381	0.8419	10.66813	87.90	0.0366	0.8414	10.56968	87.99	0.0351	0.8409	10.47294
75	93.33	-0.0581	0.8887	10.07718	93.42	-0.0596	0.8884	9.98116	93.51	-0.0612	0.8881	9.88689
80	98.70	-0.1513	0.9402	9.50466	98.79	-0.1529	0.9401	9.41122	98.88	-0.1544	0.9401	9.31948
85	103.93	-0.2407	0.9965	8.95560	104.02	-0.2422	0.9967	8.86478	104.11	-0.2438	0.9970	8.77563
90	109.00	-0.3256	1.0576	8.43396	109.09	-0.3271	1.0582	8.34579	109.19	-0.3286	1.0588	8.25926
95	113.93	-0.4055	1.1235	7.94270	114.02	-0.4070	1.1245	7.85718	114.11	-0.4085	1.1255	7.77326
100	118.70	-0.4802	1.1940	7.48387	118.79	-0.4816	1.1955	7.40098	118.88	-0.4830	1.1969	7.31965
105	123.33	-0.5495	1.2687	7.05869	123.42	-0.5508	1.2706	6.91837	123.51	-0.5521	1.2726	6.83957
110	127.81	-0.6131	1.3470	6.66764	127.90	-0.6143	1.3496	6.58982	127.99	-0.6155	1.3521	6.51348
115	132.16	-0.6712	1.4284	6.31064	132.25	-0.6723	1.4315	6.23520	132.33	-0.6734	1.4346	6.16122
120	136.38	-0.7239	1.5118	5.98710	136.46	-0.7248	1.5156	5.91393	136.54	-0.7258	1.5194	5.84219
125	140.47	-0.7713	1.5962	5.69610	140.54	-0.7721	1.6007	5.62506	140.62	-0.7729	1.6052	5.55542
130	144.44	-0.8135	1.6805	5.43648	144.51	-0.8142	1.6857	5.36741	144.58	-0.8149	1.6909	5.29972
135	148.31	-0.8509	1.7631	5.20691	148.37	-0.8515	1.7691	5.13965	148.44	-0.8521	1.7750	5.07374
140	152.08	-0.8836	1.8428	5.00604	152.14	-0.8841	1.8494	4.94041	152.20	-0.8845	1.8561	4.87611
145	155.76	-0.9119	1.9179	4.83249	155.81	-0.9122	1.9252	4.76831	155.87	-0.9126	1.9325	4.70544
150	159.37	-0.9359	1.9868	4.68497	159.41	-0.9361	1.9948	4.62206	159.46	-0.9364	2.0027	4.56043
155	162.91	-0.9558	2.0481	4.56230	162.95	-0.9560	2.0567	4.50046	162.98	-0.9562	2.0653	4.43989
160	166.39	-0.9719	2.1005	4.46342	166.42	-0.9721	2.1095	4.40246	166.45	-0.9722	2.1186	4.33475
165	169.83	-0.9843	2.1426	4.38746	169.86	-0.9844	2.1520	4.32718	169.88	-0.9844	2.1615	4.26015
170	173.24	-0.9930	2.1734	4.33370	173.26	-0.9931	2.1832	4.27392	173.27	-0.9931	2.1930	4.21537
175	176.63	-0.9983	2.1922	4.30166	176.63	-0.9983	2.2022	4.24217	176.64	-0.9983	2.2122	4.18391
180	180.00	-1.0000	2.1985	4.29101	180.00	-1.0000	2.2086	4.23162	180.00	-1.0000	2.2186	4.17345

x = 0.109					x = 0.110					x = 0.111				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5652	16.23214	0.00	1.0000	0.5639	16.12114	0.00	1.0000	0.5626	16.01201		
5	6.65	0.9933	0.5664	16.19139	6.66	0.9933	0.5651	16.08049	6.66	0.9932	0.5638	15.97145		
10	13.29	0.9732	0.5700	16.06999	13.30	0.9732	0.5687	15.95936	13.32	0.9731	0.5674	15.85060		
15	19.90	0.9403	0.5760	15.87035	19.92	0.9401	0.5747	15.76013	19.95	0.9400	0.5734	15.65189		
20	26.48	0.8951	0.5845	15.59644	26.51	0.8948	0.5832	15.48694	26.54	0.8946	0.5820	15.37929		
25	33.02	0.8385	0.5956	15.25365	33.06	0.8381	0.5943	15.14498	33.09	0.8378	0.5931	15.03816		
30	39.50	0.7716	0.6094	14.84857	39.55	0.7711	0.6082	14.74093	39.59	0.7706	0.6070	14.63512		
35	45.92	0.6957	0.6261	14.38882	45.97	0.6951	0.6249	14.28240	46.02	0.6944	0.6237	14.17778		
40	52.25	0.6122	0.6458	13.88282	52.31	0.6114	0.6447	13.77778	52.37	0.6106	0.6435	13.67453		
45	58.50	0.5225	0.6688	13.33948	58.56	0.5216	0.6677	13.23600	58.63	0.5206	0.6666	13.13430		
50	64.65	0.4281	0.6952	12.76796	64.72	0.4271	0.6942	12.66622	64.79	0.4260	0.6932	12.56623		
55	70.69	0.3307	0.7253	12.17744	70.76	0.3295	0.7244	12.07759	70.84	0.3282	0.7235	11.97946		
60	76.61	0.2315	0.7594	11.57679	76.69	0.2302	0.7586	11.47897	76.77	0.2289	0.7578	11.38286		
65	82.41	0.1321	0.7977	10.97437	82.49	0.1306	0.7970	10.87975	82.57	0.1292	0.7964	10.78478		
70	88.07	0.0336	0.8404	10.37793	88.16	0.0321	0.8399	10.28460	88.24	0.0306	0.8394	10.19289		
75	93.60	-0.0627	0.8878	9.79430	93.68	-0.0643	0.8875	9.70336	93.77	-0.0658	0.8872	9.61402		
80	98.97	-0.1560	0.9400	9.22939	99.06	-0.1575	0.9400	9.14092	99.15	-0.1591	0.9399	9.05402		
85	104.20	-0.2453	0.9972	8.68810	104.29	-0.2469	0.9975	8.60215	104.38	-0.2484	0.9977	8.51774		
90	109.28	-0.3302	1.0594	8.17431	109.37	-0.3317	1.0600	8.09091	109.46	-0.3332	1.0606	8.00901		
95	114.20	-0.4100	1.1265	7.69090	114.29	-0.4114	1.1275	7.61004	114.38	-0.4129	1.1285	7.53066		
100	118.97	-0.4844	1.1983	7.23984	119.06	-0.4858	1.1998	7.16151	119.15	-0.4872	1.2012	7.08461		
105	123.60	-0.5533	1.2745	6.82226	123.68	-0.5546	1.2765	6.74640	123.77	-0.5559	1.2785	6.67194		
110	128.07	-0.6167	1.3546	6.43860	128.16	-0.6179	1.3571	6.36513	128.24	-0.6190	1.3596	6.29303		
115	132.41	-0.6744	1.4377	6.08867	132.49	-0.6755	1.4409	6.01749	132.57	-0.6766	1.4440	5.94766		
120	136.61	-0.7267	1.5231	5.77184	136.69	-0.7277	1.5269	5.70284	136.77	-0.7286	1.5307	5.63516		
125	140.69	-0.7737	1.6097	5.48714	140.76	-0.7746	1.6141	5.42019	140.84	-0.7754	1.6186	5.35451		
130	144.65	-0.8156	1.6961	5.23336	144.72	-0.8163	1.7013	5.16829	144.79	-0.8170	1.7065	5.10449		
135	148.50	-0.8526	1.7809	5.00314	148.56	-0.8532	1.7868	4.94581	148.63	-0.8538	1.7928	4.88372		
140	152.25	-0.8850	1.8627	4.81303	152.31	-0.8855	1.8694	4.75133	152.37	-0.8859	1.8760	4.69078		
145	155.92	-0.9129	1.9398	4.64384	155.97	-0.9133	1.9472	4.58346	156.02	-0.9137	1.9546	4.52428		
150	159.50	-0.9367	2.0107	4.50005	159.55	-0.9370	2.0187	4.44089	159.59	-0.9372	2.0268	4.38290		
155	163.02	-0.9564	2.0738	4.38055	163.06	-0.9566	2.0824	4.32241	163.09	-0.9568	2.0911	4.26543		
160	166.48	-0.9723	2.1277	4.28427	166.51	-0.9724	2.1368	4.22697	166.54	-0.9725	2.1459	4.17082		
165	169.90	-0.9845	2.1710	4.21033	169.92	-0.9846	2.1806	4.15368	169.95	-0.9846	2.1901	4.09818		
170	173.29	-0.9931	2.2028	4.15802	173.30	-0.9932	2.2126	4.10184	173.32	-0.9932	2.2225	4.04680		
175	176.65	-0.9983	2.2222	4.12684	176.66	-0.9983	2.2322	4.07095	176.66	-0.9983	2.2422	4.01618		
180	180.00	-1.0000	2.2287	4.11649	180.00	-1.0000	2.2388	4.06068	180.00	-1.0000	2.2489	4.00601		

x = 0.112					x = 0.113					x = 0.114				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5614	15.90471	0.00	1.0000	0.5601	15.79920	0.00	1.0000	0.5589	15.69542		
5	6.67	0.9932	0.5626	15.86425	6.68	0.9932	0.5613	15.75882	6.69	0.9932	0.5601	15.65513		
10	13.33	0.9731	0.5662	15.74367	13.35	0.9730	0.5649	15.63851	13.36	0.9729	0.5637	15.53509		
15	19.97	0.9399	0.5722	15.54541	19.99	0.9397	0.5710	15.44070	20.01	0.9396	0.5697	15.33772		
20	26.57	0.8944	0.5807	15.27344	26.60	0.8941	0.5795	15.16936	26.63	0.8939	0.5783	15.06699		
25	33.13	0.8374	0.5919	14.93314	33.17	0.8371	0.5907	14.82986	33.20	0.8367	0.5895	14.72829		
30	39.63	0.7701	0.6058	14.53109	39.68	0.7697	0.6046	14.42880	39.72	0.7692	0.6034	14.32819		
35	46.07	0.6938	0.6226	14.07492	46.12	0.6932	0.6214	13.97379	46.17	0.6926	0.6203	13.87433		
40	52.42	0.6098	0.6424	13.57303	52.48	0.6091	0.6413	13.47323	52.53	0.6083	0.6402	13.37508		
45	58.69	0.5197	0.6655	13.03431	58.75	0.5188	0.6645	12.93601	58.81	0.5178	0.6634	12.83934		
50	64.85	0.4249	0.6922	12.46793	64.92	0.4238	0.6912	12.37129	64.99	0.4228	0.6902	12.27626		
55	70.91	0.3270	0.7226	11.88300	70.98	0.3258	0.7217	11.78818	71.06	0.3246	0.7208	11.69495		
60	76.85	0.2275	0.7570	11.28839	76.92	0.2262	0.7562	11.19553	77.00	0.2249	0.7554	11.10423		
65	82.66	0.1278	0.7957	10.69243	82.74	0.1264	0.7951	10.60186	82.82	0.1250	0.7944	10.51243		
70	88.33	0.0292	0.8389	10.10278	88.41	0.0277	0.8385	10.01422	88.50	0.0262	0.8380	9.92716		
75	93.86	-0.0673	0.8869	9.52624	93.95	-0.0688	0.8867	9.43997	94.03	-0.0704	0.8864	9.35519		
80	99.24	-0.1606	0.9399	8.96864	99.33	-0.1622	0.9399	8.88475	99.42	-0.1637	0.9398	8.80231		
85	104.47	-0.2500	0.9980	8.43482	104.56	-0.2515	0.9982	8.35335	104.65	-0.2530	0.9985	8.27330		
90	109.55	-0.3347	1.0612	7.92857	109.64	-0.3362	1.0618	7.84955	109.73	-0.3376	1.0624	7.77193		
95	114.47	-0.4143	1.1295	7.45270	114.56	-0.4157	1.1305	7.37614	114.65	-0.4172	1.1315	7.30093		
100	119.24	-0.4885	1.2027	7.00911	119.33	-0.4899	1.2041	6.93497	119.42	-0.4912	1.2056	6.86216		
105	123.86	-0.5572	1.2804	6.59885	123.95	-0.5584	1.2824	6.52708	124.03	-0.5597	1.2843	6.45661		
110	128.33	-0.6202	1.3621	6.22227	128.41	-0.6213	1.3647	6.15280	128.50	-0.6225	1.3672	6.08460		
115	132.66	-0.6776	1.4471	5.87913	132.74	-0.6786	1.4503	5.81187	132.82	-0.6797	1.4534	5.74585		
120	136.85	-0.7295	1.5345	5.56875	136.92	-0.7305	1.5383	5.50358	137.00	-0.7314	1.5421	5.43963		
125	140.91	-0.7762	1.6231	5.29009	140.98	-0.7770	1.6276	5.22689	141.06	-0.7778	1.6321	5.16487		
130	144.85	-0.8177	1.7117	5.04191	144.92	-0.8184	1.7169	4.98052	144.99	-0.8190	1.7221	4.92030		
135	148.69	-0.8544	1.7987	4.82282	148.75	-0.8549	1.8047	4.76310	148.81	-0.8555	1.8107	4.70451		
140	152.42	-0.8864	1.8827	4.63141	152.48	-0.8868	1.8894	4.57318	152.53	-0.8873	1.8961	4.51608		
145	156.07	-0.9140	1.9619	4.46626	156.12	-0.9144	1.9693	4.40936	156.17	-0.9147	1.9767	4.35357		
150	159.63	-0.9375	2.0348	4.32605	159.68	-0.9377	2.0429	4.27032	159.72	-0.9380	2.0509	4.21567		
155	163.13	-0.9570	2.0997	4.20958	163.17	-0.9572	2.1083	4.15483	163.20	-0.9573	2.1170	4.10115		
160	166.57	-0.9727	2.1551	4.11579	166.60	-0.								

x = 0.115					x = 0.116					x = 0.117				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5577	15.59333	0.00	1.0000	0.5564	15.49289	0.00	1.0000	0.5552	15.39406		
5	6.69	0.9932	0.5588	15.55313	6.70	0.9932	0.5576	15.45278	6.71	0.9932	0.5564	15.35403		
10	13.38	0.9729	0.5625	15.43335	13.39	0.9728	0.5612	15.33325	13.41	0.9728	0.5600	15.23476		
15	20.04	0.9395	0.5685	15.23641	20.06	0.9394	0.5673	15.13675	20.08	0.9392	0.5661	15.03868		
20	26.66	0.8937	0.5771	14.96630	26.69	0.8935	0.5759	14.86723	26.72	0.8932	0.5747	14.76976		
25	33.24	0.8364	0.5883	14.62837	33.28	0.8360	0.5871	14.53008	33.31	0.8357	0.5860	14.43336		
30	39.76	0.7687	0.6023	14.22923	39.80	0.7682	0.6011	14.13188	39.85	0.7678	0.6000	14.03610		
35	46.22	0.6919	0.6191	13.77650	46.27	0.6913	0.6180	13.68026	46.31	0.6907	0.6169	13.58557		
40	52.59	0.6075	0.6391	13.27854	52.65	0.6067	0.6380	13.18358	52.70	0.6060	0.6370	13.09015		
45	58.87	0.5169	0.6624	12.74427	58.94	0.5160	0.6614	12.65075	59.00	0.5151	0.6604	12.55874		
50	65.06	0.4217	0.6893	12.18281	65.12	0.4207	0.6883	12.09088	65.19	0.4196	0.6873	12.00045		
55	71.13	0.3235	0.7199	11.60326	71.20	0.3223	0.7190	11.51308	71.27	0.3211	0.7182	11.42438		
60	77.08	0.2236	0.7547	11.01445	77.15	0.2223	0.7539	10.92616	77.23	0.2210	0.7531	10.83932		
65	82.90	0.1236	0.7938	10.42469	82.98	0.1222	0.7931	10.33841	83.06	0.1208	0.7925	10.25355		
70	88.58	0.0247	0.8375	9.84157	88.67	0.0233	0.8370	9.75741	88.75	0.0218	0.8366	9.67465		
75	94.12	-0.0719	0.8861	9.27184	94.21	-0.0734	0.8858	9.18990	94.29	-0.0749	0.8856	9.10932		
80	99.51	-0.1652	0.9398	8.72128	99.60	-0.1667	0.9398	8.64162	99.69	-0.1682	0.9398	8.56330		
85	104.74	-0.2545	0.9988	8.19464	104.83	-0.2560	0.9990	8.11732	104.92	-0.2575	0.9993	8.04130		
90	109.82	-0.3391	1.0630	7.69565	109.91	-0.3406	1.0636	7.62069	110.00	-0.3421	1.0642	7.54700		
95	114.74	-0.4186	1.1325	7.22704	114.83	-0.4200	1.1335	7.15444	114.92	-0.4214	1.1345	7.08309		
100	119.51	-0.4926	1.2070	6.79063	119.60	-0.4939	1.2085	6.72037	119.69	-0.4952	1.2099	6.65132		
105	124.12	-0.5609	1.2863	6.38741	124.21	-0.5622	1.2882	6.31942	124.29	-0.5634	1.2902	6.25264		
110	128.58	-0.6236	1.3697	6.01764	128.67	-0.6248	1.3722	5.95187	128.75	-0.6259	1.3747	5.88727		
115	132.90	-0.6807	1.4566	5.68103	132.98	-0.6817	1.4597	5.61739	133.06	-0.6828	1.4628	5.53488		
120	137.08	-0.7323	1.5459	5.37685	137.15	-0.7332	1.5497	5.31521	137.23	-0.7341	1.5535	5.25469		
125	141.13	-0.7786	1.6366	5.10400	141.20	-0.7793	1.6412	5.04425	141.27	-0.7801	1.6457	4.98559		
130	145.06	-0.8197	1.7274	4.86120	145.12	-0.8204	1.7326	4.80320	145.19	-0.8211	1.7379	4.74626		
135	148.87	-0.8560	1.8166	4.64703	148.94	-0.8566	1.8226	4.59063	149.00	-0.8571	1.8286	4.53527		
140	152.59	-0.8877	1.9028	4.46006	152.65	-0.8882	1.9095	4.40509	152.70	-0.8886	1.9162	4.35116		
145	156.22	-0.9151	1.9842	4.29885	156.27	-0.9154	1.9916	4.24516	156.31	-0.9158	1.9990	4.19249		
150	159.76	-0.9383	2.0590	4.16207	159.80	-0.9385	2.0671	4.10949	159.85	-0.9388	2.0752	4.05792		
155	163.24	-0.9575	2.1257	4.04851	163.28	-0.9577	2.1344	3.99687	163.31	-0.9579	2.1431	3.94623		
160	166.66	-0.9730	2.1827	3.95709	166.69	-0.9731	2.1919	3.90623	166.72	-0.9733	2.2011	3.85635		
165	170.04	-0.9849	2.2285	3.88694	170.06	-0.9850	2.2382	3.83668	170.08	-0.9850	2.2478	3.78739		
170	173.38	-0.9933	2.2621	3.83734	173.39	-0.9934	2.2721	3.78751	173.41	-0.9934	2.2821	3.73864		
175	176.69	-0.9983	2.2826	3.80779	176.70	-0.9983	2.2928	3.75822	176.71	-0.9984	2.3030	3.70960		
180	180.00	-1.0000	2.2896	3.79797	180.00	-1.0000	2.2998	3.74849	180.00	-1.0000	2.3100	3.69996		

x = 0.118					x = 0.119					x = 0.120				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5540	15.29680	0.00	1.0000	0.5528	15.20107	0.00	1.0000	0.5516	15.10684		
5	6.72	0.9931	0.5552	15.25685	6.72	0.9931	0.5540	15.16121	6.73	0.9931	0.5528	15.06705		
10	13.42	0.9727	0.5588	15.13783	13.43	0.9726	0.5576	15.04243	13.45	0.9726	0.5565	14.94852		
15	20.10	0.9391	0.5649	14.94217	20.12	0.9390	0.5637	14.84718	20.14	0.9388	0.5626	14.75367		
20	26.75	0.8930	0.5735	14.67383	26.78	0.8928	0.5724	14.57942	26.80	0.8926	0.5712	14.48648		
25	33.35	0.8354	0.5848	14.33819	33.38	0.8350	0.5836	14.24452	33.42	0.8347	0.5825	14.15231		
30	39.89	0.7673	0.5988	13.94184	39.93	0.7668	0.5977	13.84907	39.97	0.7663	0.5966	13.75776		
35	46.36	0.6901	0.6158	13.49239	46.41	0.6895	0.6147	13.40069	46.46	0.6889	0.6136	13.31043		
40	52.76	0.6052	0.6359	12.99822	52.81	0.6044	0.6348	12.90775	52.87	0.6037	0.6338	12.81870		
45	59.06	0.5142	0.6593	12.46821	59.12	0.5133	0.6583	12.37913	59.18	0.5124	0.6573	12.29145		
50	65.26	0.4186	0.6864	11.91148	65.32	0.4175	0.6854	11.82393	65.39	0.4165	0.6845	11.73777		
55	71.34	0.3199	0.7173	11.33711	71.41	0.3187	0.7164	11.25124	71.48	0.3176	0.7156	11.16673		
60	77.31	0.2197	0.7524	10.75389	77.38	0.2184	0.7516	10.66983	77.46	0.2172	0.7509	10.58712		
65	83.14	0.1195	0.7919	10.17008	83.22	0.1181	0.7913	10.08796	83.30	0.1167	0.7906	10.00716		
70	88.83	0.0204	0.8361	9.59325	88.91	0.0189	0.8356	9.51317	89.00	0.0175	0.8352	9.43439		
75	94.38	-0.0763	0.8853	9.03008	94.46	-0.0778	0.8851	8.95214	94.55	-0.0793	0.8848	8.87546		
80	99.77	-0.1697	0.9397	8.48629	99.86	-0.1712	0.9397	8.41055	99.95	-0.1727	0.9397	8.33605		
85	105.01	-0.2590	0.9995	7.96657	105.10	-0.2605	0.9998	7.89308	105.19	-0.2620	1.0001	7.82080		
90	110.09	-0.3435	1.0648	7.47457	110.18	-0.3450	1.0654	7.40336	110.27	-0.3464	1.0660	7.33333		
95	115.01	-0.4228	1.1355	7.01296	115.10	-0.4242	1.1365	6.94402	115.19	-0.4256	1.1375	6.87624		
100	119.77	-0.4966	1.2114	6.58347	119.86	-0.4979	1.2128	6.51678	119.95	-0.4992	1.2143	6.45122		
105	124.38	-0.5647	1.2921	6.18701	124.46	-0.5659	1.2941	6.12253	124.55	-0.5671	1.2961	6.05915		
110	128.83	-0.6270	1.3773	5.82381	128.91	-0.6282	1.3798	5.76145	129.00	-0.6293	1.3823	5.70018		
115	133.14	-0.6838	1.4660	5.49349	133.22	-0.6848	1.4691	5.43318	133.30	-0.6858	1.4723	5.37393		
120	137.31	-0.7350	1.5574	5.19526	137.38	-0.7359	1.5612	5.13689	137.46	-0.7368	1.5650	5.07955		
125	141.34	-0.7809	1.6502	4.92800	141.41	-0.7817	1.6547	4.87144	141.48	-0.7824	1.6593	4.81589		
130	145.26	-0.8217	1.7431	4.69037	145.32	-0.8224	1.7484	4.63549	145.39	-0.8230	1.7537	4.58160		
135	149.06	-0.8577	1.8346	4.48094	149.12	-0.8582	1.8406	4.42759	149.18	-0.8588	1.8466	4.37522		
140	152.76	-0.8891	1.9230	4.29822	152.81	-0.8895	1.9297	4.24626	152.87	-0.8899	1.9365	4.19526		
145	156.36	-0.9161	2.0065	4.14080	156.41	-0.9164	2.0140	4.09007	156.46	-0.9168	2.0214	4.04027		
150	159.89	-0.9390	2.0834	4.00731	159.93	-0.9393	2.0915	3.95765	159.97	-0.9395	2.0997			

$x = 0.121$					$x = 0.122$					$x = 0.123$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.5504	15.01406	0.00	1.0000	0.5493	14.92270	0.00	1.0000	0.5481	14.83274		
5	6.74	0.9931	0.5517	14.97435	6.74	0.9931	0.5505	14.88308	6.75	0.9931	0.5493	14.79319		
10	13.46	0.9725	0.5553	14.85606	13.48	0.9725	0.5541	14.76502	13.49	0.9724	0.5530	14.67537		
15	20.17	0.9387	0.5614	14.66162	20.19	0.9386	0.5602	14.57097	20.21	0.9384	0.5591	14.48171		
20	26.83	0.8923	0.5700	14.39499	26.86	0.8921	0.5689	14.30490	26.89	0.8919	0.5678	14.21618		
25	33.45	0.8343	0.5813	14.06154	33.49	0.8340	0.5802	13.97216	33.52	0.8337	0.5791	13.88415		
30	40.02	0.7659	0.5954	13.66787	40.06	0.7654	0.5943	13.57936	40.10	0.7649	0.5932	13.49220		
35	46.51	0.6882	0.6125	13.22158	46.56	0.6876	0.6114	13.13410	46.60	0.6870	0.6104	13.04795		
40	52.92	0.6029	0.6327	12.73105	52.97	0.6022	0.6317	12.64474	53.03	0.6014	0.6306	12.55977		
45	59.24	0.5115	0.6563	12.20514	59.30	0.5106	0.6553	12.12017	59.36	0.5097	0.6544	12.03651		
50	65.45	0.4154	0.6836	11.65296	65.52	0.4144	0.6826	11.56946	65.58	0.4133	0.6817	11.48726		
55	71.56	0.3164	0.7147	11.08356	71.63	0.3152	0.7139	11.00169	71.70	0.3141	0.7131	10.92108		
60	77.53	0.2159	0.7501	10.50571	77.61	0.2146	0.7494	10.42559	77.68	0.2133	0.7486	10.34671		
65	83.38	0.1153	0.7900	9.92765	83.45	0.1140	0.7894	9.84939	83.53	0.1126	0.7888	9.77235		
70	89.08	0.0161	0.8347	9.35687	89.16	0.0146	0.8343	9.28058	89.24	0.0132	0.8338	9.20549		
75	94.63	-0.0808	0.8845	8.80002	94.72	-0.0822	0.8843	8.72579	94.80	-0.0837	0.8840	8.65274		
80	100.03	-0.1742	0.9397	8.26276	100.12	-0.1757	0.9397	8.19066	100.21	-0.1772	0.9397	8.11970		
85	105.28	-0.2635	1.0003	7.74971	105.36	-0.2649	1.0006	7.67978	105.45	-0.2664	1.0009	7.61097		
90	110.36	-0.3479	1.0666	7.26446	110.44	-0.3493	1.0672	7.19672	110.53	-0.3507	1.0678	7.13008		
95	115.28	-0.4270	1.1385	6.80959	115.36	-0.4283	1.1395	6.74404	115.45	-0.4297	1.1405	6.67957		
100	120.03	-0.5005	1.2157	6.38677	120.12	-0.5018	1.2172	6.32339	120.21	-0.5031	1.2186	6.26107		
105	124.63	-0.5683	1.2980	5.99684	124.72	-0.5695	1.3000	5.93559	124.80	-0.5707	1.3019	5.87537		
110	129.08	-0.6304	1.3848	5.63996	129.16	-0.6315	1.3874	5.58077	129.24	-0.6326	1.3899	5.52257		
115	133.38	-0.6868	1.4754	5.31570	133.45	-0.6878	1.4786	5.25848	133.53	-0.6888	1.4818	5.20223		
120	137.53	-0.7377	1.5688	5.02321	137.61	-0.7385	1.5727	4.96785	137.68	-0.7394	1.5765	4.91345		
125	141.56	-0.7832	1.6638	4.76132	141.63	-0.7840	1.6683	4.70771	141.70	-0.7847	1.6729	4.65503		
130	145.45	-0.8237	1.7589	4.52867	145.52	-0.8243	1.7642	4.67668	145.58	-0.8250	1.7695	4.62560		
135	149.24	-0.8593	1.8527	4.32378	149.30	-0.8598	1.8587	4.27327	149.36	-0.8604	1.8648	4.22365		
140	152.92	-0.8904	1.9433	4.14517	152.97	-0.8908	1.9501	4.09599	153.03	-0.8912	1.9569	4.04769		
145	156.51	-0.9171	2.0289	3.99138	156.56	-0.9175	2.0365	3.94338	156.60	-0.9178	2.0440	3.89625		
150	160.02	-0.9398	2.1078	3.86106	160.06	-0.9400	2.1160	3.81408	160.10	-0.9403	2.1243	3.76796		
155	163.45	-0.9586	2.1782	3.75296	163.49	-0.9588	2.1870	3.70686	163.52	-0.9589	2.1958	3.66159		
160	166.83	-0.9737	2.2383	3.66603	166.86	-0.9738	2.2477	3.62063	166.89	-0.9739	2.2571	3.61760		
165	170.17	-0.9853	2.2868	3.59936	170.19	-0.9854	2.2966	3.55452	170.21	-0.9854	2.3064	3.51050		
170	173.46	-0.9935	2.3223	3.55225	173.48	-0.9935	2.3324	3.50780	173.49	-0.9936	2.3425	3.46417		
175	176.74	-0.9984	2.3440	3.52419	176.74	-0.9984	2.3543	3.47998	176.75	-0.9984	2.3646	3.43658		
180	180.00	-1.0000	2.3513	3.51487	180.00	-1.0000	2.3617	3.47074	180.00	-1.0000	2.3721	3.42742		

$x = 0.124$					$x = 0.125$					$x = 0.126$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.5470	14.74413	0.00	1.0000	0.5458	14.65685	0.00	1.0000	0.5447	14.57087		
5	6.76	0.9931	0.5482	14.70466	6.77	0.9930	0.5470	14.61746	6.77	0.9930	0.5459	14.53155		
10	13.51	0.9723	0.5518	14.58707	13.52	0.9723	0.5507	14.50010	13.53	0.9722	0.5495	14.44441		
15	20.23	0.9383	0.5579	14.39380	20.25	0.9382	0.5568	14.30720	20.27	0.9381	0.5557	14.22189		
20	26.92	0.8917	0.5666	14.12881	26.95	0.8914	0.5655	14.04274	26.97	0.8912	0.5644	13.95796		
25	33.56	0.8333	0.5780	13.79747	33.59	0.8330	0.5769	13.71208	33.63	0.8327	0.5758	13.62797		
30	40.14	0.7645	0.5921	13.40637	40.18	0.7640	0.5911	13.32182	40.22	0.7635	0.5900	13.23854		
35	46.65	0.6864	0.6093	12.96312	46.70	0.6858	0.6082	12.87956	46.75	0.6852	0.6072	12.79725		
40	53.08	0.6007	0.6296	12.47608	53.14	0.5999	0.6286	12.39366	53.19	0.5992	0.6276	12.31247		
45	59.42	0.5088	0.6534	11.95412	59.48	0.5079	0.6524	11.87298	59.54	0.5070	0.6514	11.79306		
50	65.65	0.4123	0.6808	11.40632	65.71	0.4113	0.6799	11.32660	65.78	0.4103	0.6790	11.24809		
55	71.77	0.3129	0.7122	10.84172	71.83	0.3118	0.7114	10.76356	71.90	0.3106	0.7106	10.68659		
60	77.76	0.2121	0.7479	10.26905	77.83	0.2108	0.7472	10.19258	77.90	0.2096	0.7465	10.11727		
65	83.61	0.1113	0.7882	9.69651	83.69	0.1099	0.7876	9.62184	83.77	0.1086	0.7870	9.54832		
70	89.32	0.0118	0.8334	9.13158	89.40	0.0104	0.8330	9.05881	89.48	0.0090	0.8325	8.98716		
75	94.89	-0.0852	0.8838	8.58083	94.97	-0.0866	0.8835	8.51005	95.05	-0.0881	0.8833	8.44036		
80	100.29	-0.1786	0.9396	8.04967	100.38	-0.1801	0.9396	7.98114	100.46	-0.1816	0.9396	7.91348		
85	105.54	-0.2678	1.0012	7.54326	105.62	-0.2693	1.0014	7.47662	105.71	-0.2707	1.0017	7.41104		
90	110.62	-0.3521	1.0684	7.06451	110.70	-0.3536	1.0690	7.00000	110.79	-0.3550	1.0697	6.93650		
95	115.54	-0.4311	1.1415	6.61615	115.62	-0.4324	1.1425	6.55375	115.71	-0.4338	1.1435	6.49236		
100	120.29	-0.5044	1.2201	6.19977	120.38	-0.5057	1.2215	6.13947	120.46	-0.5070	1.2230	6.08014		
105	124.89	-0.5719	1.3039	5.81614	124.97	-0.5731	1.3059	5.75789	125.05	-0.5743	1.3078	5.70060		
110	129.32	-0.6337	1.3924	5.46536	129.40	-0.6348	1.3950	5.40909	129.48	-0.6359	1.3975	5.35376		
115	133.61	-0.6898	1.4849	5.14694	133.69	-0.6907	1.4881	5.09257	133.77	-0.6917	1.4913	5.03912		
120	137.76	-0.7403	1.5803	4.85998	137.83	-0.7412	1.5842	4.80741	137.90	-0.7420	1.5880	4.75574		
125	141.77	-0.7855	1.6774	4.60327	141.83	-0.7862	1.6820	4.55239	141.90	-0.7870	1.6866	4.50238		
130	145.65	-0.8256	1.7748	4.37541	145.71	-0.8262	1.7801	4.32609	145.78	-0.8269	1.7854	4.27762		
135	149.42	-0.8609	1.8708	4.17491	149.48	-0.8614	1.8769	4.12701	149.54	-0.8620	1.8830	4.07995		
140	153.08	-0.8917	1.9637	4.00024	153.14	-0.8921	1.9705	3.95363	153.19	-0.8925	1.9773	3.90783		
145	156.65	-0.9181	2.0515	3.84995	156.70	-0.9184	2.0591	3.80448	156.75	-0.9188	2.0667	3.75980		
150	160.14	-0.9405	2.1325	3.72266	160.18	-0.9408	2.1407	3.67817	160.22	-0.9410	2.1490	3.63447		
155	163.56	-0.9591	2.2047	3.61714	163.59	-0.9593	2.2136	3.57349	163.63	-0.9595	2.2225	3.53051		
160	166.92	-0.9740	2.2664	3.52321	166.95	-0.9742	2.2759	3.48935	166.97	-0.9743	2.2853	3.44715		
165	170.23	-0.9855	2.3162	3.46728	170.25	-0.9856	2.3261	3.42485	170.27	-0.9856	2.3360	3.38317		
170	173.51	-0.9936	2.3527	3.42134	173.52	-0.9936	2.3629	3.37929	173.53	-0.9936	2.3731	3.33799		
175	176.76	-0.9984	2.3750	3.39398	176.77	-0.9984	2.3854	3.35216	176.77	-0.9984	2.3958	3.31108		
180	180.00	-1.0000	2.3825	3.38490	180.00	-1.0000	2.3930	3.34315	180.00	-1.0000	2.4034	3.30215		

$$x = 0.127$$

$$x = 0.128$$

$$x = 0.129$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5426	14.48615	0.00	1.0000	0.5424	14.40267	0.00	1.0000	0.5413	14.32040
5	6.78	0.9930	0.5446	14.44691	6.79	0.9930	0.5436	14.36350	6.79	0.9930	0.5425	14.28130
10	13.56	0.9722	0.5484	14.32999	13.56	0.9721	0.5473	14.24680	13.58	0.9721	0.5462	14.16482
15	20.29	0.9379	0.5546	14.13784	20.31	0.9378	0.5535	14.05502	20.33	0.9377	0.5524	13.97339
20	27.00	0.8910	0.5633	13.87442	27.03	0.8908	0.5622	13.79211	27.06	0.8906	0.5611	13.71099
25	33.66	0.8323	0.5747	13.54511	33.70	0.8320	0.5736	13.46345	33.73	0.8317	0.5725	13.38299
30	40.26	0.7631	0.5889	13.15649	40.30	0.7626	0.5878	13.07564	40.35	0.7622	0.5868	12.99597
35	46.79	0.6846	0.6061	12.71616	46.84	0.6840	0.6051	12.63626	46.89	0.6834	0.6041	12.55753
40	53.24	0.5984	0.6266	12.23249	53.30	0.5977	0.6256	12.15369	53.35	0.5970	0.6246	12.07604
45	59.60	0.5061	0.6505	11.71433	59.65	0.5052	0.6495	11.63676	59.71	0.5043	0.6486	11.56033
50	65.84	0.4092	0.6781	11.17075	65.91	0.4082	0.6772	11.09456	65.97	0.4072	0.6763	11.01948
55	71.37	0.3095	0.7098	10.61077	72.04	0.3083	0.7089	10.53608	72.11	0.3072	0.7081	10.46249
60	77.98	0.2093	0.7457	10.04310	78.05	0.2071	0.7450	9.97003	78.12	0.2058	0.7443	9.89805
65	83.84	0.1072	0.7864	9.47590	83.92	0.1059	0.7858	9.40457	84.00	0.1046	0.7852	9.33431
70	89.57	0.0076	0.8321	8.91660	89.65	0.0062	0.8317	8.84711	89.72	0.0048	0.8312	8.77867
75	95.13	-0.0895	0.8831	8.37175	95.22	-0.0909	0.8828	8.30417	95.30	-0.0924	0.8826	8.23762
80	100.55	-0.1630	0.9396	7.84687	100.63	-0.1645	0.9396	7.78128	100.71	-0.1659	0.9396	7.71669
85	105.79	-0.2722	1.0020	7.34647	105.88	-0.2736	1.0023	7.28291	105.97	-0.2751	1.0026	7.22032
90	110.98	-0.3564	1.0703	6.87401	110.96	-0.3578	1.0709	6.81250	111.05	-0.3592	1.0715	6.75193
95	115.79	-0.4351	1.1445	6.43194	115.88	-0.4365	1.1455	6.37247	115.97	-0.4378	1.1465	6.31393
100	120.55	-0.5082	1.2244	6.02177	120.63	-0.5095	1.2259	5.96433	120.71	-0.5108	1.2273	5.90780
105	125.13	-0.5755	1.3098	5.64423	125.22	-0.5767	1.3118	5.58877	125.30	-0.5779	1.3137	5.53420
110	129.57	-0.6370	1.4001	5.29933	129.65	-0.6380	1.4026	5.24579	129.72	-0.6391	1.4051	5.19312
115	133.84	-0.6927	1.4944	4.98655	133.92	-0.6937	1.4976	4.93484	134.00	-0.6946	1.5008	4.88398
120	137.98	-0.7429	1.5919	4.70493	138.05	-0.7437	1.5957	4.65496	138.12	-0.7446	1.5996	4.60582
125	141.37	-0.7877	1.6911	4.45322	142.04	-0.7885	1.6957	4.40488	142.11	-0.7892	1.7003	4.35734
130	145.84	-0.8275	1.7908	4.22998	145.91	-0.8281	1.7961	4.18314	145.97	-0.8287	1.8014	4.13709
135	149.60	-0.8625	1.8891	4.03370	149.65	-0.8630	1.8952	3.98823	149.71	-0.8635	1.9013	3.94354
140	153.24	-0.8929	1.9842	3.86283	153.30	-0.8933	1.9911	3.81860	153.35	-0.8937	1.9979	3.77513
145	156.79	-0.9191	2.0743	3.71591	156.84	-0.9194	2.0819	3.67277	156.89	-0.9197	2.0895	3.63038
150	160.26	-0.9413	2.1573	3.59154	160.30	-0.9415	2.1656	3.54936	160.35	-0.9417	2.1739	3.50791
155	163.66	-0.9596	2.2314	3.48850	163.70	-0.9598	2.2403	3.44712	163.73	-0.9600	2.2493	3.40646
160	167.00	-0.9744	2.2948	3.40570	167.03	-0.9745	2.3043	3.36498	167.06	-0.9746	2.3138	3.32497
165	170.29	-0.9857	2.3459	3.34224	170.31	-0.9857	2.3558	3.30203	170.33	-0.9858	2.3658	3.26253
170	173.55	-0.9937	2.3834	3.29743	173.56	-0.9937	2.3936	3.25758	173.58	-0.9937	2.4039	3.21844
175	176.78	-0.9984	2.4062	3.27074	176.79	-0.9984	2.4167	3.23112	176.79	-0.9984	2.4272	3.19219
180	180.00	-1.0000	2.4139	3.26188	180.00	-1.0000	2.4245	3.22233	180.00	-1.0000	2.4351	3.18348

$$x = 0.130$$

$$x = 0.131$$

$$x = 0.132$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5402	14.23931	0.00	1.0000	0.5391	14.15938	0.00	1.0000	0.5380	14.08058
5	6.80	0.9930	0.5414	14.20028	6.81	0.9929	0.5403	14.12042	6.81	0.9929	0.5392	14.04169
10	13.59	0.9720	0.5451	14.08401	13.60	0.9719	0.5440	14.00436	13.62	0.9719	0.5429	13.92584
15	20.35	0.9376	0.5513	13.89294	20.38	0.9374	0.5502	13.81365	20.40	0.9373	0.5491	13.73547
20	27.08	0.8903	0.5600	13.63104	27.11	0.8901	0.5589	13.55224	27.14	0.8899	0.5579	13.47455
25	33.76	0.8313	0.5715	13.30368	33.80	0.8310	0.5704	13.22551	33.83	0.8307	0.5693	13.14844
30	40.39	0.7617	0.5857	12.91744	40.43	0.7612	0.5847	12.84005	40.47	0.7608	0.5837	12.76375
35	46.94	0.6828	0.6030	12.47994	46.98	0.6822	0.6020	12.40345	47.03	0.6816	0.6010	12.32806
40	53.40	0.5962	0.6236	11.99951	53.45	0.5955	0.6226	11.92408	53.51	0.5947	0.6216	11.84973
45	59.77	0.5035	0.6476	11.48501	59.83	0.5026	0.6467	11.41078	59.89	0.5017	0.6458	11.33761
50	66.03	0.4062	0.6754	10.94550	66.10	0.4052	0.6746	10.87259	66.16	0.4042	0.6737	10.80073
55	72.18	0.3061	0.7073	10.38998	72.25	0.3049	0.7065	10.31852	72.31	0.3038	0.7057	10.24810
60	78.19	0.2046	0.7436	9.82713	78.27	0.2033	0.7429	9.75724	78.34	0.2021	0.7422	9.68837
65	84.07	0.1033	0.7847	9.26509	84.15	0.1019	0.7841	9.19688	84.22	0.1006	0.7835	9.12967
70	89.80	0.0034	0.8308	8.71124	89.88	0.0020	0.8304	8.64480	89.96	0.0007	0.8300	8.57934
75	95.38	-0.0938	0.8824	8.17207	95.46	-0.0952	0.8821	8.10749	95.54	-0.0966	0.8819	8.04386
80	100.80	-0.1874	0.9396	7.65307	100.88	-0.1888	0.9396	7.59041	100.97	-0.1902	0.9396	7.52858
85	106.05	-0.2765	1.0028	7.15869	106.13	-0.2779	1.0031	7.09799	106.22	-0.2793	1.0034	7.03820
90	111.13	-0.3606	1.0721	6.69230	111.22	-0.3619	1.0727	6.63358	111.30	-0.3633	1.0733	6.57575
95	116.05	-0.4392	1.1475	6.25631	116.13	-0.4405	1.1485	6.19957	116.22	-0.4418	1.1495	6.14370
100	120.80	-0.5120	1.2288	5.85215	120.88	-0.5133	1.2302	5.79737	120.97	-0.5145	1.2317	5.74344
105	125.38	-0.5790	1.3157	5.48049	125.46	-0.5802	1.3177	5.42763	125.54	-0.5813	1.3197	5.37559
110	129.80	-0.6402	1.4077	5.14128	129.88	-0.6412	1.4102	5.09028	129.96	-0.6423	1.4128	5.04008
115	134.07	-0.6956	1.5040	4.83395	134.15	-0.6965	1.5071	4.78471	134.2	-0.6975	1.5103	4.73627
120	138.19	-0.7454	1.6034	4.55748	138.27	-0.7463	1.6073	4.50993	138.34	-0.7471	1.6112	4.46314
125	142.18	-0.7899	1.7049	4.31059	142.25	-0.7907	1.7095	4.26461	142.31	-0.7914	1.7141	4.21937
130	146.03	-0.8294	1.8068	4.09181	146.10	-0.8306	1.8122	4.04728	146.16	-0.8306	1.8175	4.00348
135	149.77	-0.8640	1.9074	3.89960	149.83	-0.8645	1.9135	3.85639	149.89	-0.8650	1.9197	3.81391
140	153.40	-0.8942	2.0046	3.73240	153.45	-0.8946	2.0117	3.69039	153.51	-0.8950	2.0167	3.64907
145	156.94	-0.9201	2.0971	3.58872	156.98	-0.9204	2.1048	3.54776	157.03	-0.9207	2.1125	3.50749
150	160.39	-0.9420	2.1823	3.46717	160.43	-0.9422	2.1906	3.42713	160.47	-0.9424	2.1990	3.38776
155	163.76	-0.9601	2.2583	3.36651	163.80	-0.9603	2.2673	3.32724	163.83	-0.9605	2.2763	3.28865
160	167.08	-0.9747	2.3233	3.28566	167.11	-0.9748	2.3329	3.24703	167.14	-0.9749	2.3424	3.20906
165	170.35	-0.9859	2.3757	3.22372	170.38	-0.9859	2.3858	3.18558	170.40	-0.9860	2.3958	3.14810
170	173.59	-0.9937	2.4142	3.17999	173.60	-0.9938	2.4246	3.14220	173.62	-0.9938	2.4349	3.10506
175	176.80	-0.9984	2.4377	3.15395	176.81	-0.9984	2.4443	3.11637	176.81	-0.9985	2.4589	3.07944
180	180.00	-1.0000	2.4456	3.14531	180.00	-1.0000	2.4563	3.10780	180.00	-1.0000	2.4669	3.07094

x = 0.133					x = 0.134					x = 0.135				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5369	14.00288	0.00	1.0000	0.5359	13.92627	0.00	1.0000	0.5348	13.85072		
5	6.82	0.9929	0.5382	13.96406	6.83	0.9929	0.5371	13.88752	6.84	0.9929	0.5360	13.81203		
10	13.63	0.9718	0.5418	13.84842	13.64	0.9718	0.5408	13.77208	13.66	0.9717	0.5397	13.69679		
15	20.42	0.9372	0.5480	13.65839	20.44	0.9371	0.5470	13.58239	20.46	0.9369	0.5459	13.50744		
20	27.17	0.8897	0.5568	13.39795	27.19	0.8895	0.5558	13.32242	27.22	0.8893	0.5547	13.24794		
25	33.87	0.8303	0.5683	13.07246	33.90	0.8300	0.5672	12.99755	33.93	0.8297	0.5662	12.92367		
30	40.51	0.7603	0.5825	12.68853	40.55	0.7599	0.5816	12.61436	40.59	0.7594	0.5806	12.54122		
35	47.07	0.6811	0.6006	12.25373	47.12	0.6805	0.5990	12.18045	47.17	0.6799	0.5980	12.10818		
40	53.56	0.5940	0.6207	11.77644	53.61	0.5933	0.6197	11.70417	53.66	0.5926	0.6187	11.63291		
45	59.94	0.5008	0.6448	11.26547	60.00	0.5000	0.6439	11.19436	60.06	0.4991	0.6430	11.12423		
50	66.22	0.4032	0.6728	10.72989	66.29	0.4022	0.6720	10.66005	66.35	0.4012	0.6711	10.59120		
55	72.38	0.3027	0.7049	10.17868	72.45	0.3016	0.7042	10.11024	72.52	0.3004	0.7034	10.04277		
60	78.41	0.2009	0.7415	9.62049	78.48	0.1997	0.7408	9.55357	78.55	0.1984	0.7402	9.48760		
65	84.30	0.0993	0.7830	9.06342	84.38	0.0980	0.7824	8.99813	84.45	0.0967	0.7818	8.93377		
70	90.04	-0.0007	0.8296	8.51484	90.12	-0.0021	0.8291	8.45126	90.20	-0.0035	0.8287	8.38860		
75	95.63	-0.0980	0.8817	7.98117	95.71	-0.0994	0.8815	7.91939	95.79	-0.1008	0.8812	7.85850		
80	101.05	-0.1916	0.9396	7.46786	101.13	-0.1930	0.9397	7.40794	101.21	-0.1945	0.9397	7.34888		
85	106.30	-0.2807	1.0037	6.97930	106.39	-0.2821	1.0040	6.92127	106.47	-0.2835	1.0043	6.86409		
90	111.39	-0.3647	1.0740	6.51879	111.47	-0.3661	1.0746	6.46268	111.56	-0.3674	1.0752	6.40740		
95	116.30	-0.4431	1.1505	6.08868	116.39	-0.4444	1.1515	6.03448	116.47	-0.4457	1.1525	5.98110		
100	121.05	-0.5158	1.2332	5.69034	121.13	-0.5170	1.2346	5.63804	121.21	-0.5182	1.2361	5.58654		
105	125.63	-0.5825	1.3216	5.32937	125.71	-0.5836	1.3236	5.27393	125.79	-0.5848	1.3256	5.22426		
110	130.04	-0.6433	1.4153	4.99066	130.12	-0.6444	1.4179	4.94202	130.20	-0.6454	1.4205	4.89412		
115	134.30	-0.6984	1.5135	4.68859	134.38	-0.6994	1.5167	4.64166	134.45	-0.7003	1.5199	4.59547		
120	138.41	-0.7479	1.6151	4.41710	138.48	-0.7488	1.6190	4.37180	138.55	-0.7496	1.6228	4.32721		
125	142.38	-0.7921	1.7187	4.17487	142.45	-0.7928	1.7233	4.13109	142.52	-0.7935	1.7280	4.08800		
130	146.22	-0.8312	1.8229	3.96040	146.29	-0.8318	1.8283	3.91802	146.35	-0.8324	1.8337	3.87632		
135	149.94	-0.8655	1.9258	3.77212	150.00	-0.8660	1.9320	3.73101	150.06	-0.8665	1.9382	3.69058		
140	153.56	-0.8954	2.0256	3.60845	153.61	-0.8958	2.0326	3.56850	153.66	-0.8962	2.0395	3.52920		
145	157.07	-0.9210	2.1201	3.46790	157.12	-0.9213	2.1279	3.42896	157.17	-0.9216	2.1356	3.39067		
150	160.51	-0.9427	2.2074	3.34906	160.55	-0.9429	2.2158	3.31101	160.59	-0.9431	2.2243	3.27359		
155	163.87	-0.9606	2.2853	3.25070	163.90	-0.9608	2.2944	3.21340	163.93	-0.9609	2.3035	3.21762		
160	167.17	-0.9750	2.3521	3.17173	167.19	-0.9751	2.3617	3.13504	167.22	-0.9752	2.3713	3.09896		
165	170.42	-0.9860	2.4059	3.11125	170.44	-0.9861	2.4159	3.07503	170.46	-0.9862	2.4261	3.03943		
170	173.63	-0.9938	2.4453	3.06856	173.64	-0.9939	2.4558	3.03268	173.66	-0.9939	2.4662	2.99741		
175	176.82	-0.9985	2.4695	3.04315	176.83	-0.9985	2.4801	3.00747	176.84	-0.9985	2.4908	2.97240		
180	180.00	-1.0000	2.4776	3.03471	180.00	-1.0000	2.4893	2.99910	180.00	-1.0000	2.4990	2.96410		

x = 0.136					x = 0.137					x = 0.138				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5337	13.77620	0.00	1.0000	0.5327	13.70270	0.00	1.0000	0.5316	13.63020		
5	6.84	0.9929	0.5350	13.73758	6.85	0.9929	0.5339	13.66415	6.86	0.9929	0.5329	13.59170		
10	13.67	0.9717	0.5387	13.62254	13.69	0.9716	0.5376	13.54930	13.70	0.9716	0.5366	13.47705		
15	20.48	0.9368	0.5449	13.43352	20.50	0.9367	0.5438	13.36661	20.52	0.9366	0.5428	13.29436		
20	27.25	0.8890	0.5537	13.17448	27.27	0.8888	0.5526	13.10203	27.30	0.8886	0.5516	13.03055		
25	33.97	0.8294	0.5652	12.85081	34.00	0.8290	0.5642	12.77894	34.03	0.8287	0.5631	12.70805		
30	40.63	0.7590	0.5796	12.46909	40.67	0.7585	0.5786	12.39794	40.70	0.7581	0.5776	12.32777		
35	47.21	0.6793	0.5970	12.03691	47.26	0.6787	0.5961	11.96662	47.30	0.6781	0.5951	11.89729		
40	53.71	0.5918	0.6178	11.56264	53.76	0.5911	0.6169	11.49333	53.81	0.5904	0.6159	11.42496		
45	60.12	0.4983	0.6421	11.05508	60.17	0.4974	0.6412	10.98689	60.23	0.4965	0.6403	10.91962		
50	66.41	0.4002	0.6703	10.52330	66.47	0.3992	0.6694	10.45634	66.53	0.3982	0.6686	10.39030		
55	72.58	0.2993	0.7026	9.97624	72.65	0.2982	0.7018	9.91064	72.72	0.2971	0.7011	9.84594		
60	78.63	0.1972	0.7395	9.42256	78.70	0.1960	0.7388	9.35842	78.77	0.1948	0.7381	9.29517		
65	84.53	0.0954	0.7813	8.87031	84.60	0.0941	0.7807	8.80775	84.67	0.0928	0.7802	8.74605		
70	90.28	-0.0048	0.8283	8.32682	90.35	-0.0062	0.8279	8.26592	90.43	-0.0075	0.8275	8.20587		
75	95.87	-0.1022	0.8810	7.79848	95.95	-0.1036	0.8808	7.73932	96.03	-0.1050	0.8806	7.68099		
80	101.30	-0.1959	0.9397	7.29068	101.38	-0.1973	0.9397	7.23331	101.46	-0.1987	0.9397	7.17576		
85	106.55	-0.2849	1.0046	6.80775	106.64	-0.2863	1.0048	6.75222	106.72	-0.2877	1.0051	6.69748		
90	111.64	-0.3688	1.0758	6.35294	111.72	-0.3701	1.0765	6.29927	111.81	-0.3715	1.0771	6.24637		
95	116.55	-0.4470	1.1535	5.92851	116.64	-0.4483	1.1545	5.87670	116.72	-0.4496	1.1556	5.82565		
100	121.30	-0.5195	1.2375	5.53581	121.38	-0.5207	1.2390	5.48583	121.46	-0.5219	1.2405	5.43660		
105	125.87	-0.5859	1.3276	5.17534	125.95	-0.5871	1.3295	5.12717	126.03	-0.5882	1.3315	5.07971		
110	130.28	-0.6465	1.4230	4.84997	130.35	-0.6475	1.4256	4.80053	130.43	-0.6485	1.4281	4.75479		
115	134.53	-0.7012	1.5231	4.54999	134.60	-0.7022	1.5263	4.50521	134.67	-0.7031	1.5295	4.46112		
120	138.63	-0.7504	1.6267	4.28332	138.70	-0.7512	1.6306	4.24011	138.77	-0.7520	1.6345	4.19758		
125	142.58	-0.7942	1.7326	4.04559	142.65	-0.7949	1.7372	4.00386	142.72	-0.7956	1.7419	3.96277		
130	146.41	-0.8330	1.8391	3.83528	146.47	-0.8336	1.8445	3.79490	146.53	-0.8342	1.8499	3.75516		
135	150.12	-0.8670	1.9444	3.65079	150.17	-0.8675	1.9506	3.61165	150.23	-0.8680	1.9568	3.57313		
140	153.71	-0.8966	2.0465	3.49054	153.76	-0.8970	2.0535	3.45251	153.81	-0.8974	2.0605	3.41508		
145	157.21	-0.9219	2.1433	3.35301	157.26	-0.9222	2.1511	3.31595	157.30	-0.9226	2.1589	3.27950		
150	160.63	-0.9434	2.2327	3.23679	160.67	-0.9436	2.2412	3.20059	160.70	-0.9438	2.2497	3.16499		
155	163.97	-0.9611	2.3126	3.14065	164.00	-0.9613	2.3217	3.10517	164.03	-0.9614	2.3309	3.07027		
160	167.25	-0.9753	2.3810	3.06349	167.27	-0.9754	2.3.							

$x = 0.139$
 $x = 0.140$
 $x = 0.141$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5306	13.55866	0.00	1.0000	0.5296	13.48808	0.00	1.0000	0.5285	13.41844
5	6.86	0.9928	0.5318	13.52023	6.87	0.9928	0.5308	13.44972	6.88	0.9928	0.5298	13.38013
10	13.71	0.9715	0.5355	13.40577	13.73	0.9714	0.5345	13.33545	13.74	0.9714	0.5335	13.26605
15	20.54	0.9364	0.5417	13.21772	20.56	0.9363	0.5407	13.14771	20.58	0.9362	0.5397	13.07862
20	27.33	0.8894	0.5506	12.96004	27.35	0.8882	0.5496	12.89047	27.38	0.8880	0.5486	12.82182
25	34.07	0.8284	0.5621	12.63812	34.10	0.8281	0.5611	12.56911	34.13	0.8278	0.5601	12.50102
30	40.74	0.7576	0.5766	12.25853	40.78	0.7572	0.5756	12.19023	40.82	0.7567	0.5746	12.12283
35	47.35	0.6775	0.5941	11.82889	47.39	0.6770	0.5932	11.76140	47.44	0.6764	0.5922	11.69482
40	53.87	0.5897	0.6150	11.35752	53.92	0.5890	0.6140	11.29099	53.97	0.5882	0.6131	11.22535
45	60.29	0.4957	0.6334	10.85327	60.34	0.4948	0.6385	10.78781	60.40	0.4940	0.6376	10.72323
50	66.59	0.3972	0.6677	10.32515	66.66	0.3962	0.6669	10.26089	66.72	0.3953	0.6661	10.19749
55	72.78	0.2960	0.7063	9.78212	72.85	0.2949	0.6996	9.71917	72.91	0.2938	0.6988	9.65707
60	78.84	0.1936	0.7375	9.23279	78.91	0.1924	0.7368	9.17126	78.98	0.1912	0.7361	9.11057
65	84.75	0.0915	0.7796	8.68521	84.82	0.0902	0.7791	8.62520	84.90	0.0890	0.7785	8.56601
70	90.51	-0.0089	0.8271	8.14665	90.59	-0.0102	0.8267	8.08826	90.66	-0.0116	0.8263	8.03066
75	96.11	-0.1054	0.8804	7.62347	96.19	-0.1078	0.8802	7.56676	96.27	-0.1092	0.8800	7.51083
80	101.54	-0.2001	0.9397	7.12101	101.62	-0.2015	0.9397	7.06604	101.70	-0.2028	0.9398	7.01183
85	106.80	-0.2891	1.0054	6.64353	106.88	-0.2904	1.0057	6.59034	106.97	-0.2918	1.0060	6.53790
90	111.89	-0.3728	1.0777	6.19424	111.97	-0.3742	1.0783	6.14285	112.06	-0.3755	1.0790	6.09220
95	116.80	-0.4509	1.1566	5.77534	116.88	-0.4522	1.1576	5.72575	116.97	-0.4535	1.1586	5.67688
100	121.54	-0.5231	1.2420	5.38809	121.62	-0.5243	1.2434	5.34028	121.70	-0.5255	1.2449	5.29317
105	126.11	-0.5893	1.3335	5.03296	126.19	-0.5904	1.3355	4.98690	126.27	-0.5915	1.3375	4.94151
110	130.51	-0.6496	1.4307	4.70974	130.59	-0.6506	1.4333	4.66536	130.66	-0.6516	1.4359	4.62164
115	134.75	-0.7040	1.5327	4.41770	134.82	-0.7049	1.5359	4.37493	134.90	-0.7058	1.5392	4.33280
120	138.84	-0.7528	1.6385	4.15569	138.91	-0.7536	1.6424	4.11444	138.98	-0.7544	1.6463	4.07382
125	142.78	-0.7963	1.7465	3.92232	142.85	-0.7970	1.7512	3.88250	142.91	-0.7977	1.7559	3.84328
130	146.59	-0.8348	1.8554	3.71604	146.66	-0.8354	1.8508	3.67752	146.72	-0.8360	1.8635	3.63961
135	150.29	-0.8685	1.9630	3.53521	150.34	-0.8690	1.9693	3.49790	150.40	-0.8695	1.9755	3.46116
140	153.87	-0.8978	2.0675	3.37826	153.92	-0.8982	2.0746	3.34202	153.97	-0.8985	2.0816	3.32634
145	157.35	-0.9229	2.1666	3.24364	157.39	-0.9232	2.1745	3.20835	157.44	-0.9235	2.1823	3.17362
150	160.74	-0.9441	2.2582	3.12995	160.78	-0.9443	2.2668	3.09549	160.82	-0.9445	2.2753	3.06157
155	164.07	-0.9616	2.3401	3.03595	164.10	-0.9617	2.3493	3.00218	164.13	-0.9619	2.3585	2.96895
160	167.33	-0.9756	2.4102	2.96053	167.35	-0.9757	2.4206	2.92753	167.38	-0.9758	2.4298	2.89466
165	170.54	-0.9864	2.4668	2.90282	170.56	-0.9865	2.4771	2.87006	170.58	-0.9865	2.4873	2.83783
170	173.71	-0.9940	2.5084	2.86210	173.73	-0.9940	2.5190	2.82965	173.74	-0.9940	2.5296	2.79773
175	176.86	-0.9985	2.5337	2.83787	176.87	-0.9985	2.5446	2.80561	176.88	-0.9985	2.5554	2.77388
180	180.00	-1.0000	2.5423	2.82983	180.00	-1.0000	2.5532	2.79763	180.00	-1.0000	2.5641	2.76596

 $x = 0.142$
 $x = 0.143$
 $x = 0.144$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5275	13.34970	0.00	1.0000	0.5265	13.28187	0.00	1.0000	0.5255	13.21491
5	6.88	0.9928	0.5288	13.31146	6.89	0.9928	0.5277	13.24369	6.90	0.9928	0.5267	13.17679
10	13.75	0.9713	0.5325	13.19756	13.77	0.9713	0.5314	13.12997	13.78	0.9712	0.5304	13.06325
15	20.60	0.9361	0.5387	13.01044	20.62	0.9360	0.5377	12.94315	20.64	0.9358	0.5367	12.87673
20	27.41	0.8878	0.5476	12.75407	27.43	0.8876	0.5466	12.68721	27.46	0.8874	0.5456	12.62121
25	34.16	0.8274	0.5591	12.43393	34.20	0.8271	0.5582	12.36752	34.23	0.8268	0.5572	12.30207
30	40.86	0.7563	0.5737	12.05632	40.90	0.7559	0.5727	11.99067	40.94	0.7554	0.5717	11.92589
35	47.48	0.6758	0.5913	11.62911	47.53	0.6752	0.5903	11.56427	47.57	0.6747	0.5894	11.50027
40	54.02	0.5875	0.6122	11.16057	54.07	0.5868	0.6113	11.09664	54.12	0.5861	0.6104	11.03355
45	60.45	0.4931	0.6368	10.65950	60.51	0.4923	0.6359	10.59662	60.56	0.4914	0.6350	10.53455
50	66.78	0.3943	0.6653	10.13493	66.84	0.3933	0.6645	10.07320	66.90	0.3923	0.6636	10.01228
55	72.98	0.2927	0.6981	9.59580	73.05	0.2916	0.6973	9.53534	73.11	0.2905	0.6966	9.47568
60	79.05	0.1900	0.7355	9.05069	79.12	0.1888	0.7348	8.99151	79.19	0.1876	0.7342	8.93331
65	84.97	0.0877	0.7780	8.50762	85.04	0.0864	0.7775	8.45001	85.12	0.0851	0.7769	8.39317
70	90.74	-0.0129	0.8259	7.97384	90.81	-0.0142	0.8256	7.91780	90.89	-0.0155	0.8252	7.86250
75	96.35	-0.1105	0.8798	7.45566	96.42	-0.1119	0.8796	7.40125	96.50	-0.1132	0.8794	7.34757
80	101.78	-0.2042	0.9398	6.95837	101.86	-0.2056	0.9398	6.90565	101.94	-0.2070	0.9398	6.85364
85	107.05	-0.2932	1.0063	6.48619	107.13	-0.2945	1.0066	6.43519	107.21	-0.2959	1.0069	6.38490
90	112.14	-0.3768	1.0796	6.04225	112.22	-0.3782	1.0802	5.99300	112.30	-0.3795	1.0808	5.94444
95	117.05	-0.4547	1.1596	5.62870	117.13	-0.4560	1.1607	5.58120	117.21	-0.4573	1.1617	5.53437
100	121.78	-0.5267	1.2464	5.24674	121.86	-0.5279	1.2478	5.20097	121.94	-0.5291	1.2493	5.15585
105	126.35	-0.5927	1.3395	4.89679	126.42	-0.5938	1.3415	4.85271	126.50	-0.5949	1.3435	4.80926
110	130.74	-0.6526	1.4384	4.57857	130.81	-0.6536	1.4410	4.53612	130.89	-0.6546	1.4436	4.49429
115	134.97	-0.7067	1.5424	4.29130	135.04	-0.7076	1.5456	4.25042	135.12	-0.7085	1.5488	4.21013
120	139.05	-0.7552	1.6502	4.03381	139.12	-0.7560	1.6542	3.99440	139.19	-0.7568	1.6581	3.95558
125	142.98	-0.7984	1.7606	3.80467	143.05	-0.7991	1.7652	3.76663	143.11	-0.7998	1.7699	3.72917
130	146.78	-0.8366	1.8717	3.60227	146.84	-0.8371	1.8772	3.56551	146.90	-0.8377	1.8827	3.52930
135	150.45	-0.8700	1.9818	3.42500	150.51	-0.8704	1.9881	3.38939	150.56	-0.8709	1.9944	3.35433
140	154.02	-0.8989	2.0887	3.27123	154.07	-0.8993	2.0958	3.23666	154.12	-0.8997	2.1029	3.20263
145	157.48	-0.9238	2.1901	3.13943	157.53	-0.9241	2.1980	3.10578	157.57	-0.9244	2.2059	3.07266
150	160.86	-0.9447	2.2839	3.02819	160.90	-0.9449	2.2925	2.99534	160.94	-0.9452	2.3011	2.96300
155	164.16	-0.9620	2.3678	2.93625	164.20	-0.9622	2.3771	2.90407	164.23	-0.9624	2.3864	2.87240
160	167.41	-0.9759	2.4396	2.86252	167.43	-0.9760	2.4495	2.83089	167.46	-0.9761	2.4594	2.79976
165	170.60	-0.9866	2.4976	2.80612	170.62	-0.9866	2.5080	2.77491	170.64	-0.9867	2.5183	2.74421
170	173.75	-0.9941	2.5402	2.76633	173.77	-0.9941	2.5509	2.73543	173.78	-0.9941	2.5617	2.70502
175	176.88	-0.9985	2.5663	2.74266	176.89	-0.9985	2.5772	2.71194	176.90	-0.9985	2.5881	2.68172
180	180.00	-1.0000	2.5750	2.73480	180.00	-1.0000	2.5860	2.70415	180.00	-1.0000	2.5970	2.67398

x = 0.145					x = 0.146					x = 0.147				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5245	13.14881	0.00	1.0000	0.5235	13.08355	0.00	1.0000	0.5225	13.01913		
5	6.90	0.9928	0.5257	13.11075	6.91	0.9927	0.5247	13.04555	6.91	0.9927	0.5238	12.98118		
10	13.79	0.9712	0.5294	12.99739	13.80	0.9711	0.5285	12.93237	13.82	0.9711	0.5275	12.86817		
15	20.66	0.9357	0.5357	12.81117	20.68	0.9356	0.5347	12.74644	20.69	0.9355	0.5337	12.68254		
20	27.48	0.8871	0.5446	12.55607	27.51	0.8869	0.5436	12.49175	27.54	0.8867	0.5426	12.42825		
25	34.26	0.8265	0.5562	12.23746	34.29	0.8262	0.5552	12.17367	34.32	0.8259	0.5543	12.11070		
30	40.98	0.7550	0.5708	11.86193	41.01	0.7545	0.5698	11.79880	41.05	0.7541	0.5689	11.73647		
35	47.62	0.6741	0.5884	11.43709	47.66	0.6735	0.5875	11.37473	47.70	0.6730	0.5866	11.31316		
40	54.17	0.5854	0.6095	10.97128	54.22	0.5847	0.6086	10.90980	54.27	0.5840	0.6077	10.84911		
45	60.62	0.4906	0.6342	10.47329	60.68	0.4898	0.6333	10.41283	60.73	0.4889	0.6325	10.35313		
50	66.96	0.3914	0.6628	9.95216	67.02	0.3904	0.6620	9.89281	67.08	0.3894	0.6612	9.83423		
55	73.18	0.2894	0.6958	9.41679	73.24	0.2884	0.6951	9.35868	73.30	0.2873	0.6944	9.30131		
60	79.25	0.1864	0.7335	8.87577	79.32	0.1853	0.7329	8.81899	79.39	0.1841	0.7323	8.76295		
65	85.19	0.0839	0.7764	8.33709	85.26	0.0826	0.7759	8.28173	85.33	0.0814	0.7753	8.22710		
70	90.97	-0.0169	0.8248	7.80794	91.04	-0.0182	0.8244	7.75410	91.12	-0.0195	0.8240	7.70097		
75	96.58	-0.1146	0.8792	7.29461	96.66	-0.1160	0.8790	7.24236	96.74	-0.1173	0.8788	7.19080		
80	102.02	-0.2083	0.9399	6.80234	102.10	-0.2097	0.9399	6.75173	102.18	-0.2111	0.9399	6.70179		
85	107.29	-0.2973	1.0072	6.33529	107.37	-0.2986	1.0075	6.28636	107.45	-0.2999	1.0078	6.23808		
90	112.38	-0.3808	1.0815	5.89655	112.46	-0.3821	1.0821	5.84931	112.54	-0.3834	1.0827	5.80272		
95	117.29	-0.4585	1.1627	5.48819	117.37	-0.4598	1.1637	5.44265	117.45	-0.4610	1.1647	5.39774		
100	122.02	-0.5303	1.2508	5.11137	122.10	-0.5315	1.2523	5.06751	122.18	-0.5326	1.2537	5.02426		
105	126.58	-0.5960	1.3455	4.76643	126.66	-0.5970	1.3475	4.72421	126.74	-0.5981	1.3495	4.68259		
110	130.97	-0.6556	1.4462	4.45307	131.04	-0.6566	1.4488	4.41243	131.12	-0.6576	1.4514	4.37237		
115	135.19	-0.7094	1.5521	4.17044	135.26	-0.7103	1.5553	4.13131	135.33	-0.7112	1.5586	4.09276		
120	139.25	-0.7576	1.6620	3.91733	139.32	-0.7584	1.6660	3.87963	139.39	-0.7592	1.6700	3.84249		
125	143.18	-0.8005	1.7746	3.69226	143.24	-0.8011	1.7794	3.65591	143.30	-0.8018	1.7841	3.62009		
130	146.96	-0.8383	1.8882	3.49364	147.02	-0.8389	1.8937	3.45852	147.08	-0.8394	1.8992	3.42391		
135	150.62	-0.8714	2.0007	3.31981	150.68	-0.8719	2.0070	3.28580	150.73	-0.8723	2.0133	3.25230		
140	154.17	-0.9001	2.1100	3.16912	154.22	-0.9005	2.1171	3.13612	154.27	-0.9008	2.1243	3.10362		
145	157.62	-0.9247	2.2138	3.04005	157.66	-0.9249	2.2217	3.00794	157.70	-0.9252	2.2297	2.97632		
150	160.98	-0.9454	2.3098	2.93117	161.01	-0.9456	2.3185	2.89983	161.05	-0.9458	2.3272	2.86897		
155	164.26	-0.9625	2.3957	2.84122	164.29	-0.9627	2.4050	2.81053	164.32	-0.9628	2.4144	2.78031		
160	167.48	-0.9762	2.4693	2.76912	167.51	-0.9763	2.4752	2.73897	167.54	-0.9764	2.4832	2.70928		
165	170.66	-0.9867	2.5287	2.71398	170.68	-0.9868	2.5392	2.68424	170.69	-0.9868	2.5496	2.65495		
170	173.79	-0.9941	2.5724	2.67510	173.80	-0.9942	2.5832	2.64565	173.82	-0.9942	2.5940	2.61665		
175	176.90	-0.9985	2.5991	2.65197	176.91	-0.9985	2.6101	2.62269	176.91	-0.9986	2.6211	2.59388		
180	180.00	-1.0000	2.6081	2.64429	180.00	-1.0000	2.6192	2.61508	180.00	-1.0000	2.6303	2.58632		

x = 0.148					x = 0.149					x = 0.150				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5215	12.95551	0.00	1.0000	0.5206	12.89269	0.00	1.0000	0.5196	12.83064		
5	6.92	0.9927	0.5228	12.91762	6.93	0.9927	0.5218	12.85486	6.93	0.9927	0.5208	12.79287		
10	13.83	0.9710	0.5265	12.80478	13.84	0.9710	0.5255	12.74219	13.86	0.9709	0.5246	12.68037		
15	20.71	0.9354	0.5328	12.61944	20.73	0.9352	0.5318	12.55713	20.75	0.9351	0.5308	12.49559		
20	27.56	0.8865	0.5417	12.36556	27.59	0.8863	0.5407	12.30364	27.61	0.8861	0.5398	12.24250		
25	34.36	0.8255	0.5533	12.04852	34.39	0.8252	0.5524	11.98712	34.42	0.8249	0.5514	11.92649		
30	41.09	0.7537	0.5679	11.67493	41.13	0.7532	0.5670	11.61416	41.17	0.7528	0.5661	11.55415		
35	47.75	0.6724	0.5857	11.25237	47.79	0.6718	0.5848	11.19235	47.84	0.6713	0.5839	11.13307		
40	54.32	0.5833	0.6068	10.78919	54.37	0.5826	0.6059	10.73003	54.42	0.5819	0.6050	10.67160		
45	60.79	0.4881	0.6316	10.29420	60.84	0.4873	0.6308	10.23601	60.89	0.4864	0.6299	10.17855		
50	67.14	0.3885	0.6604	9.77639	67.20	0.3875	0.6596	9.71929	67.26	0.3866	0.6589	9.66290		
55	73.37	0.2862	0.6936	9.24468	73.43	0.2851	0.6929	9.18877	73.50	0.2841	0.6922	9.13357		
60	79.46	0.1829	0.7316	8.70762	79.53	0.1817	0.7310	8.65301	79.60	0.1806	0.7304	8.59908		
65	85.41	0.0801	0.7748	8.17318	85.48	0.0789	0.7743	8.11995	85.55	0.0776	0.7738	8.06740		
70	91.19	-0.0208	0.8237	7.64853	91.27	-0.0221	0.8233	7.59678	91.34	-0.0234	0.8229	7.54568		
75	96.81	-0.1187	0.8786	7.13991	96.89	-0.1200	0.8784	7.08969	96.97	-0.1213	0.8782	7.04013		
80	102.26	-0.2124	0.9400	6.65252	102.34	-0.2138	0.9400	6.60389	102.42	-0.2151	0.9400	6.55590		
85	107.53	-0.3013	1.0081	6.19045	107.61	-0.3026	1.0084	6.14345	107.69	-0.3039	1.0088	6.09708		
90	112.63	-0.3847	1.0834	5.75675	112.71	-0.3860	1.0840	5.71141	112.79	-0.3873	1.0847	5.66666		
95	117.53	-0.4623	1.1658	5.35344	117.61	-0.4635	1.1668	5.30974	117.69	-0.4648	1.1678	5.26663		
100	122.26	-0.5338	1.2552	4.98161	122.34	-0.5350	1.2567	4.93954	122.42	-0.5361	1.2582	4.89804		
105	126.81	-0.5992	1.3515	4.64154	126.89	-0.6003	1.3535	4.60107	126.97	-0.6014	1.3555	4.55815		
110	131.19	-0.6586	1.4539	4.33288	131.27	-0.6596	1.4565	4.29395	131.34	-0.6606	1.4591	4.25556		
115	135.41	-0.7121	1.5618	4.05475	135.48	-0.7130	1.5651	4.01728	135.55	-0.7139	1.5683	3.98035		
120	139.46	-0.7600	1.6739	3.80389	139.53	-0.7607	1.6779	3.76981	139.60	-0.7615	1.6819	3.73424		
125	143.37	-0.8025	1.7888	3.58479	143.43	-0.8032	1.7935	3.55000	143.50	-0.8038	1.7983	3.51572		
130	147.14	-0.8400	1.9047	3.38982	147.20	-0.8406	1.9103	3.35623	147.26	-0.8411	1.9158	3.32313		
135	150.79	-0.8728	2.0197	3.21931	150.84	-0.8733	2.0260	3.18681	150.89	-0.8737	2.0324	3.15478		
140	154.32	-0.9012	2.1314	3.07161	154.37	-0.9016	2.1386	3.04008	154.42	-0.9019	2.1458	3.00902		
145	157.75	-0.9255	2.2376	2.94518	157.79	-0.9258	2.2456	2.91451	157.84	-0.9261	2.2536	2.88430		
150	161.09	-0.9460	2.3359	2.83858	161.13	-0.9462	2.3446	2.80866	161.17	-0.9465	2.3534	2.77918		
155	164.36	-0.9630	2.4238	2.75036	164.39	-0.9631	2.4332	2.72127	164.42	-0.9633	2.4427	2.69242		
160	167.56	-0.9765	2.4992	2.68004	167.59	-0.9766	2.5092	2						

$x = 0.151$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.5186	12.76937
5	6.94	0.9927	0.5199	12.73165
10	13.87	0.9708	0.5236	12.61931
15	20.77	0.9350	0.5299	12.43481
20	27.64	0.8859	0.5388	12.18211
25	34.45	0.8246	0.5505	11.86660
30	41.20	0.7524	0.5651	11.49488
35	47.88	0.6707	0.5830	11.07453
40	54.46	0.5812	0.6042	10.61391
45	60.95	0.4856	0.6291	10.12180
50	67.32	0.3856	0.6581	9.60722
55	73.56	0.2830	0.6915	9.07905
60	79.67	0.1794	0.7297	8.54584
65	85.62	0.0764	0.7733	8.01552
70	91.42	-0.0247	0.8226	7.49524
75	97.05	-0.1227	0.8780	6.99119
80	102.50	-0.2164	0.9401	6.50853
85	107.77	-0.3053	1.0091	6.05131
90	112.87	-0.3886	1.0853	5.62251
95	117.77	-0.4660	1.1688	5.22410
100	122.50	-0.5373	1.2597	4.85711
105	127.05	-0.6025	1.3575	4.52178
110	131.42	-0.6615	1.4617	4.21770
115	135.62	-0.7147	1.5716	3.94393
120	139.67	-0.7623	1.6858	3.69919
125	143.56	-0.8045	1.8030	3.48193
130	147.32	-0.8417	1.9214	3.29051
135	150.95	-0.8742	2.0388	3.12322
140	154.46	-0.9023	2.1530	2.97842
145	157.88	-0.9264	2.2616	2.85454
150	161.20	-0.9467	2.3622	2.75015
155	164.45	-0.9634	2.4522	2.66400
160	167.64	-0.9768	2.5394	2.59501
165	170.77	-0.9871	2.6227	2.54227
170	173.87	-0.9943	2.6376	2.50510
175	176.94	-0.9986	2.6656	2.48300
180	180.00	-1.0000	2.6750	2.47567

 $x = 0.152$

θ	$\cos \theta$	G	S
0.00	1.0000	0.5177	12.70884
6.95	0.9927	0.5189	12.67117
13.88	0.9708	0.5226	12.55901
20.79	0.9349	0.5289	12.37478
27.66	0.8857	0.5379	12.12246
34.48	0.8243	0.5496	11.80745
41.24	0.7519	0.5642	11.43634
47.92	0.6701	0.5821	11.01671
54.51	0.5805	0.6033	10.55692
61.00	0.4848	0.6283	10.06576
67.38	0.3847	0.6573	9.55223
73.62	0.2819	0.6908	9.02522
79.73	0.1782	0.7291	8.49327
85.69	0.0751	0.7728	7.96429
91.49	-0.0260	0.8222	7.44344
97.12	-0.1240	0.8778	6.94289
102.58	-0.2178	0.9401	6.46177
107.85	-0.3066	1.0094	6.00614
112.95	-0.3899	1.0859	5.57894
117.85	-0.4672	1.1699	5.18214
122.58	-0.5385	1.2612	4.81673
127.12	-0.6035	1.3535	4.48295
131.49	-0.6625	1.4644	4.18036
135.69	-0.7156	1.5749	3.90802
139.73	-0.7630	1.6898	3.66462
143.62	-0.8051	1.8078	3.44863
147.38	-0.8422	1.9269	3.25836
151.00	-0.8746	2.0452	3.09213
154.51	-0.9027	2.1603	2.94827
157.92	-0.9267	2.2697	2.82522
161.24	-0.9469	2.3710	2.72156
164.48	-0.9636	2.4617	2.63602
167.66	-0.9769	2.5395	2.56752
170.79	-0.9871	2.6024	2.51517
173.88	-0.9943	2.6486	2.47827
176.95	-0.9986	2.6768	2.45634
180.00	-1.0000	2.6863	2.44906

 $x = 0.153$

θ	$\cos \theta$	G	S
0.00	1.0000	0.5167	12.64905
6.95	0.9926	0.5180	12.61144
13.89	0.9707	0.5217	12.49943
20.81	0.9348	0.5280	12.31547
27.69	0.8855	0.5369	12.06354
34.52	0.8240	0.5486	11.74902
41.28	0.7515	0.5633	11.37851
47.96	0.6696	0.5812	10.95960
54.56	0.5798	0.6024	10.50063
61.06	0.4839	0.6274	10.01041
67.44	0.3837	0.6565	9.49792
73.69	0.2809	0.6901	8.97206
79.80	0.1771	0.7285	8.44134
85.76	0.0739	0.7723	7.91371
91.57	-0.0273	0.8218	7.39627
97.20	-0.1253	0.8776	6.89520
102.66	-0.2191	0.9401	6.41561
107.93	-0.3079	1.0097	5.96155
113.03	-0.3912	1.0866	5.53594
117.93	-0.4684	1.1709	5.14073
122.66	-0.5396	1.2627	4.77689
127.20	-0.6046	1.3615	4.44464
131.57	-0.6635	1.4670	4.14353
135.76	-0.7165	1.5781	3.87261
139.80	-0.7638	1.6938	3.63055
143.69	-0.8058	1.8126	3.41579
147.44	-0.8428	1.9325	3.22667
151.06	-0.8751	2.0516	3.06148
154.56	-0.9031	2.1675	2.91856
157.96	-0.9270	2.2777	2.79633
161.28	-0.9471	2.3798	2.69338
164.52	-0.9637	2.4712	2.60845
167.69	-0.9770	2.5496	2.54044
170.81	-0.9872	2.6130	2.48847
173.89	-0.9943	2.6596	2.45185
176.95	-0.9986	2.6880	2.43007
180.00	-1.0000	2.6976	2.42285

 $x = 0.154$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.5158	12.58998
5	6.96	0.9926	0.5170	12.55242
10	13.91	0.9707	0.5207	12.44058
15	20.83	0.9346	0.5270	12.25689
20	27.71	0.8853	0.5360	12.00533
25	34.55	0.8237	0.5477	11.69130
30	41.32	0.7511	0.5624	11.32138
35	48.01	0.6690	0.5803	10.90318
40	54.61	0.5791	0.6016	10.44503
45	61.11	0.4831	0.6266	9.95573
50	67.49	0.3828	0.6558	9.44428
55	73.75	0.2798	0.6894	8.91955
60	79.87	0.1759	0.7279	8.39007
65	85.83	0.0726	0.7718	7.86375
70	91.64	-0.0286	0.8215	7.34771
75	97.28	-0.1266	0.8775	6.84810
80	102.73	-0.2204	0.9402	6.37004
85	108.01	-0.3092	1.0100	5.91753
90	113.11	-0.3924	1.0872	5.49350
95	118.01	-0.4697	1.1719	5.09986
100	122.73	-0.5408	1.2641	4.73758
105	127.28	-0.6056	1.3635	4.40685
110	131.64	-0.6644	1.4696	4.10721
115	135.83	-0.7173	1.5814	3.83768
120	139.87	-0.7646	1.6978	3.59694
125	143.75	-0.8065	1.8173	3.38342
130	147.49	-0.8433	1.9381	3.19544
135	151.11	-0.8756	2.0580	3.03128
140	154.61	-0.9034	2.1748	2.88928
145	158.01	-0.9272	2.2858	2.76787
150	161.32	-0.9473	2.3887	2.66563
155	164.55	-0.9638	2.4808	2.58129
160	167.71	-0.9771	2.5598	2.51377
165	170.83	-0.9872	2.6237	2.46218
170	173.91	-0.9944	2.6706	2.42582
175	176.96	-0.9986	2.6993	2.40421
180	180.00	-1.0000	2.7090	2.39703

 $x = 0.155$

θ	$\cos \theta$	G	S
0.00	1.0000	0.5148	12.53162
6.97	0.9926	0.5161	12.49411
13.92	0.9706	0.5200	12.38243
20.85	0.9345	0.5261	12.19301
27.74	0.8851	0.5351	11.94783
34.58	0.8234	0.5468	11.63427
41.35	0.7507	0.5615	11.26494
48.05	0.6685	0.5794	10.84744
54.66	0.5784	0.6007	10.39010
61.16	0.4823	0.6258	9.90172
67.55	0.3818	0.6550	9.39128
73.81	0.2788	0.6887	8.86768
79.94	0.1748	0.7273	8.33942
85.90	0.0714	0.7713	7.81441
91.71	-0.0299	0.8211	7.29975
97.35	-0.1280	0.8773	6.80160
102.81	-0.2218	0.9402	6.32505
108.09	-0.3105	1.0103	5.87408
113.18	-0.3937	1.0879	5.45161
118.09	-0.4709	1.1730	5.05952
122.81	-0.5419	1.2656	4.69879
127.35	-0.6067	1.3656	4.36956
131.71	-0.6654	1.4722	4.07138
135.90	-0.7182	1.5847	3.80324
139.94	-0.7653	1.7018	3.56381
143.81	-0.8071	1.8221	3.35150
147.55	-0.8439	1.9437	3.16464
151.16	-0.8760	2.0645	3.00151
154.66	-0.9038	2.1821	2.86042
158.05	-0.9275	2.2939	2.73982
161.35	-0.9475	2.3975	2.63828
164.58	-0.9640	2.4904	2.55453
167.74	-0.9772	2.5700	2.48749
170.85	-0.9873	2.6344	2.43627
173.92	-0.9944	2.6817	2.40018
176.97	-0.9986	2.7106	2.37873
180.00	-1.0000	2.7204	2.37161

 $x = 0.156$

θ	$\cos \theta$	G	S
0.00	1.0000	0.5139	12.47395
6.97	0.9926	0.5151	12.43650
13.93	0.9706	0.5189	12.32497
20.87	0.9344	0.5252	12.14181
27.76	0.8849	0.5341	11.89100
34.61	0.8230	0.5459	11.57793
41.39	0.7502	0.5606	11.20918
48.09	0.6679	0.5785	10.79237
54.71	0.5778	0.5999	10.33583
61.22	0.4815	0.6250	9.84835
67.61	0.3809	0.6542	9.33893
73.88	0.2777	0.6880	8.81644
80.00	0.1736	0.7267	8.28938
85.98	0.0702	0.7708	7.76567
91.79	-0.0312	0.8207	7.25239
97.43	-0.1293	0.8771	6.75568
102.89	-0.2231	0.9403	6.28062
108.17	-0.3118	1.0106	5.83118
113.26	-0.3950	1.0885	5.41025
118.17	-0.4721	1.1740	5.01971
122.89	-0.5430	1.2671	4.66050
127.43	-0.6078	1.3676	4.33277
131.79	-0.6664	1.4748	4.03603
135.98	-0.7190	1.5880	3.76926
140.00	-0.7661	1.7059	3.53112
143.88	-0.8078	1.8269	3.32003
147.61	-0.8444	1.9493	3.13428
151.22	-0.8765	2.0709	2.97216
154.71	-0.9041	2.1894	2.83198
158.09	-0.9278	2.3021	2.71218
161.39	-0.9477	2.4064	2.61133
164.61	-0.9641	2.5000	2.52816
167.76	-0.9773	2.5802	2.45460
170.87	-0.9873	2.6451	2.40075
173.93	-0.9944	2.6928	2.37492
176.97	-0.9986	2.7220	2.35363
180.00	-1.0000	2.7318	2.34656

x = 0.157					x = 0.158					x = 0.159				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.5130	12.41697	0.00	1.0000	0.5120	12.36066	0.00	1.0000	0.5111	12.30501		
5	6.98	0.9926	0.5142	12.37957	6.99	0.9926	0.5133	12.32331	6.99	0.9926	0.5124	12.26771		
10	13.95	0.9705	0.5180	12.26820	13.96	0.9705	0.5170	12.21209	13.97	0.9704	0.5161	12.15664		
15	20.89	0.9343	0.5243	12.08530	20.90	0.9342	0.5233	12.02945	20.92	0.9341	0.5224	11.97426		
20	27.79	0.8847	0.5332	11.83485	27.81	0.8845	0.5323	11.77937	27.84	0.8843	0.5314	11.72453		
25	34.64	0.8227	0.5450	11.52225	34.67	0.8224	0.5441	11.46723	34.70	0.8221	0.5432	11.41285		
30	41.43	0.7498	0.5597	11.15408	41.46	0.7494	0.5588	11.09963	41.50	0.7490	0.5580	11.04582		
35	48.14	0.6674	0.5776	10.73795	48.18	0.6668	0.5768	10.68418	48.22	0.6663	0.5759	10.63104		
40	54.76	0.5771	0.5990	10.28220	54.80	0.5764	0.5982	10.22921	54.85	0.5757	0.5974	10.17685		
45	61.27	0.4807	0.6242	9.79563	61.32	0.4799	0.6234	9.74353	61.38	0.4790	0.6226	9.69204		
50	67.67	0.3799	0.6535	9.28720	67.73	0.3790	0.6527	9.23610	67.79	0.3781	0.6520	9.18560		
55	73.94	0.2766	0.6873	8.76581	74.00	0.2756	0.6866	8.71580	74.06	0.2746	0.6859	8.66638		
60	80.07	0.1725	0.7261	8.23996	80.14	0.1713	0.7255	8.19113	80.20	0.1702	0.7249	8.14288		
65	86.05	0.0690	0.7703	7.71753	86.12	0.0677	0.7698	7.66997	86.19	0.0665	0.7693	7.62298		
70	91.86	-0.0325	0.8204	7.20561	91.93	-0.0337	0.8200	7.15940	92.01	-0.0350	0.8197	7.11375		
75	97.50	-0.1306	0.8769	6.71033	97.58	-0.1319	0.8768	6.66553	97.65	-0.1332	0.8766	6.62128		
80	102.97	-0.2244	0.9403	6.23674	103.04	-0.2257	0.9404	6.19341	103.12	-0.2270	0.9404	6.15062		
85	108.25	-0.3131	1.0110	5.78882	108.33	-0.3144	1.0113	5.74699	108.41	-0.3157	1.0116	5.70568		
90	113.34	-0.3962	1.0891	5.36942	113.42	-0.3975	1.0898	5.32911	113.50	-0.3987	1.0904	5.28931		
95	118.25	-0.4733	1.1750	4.98042	118.33	-0.4745	1.1761	4.94162	118.41	-0.4757	1.1771	4.90332		
100	122.97	-0.5442	1.2686	4.62272	123.04	-0.5453	1.2701	4.58542	123.12	-0.5464	1.2716	4.54861		
105	127.50	-0.6088	1.3696	4.29647	127.58	-0.6098	1.3716	4.26064	127.65	-0.6109	1.3737	4.22528		
110	131.86	-0.6673	1.4774	4.00115	131.93	-0.6683	1.4801	3.96673	132.01	-0.6692	1.4827	3.93277		
115	136.05	-0.7199	1.5913	3.73574	136.12	-0.7207	1.5946	3.70268	136.19	-0.7216	1.5979	3.67005		
120	140.07	-0.7668	1.7099	3.49889	140.14	-0.7676	1.7139	3.46710	140.20	-0.7683	1.7179	3.43573		
125	143.94	-0.8084	1.8317	3.28899	144.00	-0.8090	1.8366	3.25839	144.06	-0.8097	1.8414	3.22820		
130	147.67	-0.8450	1.9550	3.10435	147.73	-0.8455	1.9606	3.07483	147.79	-0.8461	1.9663	3.04572		
135	151.27	-0.8769	2.0774	2.94322	151.32	-0.8773	2.0839	2.91470	151.38	-0.8778	2.0904	2.88657		
140	154.76	-0.9045	2.1967	2.80394	154.80	-0.9049	2.2040	2.77631	154.85	-0.9052	2.2114	2.74906		
145	158.14	-0.9281	2.3102	2.68494	158.18	-0.9283	2.3184	2.65808	158.22	-0.9286	2.3266	2.63161		
150	161.43	-0.9479	2.4154	2.58477	161.46	-0.9481	2.4243	2.55859	161.50	-0.9483	2.4333	2.53279		
155	164.64	-0.9643	2.5096	2.50218	164.67	-0.9644	2.5193	2.47657	164.70	-0.9646	2.5290	2.45134		
160	167.79	-0.9774	2.5905	2.43609	167.81	-0.9775	2.6038	2.41095	167.84	-0.9776	2.6111	2.38617		
165	170.89	-0.9874	2.6559	2.38504	170.90	-0.9874	2.6667	2.36083	170.92	-0.9875	2.6775	2.33641		
170	173.95	-0.9944	2.7039	2.35004	173.96	-0.9944	2.7151	2.32552	173.97	-0.9945	2.7263	2.30136		
175	176.98	-0.9986	2.7333	2.32890	176.99	-0.9986	2.7447	2.30453	176.99	-0.9986	2.7562	2.28052		
180	180.00	-1.0000	2.7432	2.32188	180.00	-1.0000	2.7547	2.29757	180.00	-1.0000	2.7662	2.27361		

x = 0.160					x = 0.161					x = 0.162				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.5102	12.25000	0.00	1.0000	0.5093	12.19563	0.00	1.0000	0.5084	12.14188		
5	7.00	0.9926	0.5114	12.21275	7.00	0.9925	0.5105	12.15843	7.01	0.9925	0.5096	12.10473		
10	13.98	0.9704	0.5152	12.10184	14.00	0.9703	0.5143	12.04767	14.01	0.9703	0.5134	11.99411		
15	20.94	0.9339	0.5215	11.91970	20.96	0.9338	0.5206	11.86578	20.98	0.9337	0.5197	11.81247		
20	27.86	0.8841	0.5305	11.67033	27.89	0.8839	0.5296	11.61676	27.91	0.8837	0.5287	11.56380		
25	34.73	0.8218	0.5423	11.35911	34.76	0.8215	0.5414	11.30599	34.79	0.8212	0.5405	11.25348		
30	41.54	0.7485	0.5571	10.99264	41.57	0.7481	0.5562	10.94007	41.61	0.7477	0.5553	10.88811		
35	48.26	0.6657	0.5751	10.57852	48.31	0.6652	0.5742	10.52662	48.35	0.6646	0.5734	10.47530		
40	54.90	0.5750	0.5965	10.12510	54.95	0.5743	0.5957	10.07395	54.99	0.5737	0.5949	10.02339		
45	61.43	0.4782	0.6218	9.64116	61.48	0.4774	0.6210	9.59088	61.54	0.4766	0.6202	9.54117		
50	67.84	0.3771	0.6512	9.13569	67.90	0.3762	0.6505	9.08636	67.96	0.3753	0.6497	9.03761		
55	74.13	0.2735	0.6852	8.61754	74.19	0.2725	0.6845	8.56928	74.25	0.2714	0.6839	8.52158		
60	80.27	0.1690	0.7243	8.09521	80.33	0.1679	0.7237	8.04809	80.40	0.1668	0.7231	8.00154		
65	86.26	0.0653	0.7688	7.57656	86.32	0.0641	0.7683	7.53068	86.39	0.0629	0.7678	7.48535		
70	92.08	-0.0363	0.8193	7.06865	92.15	-0.0375	0.8190	7.02409	92.22	-0.0388	0.8187	6.98006		
75	97.73	-0.1345	0.8764	6.57757	97.80	-0.1358	0.8762	6.53439	97.88	-0.1371	0.8761	6.49172		
80	103.20	-0.2283	0.9405	6.10834	103.28	-0.2296	0.9405	6.06658	103.35	-0.2309	0.9406	6.02533		
85	108.48	-0.3170	1.0119	5.66488	108.56	-0.3183	1.0122	5.62458	108.64	-0.3196	1.0126	5.58477		
90	113.58	-0.4000	1.0911	5.25000	113.66	-0.4012	1.0917	5.21118	113.73	-0.4025	1.0924	5.17284		
95	118.48	-0.4769	1.1782	4.86550	118.56	-0.4781	1.1792	4.82816	118.64	-0.4793	1.1802	4.79129		
100	123.20	-0.5475	1.2731	4.51227	123.28	-0.5487	1.2746	4.47639	123.35	-0.5498	1.2761	4.44096		
105	127.73	-0.6119	1.3757	4.19037	127.80	-0.6130	1.3777	4.15592	127.88	-0.6140	1.3798	4.12190		
110	132.08	-0.6701	1.4853	3.89925	132.15	-0.6711	1.4880	3.86618	132.22	-0.6720	1.4906	3.83353		
115	136.26	-0.7224	1.6012	3.63786	136.32	-0.7233	1.6045	3.60610	136.39	-0.7241	1.6078	3.57475		
120	140.27	-0.7690	1.7220	3.40479	140.33	-0.7698	1.7260	3.37426	140.40	-0.7705	1.7301	3.34414		
125	144.13	-0.8103	1.8462	3.19842	144.19	-0.8110	1.8511	3.16904	144.25	-0.8116	1.8559	3.14006		
130	147.84	-0.8466	1.9719	3.01701	147.90	-0.8471	1.9776	2.98870	147.96	-0.8477	1.9833	2.96076		
135	151.43	-0.8782	2.0969	2.85883	151.48	-0.8787	2.1035	2.83148	151.54	-0.8791	2.1100	2.80450		
140	154.90	-0.9056	2.2188	2.72219	154.95	-0.9059	2.2261	2.69570	154.99	-0.9063	2.2336	2.66958		
145	158.26	-0.9289	2.3348	2.60551	158.31	-0.9292	2.3430	2.57978	158.35	-0.9294	2.3513	2.55441		
150	161.54	-0.9485	2.4423	2.50736	161.57	-0.9487	2.4513	2.48229	161.61	-0.9489	2.4604	2.45757		
155	164.73	-0.9647	2.5387	2.42647	164.76	-0.9648	2.5484	2.40195	164.79	-0.9650	2.5582	2.37778		
160	167.86	-0.9776	2.6215	2.36176	167.89	-0.9777	2.6318	2.						

$x = 0.163$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5075	12.08874
5	7.02	0.9925	0.5087	12.03164
10	14.02	0.9702	0.5125	11.94117
15	21.00	0.9336	0.5186	11.75978
20	27.94	0.8835	0.5278	11.51145
25	34.82	0.8209	0.5397	11.20156
30	41.65	0.7473	0.5545	10.83674
35	48.39	0.6641	0.5725	10.42458
40	55.04	0.5730	0.5941	9.97341
45	61.59	0.4758	0.6194	9.49204
50	68.02	0.3744	0.6490	8.98943
55	74.31	0.2704	0.6832	8.47443
60	80.47	0.1656	0.7225	7.95552
65	86.46	0.0617	0.7674	7.44055
70	92.30	-0.0401	0.8183	6.93655
75	97.95	-0.1384	0.8759	6.44956
80	103.43	-0.2322	0.9406	5.98457
85	108.72	-0.3209	1.0129	5.54545
90	113.81	-0.4037	1.0920	5.13497
95	118.72	-0.4805	1.1813	4.75487
100	123.43	-0.5509	1.2776	4.40598
105	127.95	-0.6150	1.3818	4.08832
110	132.30	-0.6730	1.4933	3.80130
115	136.46	-0.7249	1.6111	3.54381
120	140.47	-0.7712	1.7342	3.31441
125	144.31	-0.8122	1.8608	3.11146
130	148.02	-0.8482	1.9890	2.93321
135	151.59	-0.8795	2.1166	2.77789
140	155.04	-0.9066	2.2410	2.64382
145	158.39	-0.9297	2.3595	2.52940
150	161.65	-0.9491	2.4695	2.43319
155	164.82	-0.9651	2.5680	2.35395
160	167.94	-0.9779	2.6527	2.29058
165	171.00	-0.9877	2.7211	2.24221
170	174.02	-0.9946	2.7715	2.20815
175	177.02	-0.9986	2.8023	2.18791
180	180.00	-1.0000	2.8127	2.18120

 $x = 0.164$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.5066	12.03621
7.02	0.9925	0.5078	11.99916
14.02	0.9702	0.5116	11.88883
21.00	0.9335	0.5179	11.70768
27.96	0.8833	0.5270	11.45968
34.85	0.8206	0.5388	11.15024
41.68	0.7468	0.5536	10.78596
48.43	0.6635	0.5717	10.37443
55.09	0.5723	0.5932	9.92401
61.64	0.4750	0.6187	9.44347
68.07	0.3734	0.6483	8.94179
74.37	0.2694	0.6825	8.42783
80.53	0.1645	0.7219	7.91004
86.53	0.0605	0.7669	7.39627
92.37	-0.0413	0.8180	6.89354
98.03	-0.1396	0.8757	6.40790
103.50	-0.2335	0.9407	5.94430
108.79	-0.3221	1.0132	5.50660
113.89	-0.4035	1.0937	5.09756
118.79	-0.4816	1.1823	4.71890
123.50	-0.5520	1.2791	4.37143
128.03	-0.6160	1.3838	4.05517
132.37	-0.6739	1.4959	3.76948
136.53	-0.7258	1.6145	3.51327
140.53	-0.7720	1.7382	3.28508
144.37	-0.8128	1.8657	3.08325
148.07	-0.8487	1.9947	2.90603
151.64	-0.8800	2.1232	2.75165
155.09	-0.9070	2.2484	2.61841
158.43	-0.9300	2.3678	2.50473
161.68	-0.9493	2.4786	2.40916
164.85	-0.9653	2.5779	2.33045
167.96	-0.9780	2.6632	2.26752
171.02	-0.9877	2.7321	2.21949
174.03	-0.9946	2.7829	2.18568
177.02	-0.9987	2.8139	2.16558
180.00	-1.0000	2.8244	2.15891

 $x = 0.165$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.5057	11.98427
7.03	0.9925	0.5070	11.94726
14.04	0.9701	0.5107	11.83708
21.03	0.9334	0.5171	11.65616
27.99	0.8831	0.5261	11.40851
34.88	0.8203	0.5379	11.09950
41.72	0.7464	0.5528	10.73575
48.47	0.6630	0.5708	10.32485
55.14	0.5716	0.5924	9.87516
61.69	0.4742	0.6179	9.39545
68.13	0.3725	0.6475	8.89470
74.44	0.2683	0.6819	8.38176
80.60	0.1634	0.7213	7.86508
86.60	0.0593	0.7664	7.35250
92.44	-0.0426	0.8176	6.85104
98.10	-0.1409	0.8756	6.36673
103.58	-0.2348	0.9407	5.90451
108.87	-0.3227	1.0135	5.46822
113.97	-0.4062	1.0944	5.06060
118.87	-0.4828	1.1834	4.68337
123.58	-0.5531	1.2806	4.33732
128.10	-0.6171	1.3859	4.02243
132.44	-0.6748	1.4986	3.73807
136.60	-0.7266	1.6178	3.48313
140.60	-0.7727	1.7423	3.25613
144.44	-0.8135	1.8705	3.05541
148.13	-0.8492	2.0005	2.87921
151.69	-0.8804	2.1298	2.72776
155.14	-0.9073	2.2599	2.59335
158.47	-0.9302	2.3762	2.48039
161.72	-0.9495	2.4877	2.38546
164.88	-0.9654	2.5977	2.30729
167.99	-0.9781	2.6977	2.24479
171.03	-0.9878	2.7832	2.19710
174.04	-0.9946	2.7943	2.16352
177.03	-0.9987	2.8256	2.14356
180.00	-1.0000	2.8361	2.13695

 $x = 0.166$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.5048	11.93290
5	7.03	0.9925	0.5061	11.89595
10	14.06	0.9701	0.5098	11.78591
15	21.05	0.9332	0.5162	11.60523
20	28.01	0.8829	0.5252	11.35790
25	34.92	0.8200	0.5371	11.04933
30	41.75	0.7460	0.5519	10.68610
35	48.51	0.6624	0.5700	10.27583
40	55.18	0.5710	0.5916	9.82686
45	61.74	0.4734	0.6171	9.34798
50	68.19	0.3716	0.6468	8.84815
55	74.50	0.2673	0.6812	8.33621
60	80.66	0.1623	0.7207	7.82063
65	86.67	0.0581	0.7659	7.30924
70	92.51	-0.0438	0.8173	6.80904
75	98.18	-0.1422	0.8754	6.32604
80	103.66	-0.2361	0.9408	5.86518
85	108.95	-0.3247	1.0139	5.43029
90	114.04	-0.4074	1.0950	5.02409
95	118.95	-0.4840	1.1844	4.64828
100	123.66	-0.5542	1.2822	4.30362
105	128.18	-0.6181	1.3879	3.99010
110	132.51	-0.6757	1.5012	3.70706
115	136.67	-0.7274	1.6211	3.45337
120	140.66	-0.7734	1.7464	3.22755
125	144.50	-0.8141	1.8754	3.02794
130	148.19	-0.8498	2.0062	2.85275
135	151.74	-0.8808	2.1364	2.70021
140	155.18	-0.9076	2.2634	2.56863
145	158.51	-0.9305	2.3845	2.45640
150	161.75	-0.9497	2.4968	2.36209
155	164.92	-0.9655	2.5976	2.28444
160	168.01	-0.9782	2.6842	2.22238
165	171.05	-0.9878	2.7542	2.17501
170	174.06	-0.9946	2.8058	2.14167
175	177.03	-0.9987	2.8373	2.12186
180	180.00	-1.0000	2.8479	2.11529

 $x = 0.167$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.5040	11.88211
7.04	0.9925	0.5052	11.84520
14.07	0.9700	0.5090	11.73530
21.07	0.9331	0.5153	11.55485
28.03	0.8827	0.5243	11.30786
34.95	0.8197	0.5362	10.99971
41.79	0.7456	0.5511	10.63701
48.56	0.6619	0.5692	10.22736
55.23	0.5703	0.5908	9.77910
61.80	0.4726	0.6163	9.30103
68.24	0.3707	0.6461	8.80211
74.56	0.2663	0.6805	8.29118
80.73	0.1611	0.7202	7.77669
86.74	0.0569	0.7655	7.26647
92.58	-0.0451	0.8170	6.76751
98.25	-0.1435	0.8753	6.28582
103.73	-0.2374	0.9409	5.82632
109.02	-0.3259	1.0142	5.39281
114.12	-0.4087	1.0957	4.98802
119.02	-0.4852	1.1855	4.61361
123.73	-0.5553	1.2837	4.27034
128.25	-0.6191	1.3900	3.95817
132.58	-0.6766	1.5039	3.67644
136.74	-0.7282	1.6245	3.42399
140.73	-0.7741	1.7505	3.19935
144.56	-0.8147	1.8803	3.00082
148.24	-0.8503	2.0119	2.82664
151.80	-0.8813	2.1430	2.67501
155.23	-0.9080	2.2709	2.54424
158.56	-0.9308	2.3929	2.43273
161.79	-0.9499	2.5060	2.33904
164.95	-0.9657	2.6075	2.26191
168.03	-0.9783	2.6948	2.20027
171.07	-0.9879	2.7653	2.15324
174.07	-0.9946	2.8172	2.12013
177.04	-0.9987	2.8490	2.10046
180.00	-1.0000	2.8597	2.09394

 $x = 0.168$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.5031	11.83188
7.05	0.9924	0.5043	11.79502
14.08	0.9700	0.5081	11.68206
21.09	0.9330	0.5145	11.50505
28.06	0.8825	0.5235	11.25838
34.98	0.8194	0.5353	10.95064
41.83	0.7452	0.5502	10.58846
48.60	0.6613	0.5684	10.17942
55.28	0.5696	0.5900	9.73188
61.85	0.4718	0.6156	9.25461
68.30	0.3698	0.6454	8.75659
74.62	0.2652	0.6799	8.24666
80.79	0.1600	0.7196	7.73325
86.81	0.0557	0.7650	7.22419
92.65	-0.0463	0.8166	6.72647
98.32	-0.1448	0.8751	6.24667
103.81	-0.2386	0.9409	5.78791
109.10	-0.3272	1.0145	5.35578
114.20	-0.4099	1.0963	4.95238
119.10	-0.4863	1.1865	4.57936
123.81	-0.5564	1.2852	4.23746
128.32	-0.6201	1.3920	3.92664
132.65	-0.6776	1.5065	3.64620
136.81	-0.7290	1.6278	3.39499
140.79	-0.7748	1.7546	3.17151
144.62	-0.8153	1.8852	2.97406
148.30	-0.8508	2.0177	2.80087
151.85	-0.8817	2.1497	2.65014
155.28	-0.9083	2.2784	2.52018
158.60	-0.9310	2.4013	2.40938
161.83	-0.9501	2.5152	2.31630
164.98	-0.9658	2.6175	2.23969
168.06	-0.9784	2.7054	2.17847
171.09	-0.9879	2.7765	2.13177
174.08	-0.9947	2.8288	2.09889
177.05	-0.9987	2.8608	2.07936
180.00	-1.0000	2.8716	2.07288

x = 0.169					x = 0.170					x = 0.171				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.5022	11.78220	0.00	1.0000	0.5013	11.73307	0.00	1.0000	0.5005	11.68446		
5	7.05	0.9924	0.5035	11.74539	7.06	0.9924	0.5026	11.69629	7.07	0.9924	0.5017	11.64773		
10	14.09	0.9699	0.5072	11.63576	14.11	0.9698	0.5064	11.58681	14.12	0.9698	0.5055	11.53838		
15	21.11	0.9329	0.5136	11.45578	21.13	0.9328	0.5127	11.40705	21.14	0.9327	0.5119	11.35885		
20	28.08	0.8823	0.5226	11.20943	28.11	0.8821	0.5218	11.16103	28.13	0.8819	0.5209	11.11314		
25	35.01	0.8191	0.5345	10.90212	35.04	0.8188	0.5337	10.85412	35.06	0.8185	0.5328	10.80665		
30	41.86	0.7448	0.5494	10.54044	41.90	0.7443	0.5486	10.49296	41.93	0.7439	0.5477	10.44598		
35	48.64	0.6608	0.5675	10.13202	48.68	0.6603	0.5667	10.08513	48.72	0.6597	0.5659	10.03875		
40	55.32	0.5690	0.5892	9.68517	55.37	0.5683	0.5884	9.63898	55.41	0.5676	0.5877	9.59330		
45	61.90	0.4710	0.6148	9.20871	61.95	0.4702	0.6141	9.16331	62.00	0.4694	0.6133	9.11841		
50	68.36	0.3688	0.6447	8.71158	68.41	0.3679	0.6440	8.66707	68.47	0.3670	0.6433	8.62305		
55	74.68	0.2642	0.6792	8.20263	74.74	0.2632	0.6786	8.15909	74.80	0.2622	0.6779	8.11604		
60	80.86	0.1589	0.7190	7.69030	80.92	0.1578	0.7184	7.64782	80.98	0.1567	0.7179	7.60582		
65	86.87	0.0545	0.7645	7.18239	86.94	0.0533	0.7641	7.14106	87.01	0.0522	0.7636	7.10018		
70	92.72	-0.0475	0.8163	6.68589	92.80	-0.0488	0.8160	6.64576	92.87	-0.0500	0.8157	6.60609		
75	98.40	-0.1460	0.8750	6.20677	98.47	-0.1473	0.8748	6.16792	98.54	-0.1485	0.8747	6.12951		
80	103.88	-0.2399	0.9410	5.74994	103.96	-0.2412	0.9410	5.71241	104.03	-0.2425	0.9411	5.67531		
85	109.18	-0.3285	1.0149	5.31918	109.25	-0.3297	1.0152	5.28300	109.33	-0.3310	1.0155	5.24724		
90	114.27	-0.4111	1.0970	4.91716	114.35	-0.4123	1.0976	4.88235	114.43	-0.4135	1.0983	4.84795		
95	119.18	-0.4875	1.1876	4.54552	119.25	-0.4886	1.1886	4.51208	119.33	-0.4898	1.1897	4.47904		
100	123.88	-0.5575	1.2867	4.20499	123.96	-0.5586	1.2882	4.17290	124.03	-0.5598	1.2897	4.14120		
105	128.40	-0.6211	1.3941	3.89549	128.47	-0.6221	1.3961	3.86473	128.54	-0.6231	1.3982	3.83434		
110	132.72	-0.6785	1.5092	3.61634	132.80	-0.6794	1.5119	3.58685	132.87	-0.6803	1.5146	3.55772		
115	136.87	-0.7299	1.6312	3.36635	136.94	-0.7307	1.6345	3.33807	137.01	-0.7315	1.6379	3.31014		
120	140.86	-0.7796	1.7587	3.14402	140.92	-0.7763	1.7628	3.11688	140.98	-0.7770	1.7670	3.09009		
125	144.68	-0.8159	1.8902	2.94764	144.74	-0.8165	1.8951	2.92157	144.80	-0.8171	1.9001	2.89583		
130	148.36	-0.8513	2.0235	2.77544	148.41	-0.8518	2.0293	2.75034	148.47	-0.8523	2.0351	2.72556		
135	151.90	-0.8821	2.1563	2.62561	151.95	-0.8825	2.1630	2.60139	152.00	-0.8830	2.1697	2.57749		
140	155.32	-0.9087	2.2860	2.49644	155.37	-0.9090	2.2936	2.47301	155.41	-0.9093	2.3011	2.44990		
145	158.64	-0.9313	2.4097	2.38634	158.68	-0.9316	2.4181	2.36361	158.72	-0.9318	2.4266	2.34119		
150	161.86	-0.9503	2.5245	2.29387	161.90	-0.9505	2.5337	2.27175	161.93	-0.9507	2.5430	2.24992		
155	165.01	-0.9659	2.6275	2.21778	165.04	-0.9661	2.6375	2.19616	165.06	-0.9662	2.6475	2.17483		
160	168.08	-0.9784	2.7160	2.15697	168.11	-0.9785	2.7267	2.13577	168.13	-0.9786	2.7374	2.14485		
165	171.11	-0.9880	2.7876	2.11059	171.13	-0.9880	2.7988	2.08970	171.14	-0.9881	2.8101	2.06910		
170	174.09	-0.9947	2.8403	2.07794	174.11	-0.9947	2.8519	2.05729	174.12	-0.9947	2.8636	2.03691		
175	177.05	-0.9987	2.8726	2.05855	177.06	-0.9987	2.8844	2.03803	177.07	-0.9987	2.8963	2.01779		
180	180.00	-1.0000	2.8834	2.05212	180.00	-1.0000	2.8954	2.03164	180.00	-1.0000	2.9073	2.01144		

x = 0.172					x = 0.173					x = 0.174				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4996	11.63638	0.00	1.0000	0.4988	11.58882	0.00	1.0000	0.4979	11.54176		
5	7.07	0.9924	0.5009	11.59970	7.08	0.9924	0.5000	11.55218	7.08	0.9924	0.4992	11.50516		
10	14.13	0.9697	0.5047	11.49048	14.14	0.9697	0.5038	11.44309	14.15	0.9696	0.5030	11.39621		
15	21.16	0.9326	0.5110	11.31117	21.18	0.9325	0.5102	11.26401	21.20	0.9323	0.5093	11.21734		
20	28.15	0.8817	0.5201	11.06578	28.18	0.8815	0.5192	11.01892	28.20	0.8813	0.5184	10.97256		
25	35.09	0.8182	0.5320	10.75969	35.12	0.8179	0.5312	10.71323	35.15	0.8176	0.5303	10.66727		
30	41.97	0.7435	0.5469	10.39952	42.00	0.7431	0.5461	10.35356	42.04	0.7427	0.5453	10.30808		
35	48.76	0.6592	0.5651	9.99288	48.80	0.6587	0.5643	9.94750	48.84	0.6581	0.5635	9.90261		
40	55.46	0.5670	0.5869	9.54811	55.51	0.5663	0.5861	9.50341	55.55	0.5656	0.5853	9.45919		
45	62.05	0.4687	0.6126	9.07400	62.10	0.4679	0.6118	9.03007	62.15	0.4671	0.6111	8.98661		
50	68.52	0.3661	0.6425	8.57950	68.58	0.3652	0.6418	8.53643	68.64	0.3643	0.6411	8.49383		
55	74.86	0.2612	0.6773	8.07345	74.92	0.2602	0.6767	8.03133	74.98	0.2592	0.6760	7.98967		
60	81.05	0.1556	0.7173	7.56427	81.11	0.1545	0.7168	7.52319	81.18	0.1534	0.7162	7.48255		
65	87.08	0.0510	0.7631	7.05976	87.15	0.0498	0.7627	7.01979	87.21	0.0486	0.7622	6.98025		
70	92.94	-0.0512	0.8153	6.56687	93.01	-0.0525	0.8150	6.52807	93.08	-0.0537	0.8147	6.48971		
75	98.62	-0.1498	0.8745	6.09154	98.69	-0.1511	0.8744	6.05398	98.76	-0.1523	0.8742	6.01685		
80	104.11	-0.2437	0.9412	5.63863	104.18	-0.2450	0.9412	5.60237	104.25	-0.2462	0.9413	5.56652		
85	109.40	-0.3322	1.0159	5.21190	109.48	-0.3335	1.0162	5.17695	109.55	-0.3347	1.0165	5.14241		
90	114.50	-0.4147	1.0990	4.81395	114.58	-0.4159	1.0996	4.78034	114.65	-0.4171	1.1003	4.74712		
95	119.40	-0.4909	1.1908	4.44639	119.48	-0.4921	1.1918	4.41412	119.55	-0.4932	1.1929	4.38222		
100	124.11	-0.5607	1.2913	4.10988	124.18	-0.5618	1.2928	4.07893	124.25	-0.5629	1.2943	4.04835		
105	128.62	-0.6241	1.4003	3.80432	128.69	-0.6251	1.4023	3.77465	128.76	-0.6261	1.4044	3.74534		
110	132.94	-0.6812	1.5172	3.52895	133.01	-0.6821	1.5199	3.50053	133.08	-0.6830	1.5226	3.47245		
115	137.08	-0.7323	1.6413	3.28256	137.15	-0.7331	1.6447	3.25532	137.21	-0.7339	1.6481	3.22842		
120	141.05	-0.7777	1.7711	3.06363	141.11	-0.7784	1.7752	3.03750	141.18	-0.7791	1.7794	3.01170		
125	144.86	-0.8177	1.9050	2.87041	144.92	-0.8184	1.9100	2.84532	144.98	-0.8190	1.9150	2.82054		
130	148.52	-0.8529	2.0409	2.70110	148.58	-0.8534	2.0468	2.67696	148.64	-0.8539	2.0526	2.65313		
135	152.05	-0.8834	2.1764	2.55390	152.10	-0.8838	2.1831	2.53062	152.15	-0.8842	2.1899	2.50764		
140	155.46	-0.9097	2.3088	2.42709	155.51	-0.9100	2.3164	2.40458	155.55	-0.9103	2.3240	2.38236		
145	158.76	-0.9321	2.4351	2.31906	158.80	-0.9323	2.4436	2.29723	158.84	-0.9326	2.4521	2.27568		
150	161.97	-0.9509	2.5523	2.22839	162.00	-0.9511	2.5617	2.20714	162.04	-0.9513	2.5710	2.18617		
155	165.09	-0.9664	2.6576	2.15379	165.12	-0.9665	2.6677	2.13304	165.15	-0.9666	2.6779	2.11256		
160	168.15	-0.9787	2.7481	2.09422	168.18									

$x = 0.175$					$x = 0.176$					$x = 0.177$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.4971	11.49520	0.00	1.0000	0.4963	11.44913	0.00	1.0000	0.4954	11.40354	0.00	1.0000
5	7.09	0.9924	0.4984	11.45865	7.10	0.9923	0.4975	11.41262	7.10	0.9923	0.4967	11.36708	7.10	0.9923
10	14.17	0.9696	0.5021	11.34982	14.18	0.9695	0.5013	11.30392	14.19	0.9695	0.5005	11.25851	14.19	0.9695
15	21.22	0.9322	0.5085	11.17117	21.23	0.9321	0.5077	11.12549	21.25	0.9320	0.5069	11.08028	21.25	0.9320
20	28.23	0.8811	0.5176	10.92670	28.25	0.8809	0.5168	10.88132	28.27	0.8807	0.5159	10.83641	28.27	0.8807
25	35.18	0.8173	0.5295	10.62180	35.21	0.8170	0.5287	10.57681	35.24	0.8167	0.5279	10.53229	35.24	0.8167
30	42.07	0.7423	0.5445	10.26309	42.11	0.7419	0.5437	10.21858	42.14	0.7415	0.5429	10.17453	42.14	0.7415
35	48.88	0.6576	0.5627	9.85819	48.92	0.6571	0.5619	9.81425	48.96	0.6565	0.5611	9.77076	48.96	0.6565
40	55.60	0.5650	0.5846	9.41544	55.64	0.5643	0.5838	9.37215	55.69	0.5637	0.5830	9.32932	55.69	0.5637
45	62.21	0.4663	0.6103	8.94361	62.26	0.4655	0.6096	8.90108	62.31	0.4647	0.6089	8.85899	62.31	0.4647
50	68.69	0.3634	0.6405	8.45168	68.75	0.3625	0.6398	8.40998	68.80	0.3616	0.6391	8.36872	68.80	0.3616
55	75.04	0.2581	0.6754	7.94845	75.10	0.2571	0.6748	7.90768	75.16	0.2561	0.6741	7.86734	75.16	0.2561
60	81.24	0.1523	0.7156	7.44235	81.30	0.1512	0.7151	7.40259	81.37	0.1501	0.7145	7.36325	81.37	0.1501
65	87.28	0.0475	0.7618	6.94115	87.35	0.0463	0.7613	6.90247	87.41	0.0451	0.7609	6.86420	87.41	0.0451
70	93.15	-0.0549	0.8144	6.45177	93.22	-0.0561	0.8141	6.41424	93.29	-0.0573	0.8138	6.37712	93.29	-0.0573
75	98.83	-0.1536	0.8741	5.98013	98.91	-0.1548	0.8739	5.94381	98.98	-0.1560	0.8738	5.90789	98.98	-0.1560
80	104.33	-0.2475	0.9414	5.53106	104.40	-0.2487	0.9415	5.49600	104.48	-0.2500	0.9415	5.46133	104.48	-0.2500
85	109.63	-0.3359	1.0169	5.10825	109.70	-0.3372	1.0172	5.07448	109.78	-0.3384	1.0176	5.04109	109.78	-0.3384
90	114.73	-0.4183	1.1010	4.71428	114.80	-0.4195	1.1016	4.68182	114.88	-0.4207	1.1023	4.64971	114.88	-0.4207
95	119.63	-0.4944	1.1939	4.35070	119.70	-0.4955	1.1950	4.31954	119.78	-0.4966	1.1961	4.28873	119.78	-0.4966
100	124.33	-0.5639	1.2958	4.01812	124.40	-0.5650	1.2974	3.98824	124.48	-0.5661	1.2989	3.95872	124.48	-0.5661
105	128.83	-0.6271	1.4065	3.71638	128.91	-0.6280	1.4085	3.68777	128.98	-0.6290	1.4106	3.65948	128.98	-0.6290
110	133.15	-0.6839	1.5253	3.44471	133.22	-0.6848	1.5280	3.41730	133.29	-0.6857	1.5307	3.39022	133.29	-0.6857
115	137.28	-0.7347	1.6514	3.20184	137.35	-0.7355	1.6548	3.17559	137.41	-0.7363	1.6582	3.14965	137.41	-0.7363
120	141.24	-0.7798	1.7836	2.98622	141.30	-0.7805	1.7877	2.96103	141.37	-0.7812	1.7919	2.93618	141.37	-0.7812
125	145.04	-0.8196	1.9199	2.79608	145.10	-0.8201	1.9249	2.77191	145.16	-0.8207	1.9300	2.74805	145.16	-0.8207
130	148.69	-0.8544	2.0585	2.62959	148.75	-0.8549	2.0643	2.60636	148.80	-0.8554	2.0702	2.58341	148.80	-0.8554
135	152.21	-0.8846	2.1966	2.48495	152.26	-0.8850	2.2034	2.46256	152.31	-0.8854	2.2102	2.46044	152.31	-0.8854
140	155.60	-0.9107	2.3317	2.36043	155.64	-0.9110	2.3394	2.33878	155.69	-0.9113	2.3471	2.31741	155.69	-0.9113
145	158.88	-0.9328	2.4607	2.25442	158.92	-0.9331	2.4692	2.23343	158.96	-0.9334	2.4778	2.21271	158.96	-0.9334
150	162.07	-0.9515	2.5804	2.16548	162.11	-0.9516	2.5899	2.14505	162.14	-0.9518	2.5993	2.12490	162.14	-0.9518
155	165.18	-0.9667	2.6880	2.09235	165.21	-0.9669	2.6987	2.07240	165.24	-0.9670	2.7084	2.05272	165.24	-0.9670
160	168.23	-0.9790	2.7805	2.03396	168.25	-0.9790	2.7914	2.01441	168.27	-0.9791	2.8023	1.99511	168.27	-0.9791
165	171.22	-0.9883	2.8554	1.98945	171.23	-0.9883	2.8668	1.97020	171.25	-0.9884	2.8783	1.95120	171.25	-0.9884
170	174.17	-0.9948	2.9105	1.95814	174.18	-0.9948	2.9223	1.93910	174.19	-0.9949	2.9342	1.93203	174.19	-0.9949
175	177.09	-0.9987	2.9442	1.93954	177.10	-0.9987	2.9563	1.92063	177.10	-0.9987	2.9685	1.90197	177.10	-0.9987
180	180.00	-1.0000	2.9556	1.93337	180.00	-1.0000	2.9678	1.91451	180.00	-1.0000	2.9800	1.89589	180.00	-1.0000

2 x = 0.178					2 x = 0.179					2 x = 0.180				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4946	11.35843	0.00	1.0000	0.4938	11.31379	0.00	1.0000	0.4930	11.26960		
5	7.11	0.9923	0.4959	11.32201	7.11	0.9923	0.4950	11.27740	7.12	0.9923	0.4942	11.23326		
10	14.20	0.9694	0.4997	11.21356	14.21	0.9694	0.4988	11.16908	14.22	0.9693	0.4980	11.12506		
15	21.27	0.9319	0.5060	11.03555	21.29	0.9318	0.5052	10.99128	21.30	0.9317	0.5044	10.94746		
20	28.30	0.8805	0.5151	10.79197	28.32	0.8803	0.5143	10.74799	28.34	0.8801	0.5135	10.70447		
25	35.27	0.8164	0.5271	10.48823	35.30	0.8161	0.5263	10.44463	35.33	0.8158	0.5255	10.40148		
30	42.18	0.7411	0.5421	10.13095	42.21	0.7407	0.5413	10.08781	42.25	0.7402	0.5405	10.04512		
35	49.00	0.6560	0.5604	9.72774	49.04	0.6555	0.5596	9.68515	49.08	0.6549	0.5588	9.64301		
40	55.74	0.5630	0.5823	9.28694	55.78	0.5624	0.5815	9.24500	55.83	0.5617	0.5808	9.20349		
45	62.36	0.4640	0.6081	8.81734	62.41	0.4632	0.6074	8.77613	62.46	0.4624	0.6067	8.73535		
50	68.86	0.3607	0.6384	8.32790	68.91	0.3598	0.6377	8.28751	68.97	0.3589	0.6370	8.24754		
55	75.22	0.2551	0.6735	7.82743	75.28	0.2541	0.6729	7.78794	75.34	0.2531	0.6723	7.74886		
60	81.43	0.1490	0.7140	7.32432	81.49	0.1479	0.7135	7.28581	81.56	0.1468	0.7129	7.24771		
65	87.48	0.0440	0.7604	6.82635	87.55	0.0428	0.7600	6.78890	87.61	0.0416	0.7596	6.75184		
70	93.36	-0.0586	0.8135	6.34040	93.43	-0.0598	0.8131	6.30407	93.50	-0.0610	0.8128	6.26813		
75	99.05	-0.1573	0.8736	5.87237	99.12	-0.1585	0.8735	5.83722	99.19	-0.1598	0.8734	5.80245		
80	104.55	-0.2512	0.9416	5.42704	104.62	-0.2525	0.9417	5.39312	104.70	-0.2537	0.9418	5.35957		
85	109.85	-0.3396	1.0179	5.00806	109.93	-0.3408	1.0182	4.97540	110.00	-0.3421	1.0186	4.94310		
90	114.95	-0.4219	1.1030	4.61797	115.03	-0.4231	1.1036	4.58659	115.10	-0.4243	1.1043	4.55555		
95	119.85	-0.4978	1.1971	4.25827	119.93	-0.4989	1.1982	4.22816	120.00	-0.5000	1.1993	4.19839		
100	124.55	-0.5671	1.3004	3.92953	124.62	-0.5682	1.3020	3.90067	124.70	-0.5692	1.3035	3.87215		
105	129.05	-0.6300	1.4127	3.63153	129.12	-0.6310	1.4148	3.60391	129.19	-0.6319	1.4169	3.57660		
110	133.36	-0.6865	1.5334	3.36346	133.43	-0.6874	1.5361	3.33702	133.50	-0.6883	1.5388	3.31088		
115	137.48	-0.7370	1.6617	3.12403	137.55	-0.7378	1.6651	3.09871	137.61	-0.7386	1.6685	3.07369		
120	141.43	-0.7819	1.7961	2.91163	141.49	-0.7825	1.8003	2.88736	141.56	-0.7832	1.8045	2.86340		
125	145.22	-0.8213	1.9350	2.72448	145.28	-0.8219	1.9400	2.70120	145.34	-0.8225	1.9451	2.67821		
130	148.86	-0.8559	2.0761	2.56075	148.91	-0.8564	2.0821	2.53838	148.97	-0.8569	2.0880	2.51627		
135	152.36	-0.8859	2.2170	2.41861	152.41	-0.8863	2.2239	2.39705	152.46	-0.8867	2.2307	2.37576		
140	155.74	-0.9117	2.3548	2.28631	155.78	-0.9120	2.3626	2.27548	155.83	-0.9123	2.3704	2.25491		
145	159.00	-0.9336	2.4865	2.19226	159.04	-0.9339	2.4951	2.17207	159.08	-0.9341	2.5038	2.15214		
150	162.18	-0.9520	2.6088	2.10501	162.21	-0.9522	2.6183	2.08537	162.25	-0.9524	2.6279	2.06598		
155	165.27	-0.9671	2.7187	2.03330	165.30	-0.9673	2.7290	2.01413	165.33	-0.9674	2.7393	1.99520		
160	168.30	-0.9792	2.8132	1.97607	168.32	-0.9793	2.8242	1.95728	168.34	-0.9794	2.8352	1.93873		
165	171.27	-0.9884	2.8984	1.93246	171.29	-0.9885	2.9013	1.91396	171.30	-0.9885	2.9129	1.89570		
170	174.20	-0.9949	2.9461	1.90178	174.21	-0.9949	2.9581	1.88349	174.22	-0.9949	2.9701	1.86544		
175	177.11	-0.9987	2.9806	1.88356	177.11	-0.9987	2.9928	1.86540	177.12	-0.9987	3.0051	1.84747		
180	180.00	-1.0000	2.9922	1.87752	180.00	-1.0000	3.0045	1.85940	180.00	-1.0000	3.0168	1.84151		

x = 0.181					x = 0.182					x = 0.183				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4922	11.22387	0.00	1.0000	0.4913	11.18258	0.00	1.0000	0.4905	11.13973		
5	7.12	0.9923	0.4934	11.18957	7.13	0.9923	0.4926	11.14632	7.14	0.9923	0.4918	11.10351		
10	14.24	0.9693	0.4972	11.08149	14.25	0.9692	0.4964	11.03836	14.26	0.9692	0.4956	10.99567		
15	21.32	0.9316	0.5036	10.90410	21.34	0.9314	0.5028	10.86117	21.36	0.9313	0.5020	10.81868		
20	28.37	0.8799	0.5127	10.66139	28.39	0.8797	0.5119	10.61875	28.41	0.8795	0.5111	10.57654		
25	35.36	0.8156	0.5247	10.35877	35.39	0.8153	0.5239	10.31650	35.42	0.8150	0.5231	10.27466		
30	42.28	0.7398	0.5397	10.00287	42.32	0.7394	0.5389	9.96105	42.35	0.7390	0.5381	9.91966		
35	49.12	0.6544	0.5580	9.60131	49.16	0.6539	0.5573	9.56002	49.20	0.6534	0.5565	9.51916		
40	55.87	0.5611	0.5800	9.16241	55.92	0.5604	0.5793	9.12176	55.96	0.5598	0.5785	9.08151		
45	62.51	0.4616	0.6060	8.69499	62.56	0.4609	0.6053	8.65504	62.61	0.4601	0.6045	8.61550		
50	69.02	0.3580	0.6364	8.20798	69.08	0.3571	0.6357	8.16883	69.13	0.3563	0.6350	8.13008		
55	75.40	0.2521	0.6716	7.71018	75.45	0.2512	0.6710	7.67191	75.51	0.2502	0.6704	7.63403		
60	81.62	0.1457	0.7124	7.21000	81.68	0.1447	0.7118	7.17269	81.74	0.1436	0.7113	7.13576		
65	87.68	0.0405	0.7591	6.71518	87.75	0.0393	0.7587	6.67890	87.81	0.0382	0.7583	6.64299		
70	93.56	-0.0622	0.8125	6.23257	93.63	-0.0634	0.8122	6.19739	93.70	-0.0646	0.8119	6.16258		
75	99.26	-0.1610	0.8732	5.76806	99.34	-0.1622	0.8731	5.73403	99.41	-0.1634	0.8730	5.70036		
80	104.77	-0.2549	0.9418	5.32638	104.84	-0.2562	0.9419	5.29355	104.92	-0.2574	0.9420	5.26107		
85	110.08	-0.3433	1.0189	4.91115	110.15	-0.3445	1.0193	4.87955	110.22	-0.3457	1.0196	4.84829		
90	115.18	-0.4254	1.1050	4.52486	115.25	-0.4266	1.1057	4.49450	115.33	-0.4278	1.1063	4.46448		
95	120.08	-0.5012	1.2003	4.16895	120.15	-0.5023	1.2014	4.13984	120.22	-0.5034	1.2025	4.11105		
100	124.77	-0.5703	1.3051	3.84395	124.84	-0.5713	1.3066	3.81607	124.92	-0.5724	1.3081	3.78850		
105	129.26	-0.6329	1.4190	3.54961	129.34	-0.6339	1.4211	3.52292	129.41	-0.6348	1.4232	3.49654		
110	133.56	-0.6892	1.5416	3.28506	133.63	-0.6900	1.5443	3.25953	133.70	-0.6909	1.5470	3.23429		
115	137.68	-0.7394	1.6719	3.04897	137.75	-0.7402	1.6754	3.02454	137.81	-0.7409	1.6788	3.00039		
120	141.62	-0.7839	1.8087	2.83971	141.68	-0.7846	1.8129	2.81631	141.74	-0.7853	1.8171	2.79319		
125	145.40	-0.8231	1.9501	2.65549	145.45	-0.8237	1.9552	2.63305	145.51	-0.8243	1.9603	2.61088		
130	149.02	-0.8574	2.0939	2.49445	149.08	-0.8578	2.0999	2.47288	149.13	-0.8583	2.1059	2.45158		
135	152.51	-0.8871	2.2376	2.35473	152.56	-0.8875	2.2445	2.33396	152.61	-0.8879	2.2514	2.31345		
140	155.87	-0.9126	2.3782	2.23460	155.92	-0.9129	2.3860	2.21455	155.96	-0.9133	2.3938	2.19474		
145	159.12	-0.9344	2.5125	2.13246	159.16	-0.9346	2.5213	2.11302	159.20	-0.9348	2.5300	2.09384		
150	162.28	-0.9526	2.6374	2.04685	162.32	-0.9527	2.6470	2.02795	162.35	-0.9529	2.6567	2.00930		
155	165.36	-0.9675	2.7497	1.97652	165.39	-0.9677	2.7601	1.95808	165.42	-0.9678	2.7705	1.93988		
160	168.37	-0.9795	2.8594	1.92042	168.39	-0.9796	2.8714	1.90235	168.41	-0.9796	2.8835	1.89451		
165	171.32	-0.9886	2.9245	1.87768	171.34	-0.9886	2.9361	1.85989	171.36	-0.9886	2.9478	1.84233		
170	174.24	-0.9949	2.9821	1.84762	174.25	-0.9950	2.9942	1.83003	174.26	-0.9950	3.0063	1.81268		
175	177.12	-0.9987	3.0173	1.82977	177.13	-0.9987	3.0297	1.81231	177.14	-0.9988	3.0420	1.79507		
180	180.00	-1.0000	3.0292	1.82386	180.00	-1.0000	3.0416	1.80643	180.00	-1.0000	3.0541	1.78924		

x = 0.184					x = 0.185					x = 0.186				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4897	11.09731	0.00	1.0000	0.4889	11.05531	0.00	1.0000	0.4881	11.01373		
5	7.14	0.9922	0.4910	11.06112	7.15	0.9922	0.4902	11.01917	7.15	0.9922	0.4894	10.97763		
10	14.27	0.9691	0.4948	10.95341	14.28	0.9691	0.4940	10.91157	14.29	0.9690	0.4932	10.87015		
15	21.37	0.9312	0.5012	10.77662	21.39	0.9311	0.5004	10.73498	21.41	0.9310	0.4996	10.69375		
20	28.44	0.8793	0.5103	10.53476	28.46	0.8792	0.5095	10.49339	28.48	0.8790	0.5087	10.45244		
25	35.44	0.8147	0.5223	10.23324	35.47	0.8144	0.5215	10.19223	35.50	0.8141	0.5207	10.15163		
30	42.38	0.7386	0.5374	9.87868	42.42	0.7382	0.5366	9.83812	42.45	0.7378	0.5358	9.79795		
35	49.24	0.6529	0.5557	9.47871	49.28	0.6523	0.5550	9.43867	49.32	0.6518	0.5542	9.39903		
40	56.01	0.5591	0.5778	9.04168	56.05	0.5585	0.5770	9.00224	56.09	0.5578	0.5763	8.96320		
45	62.66	0.4593	0.6038	8.57637	62.71	0.4586	0.6031	8.53762	62.76	0.4578	0.6024	8.49927		
50	69.18	0.3554	0.6344	8.09172	69.24	0.3545	0.6337	8.05376	69.29	0.3536	0.6330	8.01617		
55	75.57	0.2492	0.6698	7.59654	75.63	0.2482	0.6692	7.55943	75.69	0.2472	0.6686	7.52270		
60	81.81	0.1425	0.7108	7.09922	81.87	0.1414	0.7102	7.06304	81.93	0.1404	0.7097	7.02724		
65	87.88	0.0370	0.7578	6.60746	87.94	0.0359	0.7574	6.57229	88.01	0.0347	0.7570	6.53749		
70	93.77	-0.0658	0.8116	6.12813	93.84	-0.0670	0.8113	6.09403	93.91	-0.0682	0.8110	6.06029		
75	99.48	-0.1647	0.8728	5.66705	99.55	-0.1659	0.8727	5.63408	99.62	-0.1671	0.8726	5.60146		
80	104.99	-0.2586	0.9421	5.22894	105.06	-0.2598	0.9422	5.19714	105.13	-0.2611	0.9422	5.16568		
85	110.30	-0.3469	1.0200	4.81737	110.37	-0.3481	1.0203	4.78677	110.44	-0.3493	1.0207	4.75650		
90	115.40	-0.4290	1.1070	4.43478	115.47	-0.4301	1.1077	4.40540	115.55	-0.4313	1.1084	4.37634		
95	120.30	-0.5045	1.2036	4.08258	120.37	-0.5056	1.2046	4.05442	120.44	-0.5067	1.2057	4.02656		
100	124.99	-0.5734	1.3097	3.76124	125.06	-0.5744	1.3112	3.73428	125.13	-0.5755	1.3128	3.70762		
105	129.48	-0.6358	1.4253	3.47046	129.55	-0.6367	1.4274	3.44467	129.62	-0.6377	1.4295	3.41918		
110	133.77	-0.6918	1.5498	3.20935	133.84	-0.6926	1.5525	3.18469	133.91	-0.6935	1.5552	3.16031		
115	137.88	-0.7417	1.6823	2.97653	137.94	-0.7425	1.6857	2.95294	138.01	-0.7432	1.6892	2.92962		
120	141.81	-0.7859	1.8214	2.77034	141.87	-0.7866	1.8256	2.74776	141.93	-0.7873	1.8299	2.72545		
125	145.57	-0.8248	1.9653	2.58898	145.63	-0.8254	1.9704	2.56733	145.69	-0.8260	1.9756	2.54594		
130	149.18	-0.8588	2.1119	2.43054	149.24	-0.8593	2.1179	2.40976	149.29	-0.8598	2.1239	2.38922		
135	152.66	-0.8883	2.2583	2.29319	152.71	-0.8887	2.2653	2.27318	152.76	-0.8891	2.2792	2.25341		
140	156.01	-0.9136	2.4017	2.17518	156.05	-0.9139	2.4096	2.15586	156.09	-0.9142	2.4175	2.13678		
145	159.24	-0.9351	2.5388	2.07489	159.28	-0.9353	2.5476	2.05618	159.32	-0.9356	2.5564	2.03770		
150	162.38	-0.9531	2.6663	1.99088	162.42	-0.9533	2.6760	1.97269	162.45	-0.9535	2.6857	1.95473		
155	165.44	-0.9679	2.7810	1.92190	165.47	-0.9680	2.7914	1.90416	165.50	-0.9682	2.8020	1.88663		
160	168.44	-0.9797	2.8796	1.86690	168.46	-0.9798	2.8908	1.84948	168.48	-				

$\frac{2}{x} = 0.187$
 $\frac{2}{x} = 0.188$
 $\frac{2}{x} = 0.189$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4874	10.97257	0.00	1.0000	0.4866	10.93180	0.00	1.0000	0.4858	10.89144
5	7.16	0.9922	0.4886	10.93650	7.17	0.9922	0.4878	10.89578	7.17	0.9922	0.4871	10.85545
10	14.31	0.9690	0.4924	10.82914	14.32	0.9689	0.4916	10.78853	14.33	0.9689	0.4909	10.74832
15	21.43	0.9309	0.4968	10.65293	21.44	0.9308	0.4980	10.61251	21.46	0.9307	0.4973	10.57249
20	28.51	0.8788	0.5080	10.41189	28.53	0.8786	0.5072	10.37175	28.55	0.8784	0.5064	10.33199
25	35.53	0.8138	0.5200	10.11144	35.56	0.8135	0.5192	10.07164	35.59	0.8132	0.5184	10.03223
30	42.49	0.7374	0.5350	9.75819	42.52	0.7370	0.5343	9.71882	42.55	0.7366	0.5335	9.67984
35	49.30	0.6513	0.5535	9.35978	49.40	0.6508	0.5527	9.32092	49.44	0.6503	0.5520	9.28244
40	56.14	0.5572	0.5756	8.92455	56.18	0.5565	0.5749	8.88629	56.23	0.5559	0.5741	8.84839
45	62.80	0.4570	0.6017	8.46130	62.85	0.4563	0.6010	8.42371	62.90	0.4555	0.6003	8.38649
50	69.35	0.3527	0.6324	7.97896	69.40	0.3519	0.6317	7.94213	69.45	0.3510	0.6311	7.90566
55	75.75	0.2462	0.6580	7.48634	75.80	0.2452	0.6674	7.45034	75.86	0.2443	0.6668	7.41469
60	81.99	0.1393	0.7092	6.99179	82.06	0.1382	0.7087	6.95670	82.12	0.1372	0.7081	6.92197
65	88.07	0.0336	0.7565	6.50303	88.14	0.0325	0.7561	6.46893	88.20	0.0313	0.7557	6.43517
70	93.98	-0.0693	0.8107	6.02689	94.04	-0.0705	0.8104	5.99384	94.11	-0.0717	0.8101	5.96111
75	99.69	-0.1683	0.8724	5.56917	99.76	-0.1695	0.8723	5.53722	99.83	-0.1707	0.8722	5.50559
80	105.21	-0.2623	0.9423	5.13455	105.28	-0.2635	0.9424	5.10374	105.35	-0.2647	0.9425	5.07325
85	110.52	-0.3505	1.0210	4.72655	110.59	-0.3517	1.0214	4.69692	110.66	-0.3529	1.0217	4.66760
90	115.62	-0.4324	1.1091	4.34759	115.70	-0.4336	1.1097	4.31915	115.77	-0.4347	1.1104	4.29100
95	120.52	-0.5078	1.2066	3.99901	120.59	-0.5089	1.2079	3.97176	120.66	-0.5100	1.2089	3.94479
100	125.21	-0.5765	1.3143	3.68125	125.28	-0.5775	1.3159	3.65517	125.35	-0.5786	1.3175	3.62937
105	129.69	-0.6386	1.4316	3.39396	129.76	-0.6396	1.4337	3.36903	129.83	-0.6405	1.4358	3.34437
110	133.98	-0.6944	1.5580	3.13620	134.04	-0.6952	1.5607	3.11237	134.11	-0.6961	1.5635	3.08880
115	138.07	-0.7440	1.6926	2.90657	138.14	-0.7448	1.6961	2.88379	138.20	-0.7455	1.6996	2.86126
120	141.99	-0.7879	1.8342	2.70339	142.06	-0.7886	1.8384	2.68159	142.12	-0.7893	1.8427	2.66004
125	145.75	-0.8266	1.9807	2.52481	145.80	-0.8271	1.9858	2.50392	145.86	-0.8277	1.9910	2.48327
130	149.35	-0.8603	2.1299	2.36892	149.40	-0.8607	2.1360	2.34887	149.45	-0.8612	2.1421	2.32906
135	152.80	-0.8895	2.2792	2.23388	152.85	-0.8898	2.2862	2.21459	152.90	-0.8902	2.2392	2.19552
140	156.14	-0.9145	2.4254	2.11793	156.18	-0.9148	2.4334	2.09931	156.23	-0.9152	2.4413	2.08091
145	159.36	-0.9358	2.5553	2.01944	159.40	-0.9361	2.5742	2.00142	159.44	-0.9363	2.5831	1.98361
150	162.49	-0.9536	2.6955	1.93699	162.52	-0.9538	2.7052	1.91948	162.55	-0.9540	2.7150	1.90217
155	165.53	-0.9683	2.8125	1.86933	165.56	-0.9684	2.8231	1.85224	165.59	-0.9685	2.8337	1.83536
160	168.51	-0.9799	2.9133	1.81598	168.53	-0.9800	2.9246	1.79864	168.55	-0.9801	2.9360	1.78211
165	171.43	-0.9888	2.9950	1.77431	171.44	-0.9889	3.0069	1.75783	171.46	-0.9889	3.0188	1.74157
170	174.31	-0.9951	3.0551	1.74544	174.32	-0.9951	3.0674	1.72916	174.33	-0.9951	3.0798	1.71308
175	177.16	-0.9988	3.0919	1.72830	177.17	-0.9988	3.1045	1.71214	177.17	-0.9988	3.1171	1.69617
180	180.00	-1.0000	3.1043	1.72262	180.00	-1.0000	3.1170	1.70649	180.00	-1.0000	3.1297	1.69057

 $\frac{2}{x} = 0.190$
 $\frac{2}{x} = 0.191$
 $\frac{2}{x} = 0.192$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4850	10.85147	0.00	1.0000	0.4842	10.81189	0.00	1.0000	0.4835	10.77269
5	7.18	0.9922	0.4863	10.81552	7.18	0.9922	0.4855	10.77597	7.19	0.9921	0.4847	10.73581
10	14.34	0.9688	0.4901	10.70850	14.35	0.9688	0.4893	10.66906	14.36	0.9687	0.4885	10.63001
15	21.48	0.9306	0.4965	10.53286	21.49	0.9305	0.4957	10.49361	21.51	0.9303	0.4950	10.45474
20	28.57	0.8782	0.5056	10.29262	28.60	0.8780	0.5049	10.25364	28.62	0.8778	0.5041	10.21503
25	35.62	0.8129	0.5177	9.99320	35.64	0.8127	0.5169	9.95456	35.67	0.8124	0.5161	9.91628
30	42.59	0.7380	0.5328	9.63812	42.61	0.7378	0.5320	9.60000	42.66	0.7354	0.5313	9.56514
35	49.48	0.6497	0.5513	9.24434	49.52	0.6492	0.5505	9.20661	49.56	0.6487	0.5498	9.16924
40	56.27	0.5553	0.5734	8.81087	56.31	0.5546	0.5727	8.77372	56.36	0.5540	0.5720	8.73692
45	62.95	0.4547	0.5997	8.34963	63.00	0.4540	0.5990	8.31313	63.05	0.4532	0.5983	8.27699
50	69.51	0.3501	0.6304	7.86954	69.56	0.3492	0.6298	7.83378	69.61	0.3484	0.6291	7.79837
55	75.92	0.2433	0.6562	7.37940	75.98	0.2423	0.6556	7.34446	76.03	0.2413	0.6550	7.30986
60	82.18	0.1361	0.7076	6.88757	82.24	0.1350	0.7071	6.85352	82.30	0.1340	0.7066	6.81981
65	88.27	0.0302	0.7553	6.40175	88.33	0.0291	0.7549	6.36866	88.40	0.0279	0.7544	6.33589
70	94.18	-0.0729	0.8099	5.92872	94.25	-0.0741	0.8096	5.89666	94.31	-0.0752	0.8093	5.86491
75	99.90	-0.1719	0.8721	5.47428	99.97	-0.1731	0.8719	5.44329	100.04	-0.1743	0.8718	5.41262
80	105.42	-0.2659	0.9426	5.04307	105.49	-0.2671	0.9427	5.01320	105.56	-0.2683	0.9428	4.98364
85	110.74	-0.3541	1.0221	4.63858	110.81	-0.3553	1.0225	4.60986	110.88	-0.3564	1.0228	4.58443
90	115.84	-0.4359	1.1111	4.26316	115.91	-0.4370	1.1118	4.23560	115.99	-0.4382	1.1125	4.20833
95	120.74	-0.5111	1.2100	3.91812	120.81	-0.5122	1.2111	3.89173	120.88	-0.5133	1.2122	3.86561
100	125.42	-0.5796	1.3190	3.60385	125.49	-0.5806	1.3206	3.57861	125.56	-0.5816	1.3222	3.55364
105	129.90	-0.6415	1.4379	3.31998	129.97	-0.6424	1.4401	3.29585	130.04	-0.6433	1.4422	3.27199
110	134.18	-0.6969	1.5663	3.06550	134.25	-0.6978	1.5690	3.04245	134.31	-0.6986	1.5718	3.01966
115	138.27	-0.7463	1.7031	2.83899	138.33	-0.7470	1.7066	2.81697	138.40	-0.7478	1.7101	2.79519
120	142.18	-0.7899	1.8470	2.63874	142.24	-0.7906	1.8513	2.61768	142.30	-0.7912	1.8556	2.59685
125	145.92	-0.8283	1.9961	2.46287	145.98	-0.8288	2.0013	2.44270	146.03	-0.8294	2.0065	2.42276
130	149.51	-0.8617	2.1481	2.30917	149.56	-0.8622	2.1542	2.29012	149.61	-0.8626	2.1604	2.27099
135	152.95	-0.8906	2.3063	2.17658	153.00	-0.8910	2.3073	2.15807	153.05	-0.8914	2.3144	2.13967
140	156.27	-0.9155	2.4433	2.06274	156.32	-0.9158	2.4574	2.04478	156.36	-0.9161	2.4654	2.02704
145	159.48	-0.9365	2.5920	1.96601	159.52	-0.9368	2.6010	1.94863	159.56	-0.9370	2.6100	1.93146
150	162.59	-0.9542	2.7249	1.88508	162.62	-0.9544	2.7348	1.86820	162.66	-0.9545	2.7447	1.85152
155	165.62	-0.9686	2.8444	1.81869	165.64	-0.9688	2.8551	1.80222	165.67	-0.9689	2.8658	1.78596
160	168.57	-0.9802	2.9473	1.76578	168.60	-0.9803	2.9587	1.74965	168.62	-0.9803	2.9702	1.73373
165	171.48	-0.9890	3.0307	1.72551	171.49	-0.9890	3.0427	1.70964	171.51	-0.9890	3.0548	1.69397
170	174.34	-0.9951	3.0922	1.69720	174.35	-0.9951	3.1046	1.68153	174.36	-0.9952	3.1171	1.66604
175	177.18	-0.9988	3.1298	1.68041	177.18	-0.9988	3.1425	1.66484	177.19	-0.9988	3.1553	1.64947
180	180.00	-1.0000	3.1425	1.67484	180.00	-1.0000	3.1553	1.65931	180.00	-1.0000	3.1681	1.64398

x ² = 0.193					x ² = 0.194					x ² = 0.195				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.4827	10.73386	0.00	1.0000	0.4819	10.69541	0.00	1.0000	0.4812	10.65731		
5	7.19	0.9921	0.4840	10.69802	7.20	0.9921	0.4832	10.65960	7.21	0.9921	0.4825	10.62154		
10	14.38	0.9687	0.4878	10.59133	14.39	0.9686	0.4870	10.55301	14.40	0.9686	0.4863	10.51507		
15	21.53	0.9302	0.4942	10.41625	21.55	0.9301	0.4934	10.37811	21.56	0.9300	0.4927	10.34035		
20	28.64	0.8776	0.5034	10.17679	28.66	0.8774	0.5026	10.13891	28.69	0.8773	0.5018	10.10140		
25	35.70	0.8121	0.5154	9.87838	35.73	0.8118	0.5146	9.84083	35.76	0.8115	0.5139	9.80364		
30	42.69	0.7350	0.5305	9.52765	42.72	0.7346	0.5298	9.49051	42.76	0.7343	0.5291	9.45373		
35	49.59	0.6482	0.5491	9.13223	49.63	0.6477	0.5483	9.09558	49.67	0.6472	0.5476	9.05927		
40	56.40	0.5534	0.5713	8.70048	56.45	0.5527	0.5706	8.66439	56.49	0.5521	0.5699	8.62865		
45	63.10	0.4525	0.5976	8.24120	63.15	0.4517	0.5969	8.20575	63.19	0.4510	0.5963	8.17064		
50	69.67	0.3475	0.6285	7.76331	69.72	0.3466	0.6278	7.72858	69.77	0.3458	0.6272	7.69418		
55	76.09	0.2404	0.6644	7.27560	76.15	0.2394	0.6639	7.24166	76.21	0.2384	0.6633	7.20806		
60	82.36	0.1329	0.7061	6.78642	82.42	0.1319	0.7056	6.75336	82.48	0.1308	0.7051	6.72062		
65	88.46	0.0268	0.7540	6.30345	88.53	0.0257	0.7536	6.27133	88.59	0.0246	0.7532	6.23952		
70	94.38	-0.0764	0.8090	5.83348	94.45	-0.0776	0.8087	5.80236	94.52	-0.0787	0.8084	5.77154		
75	100.11	-0.1755	0.8717	5.38225	100.18	-0.1767	0.8716	5.35218	100.25	-0.1779	0.8715	5.32241		
80	105.64	-0.2695	0.9429	4.95437	105.71	-0.2707	0.9430	4.92540	105.78	-0.2719	0.9431	4.89672		
85	110.95	-0.3576	1.0232	4.55330	111.03	-0.3588	1.0235	4.52545	111.10	-0.3600	1.0239	4.49789		
90	116.06	-0.4393	1.1132	4.18134	116.13	-0.4405	1.1139	4.15464	116.21	-0.4416	1.1146	4.12820		
95	120.95	-0.5143	1.2133	3.83977	121.03	-0.5154	1.2144	3.81421	121.10	-0.5165	1.2155	3.78890		
100	125.64	-0.5826	1.3237	3.52893	125.71	-0.5836	1.3253	3.50449	125.78	-0.5846	1.3269	3.48030		
105	130.11	-0.6442	1.4443	3.24839	130.18	-0.6452	1.4464	3.22506	130.25	-0.6461	1.4486	3.20194		
110	134.38	-0.6994	1.5746	2.99712	134.45	-0.7003	1.5774	2.97483	134.52	-0.7011	1.5802	2.95277		
115	138.46	-0.7485	1.7136	2.77366	138.53	-0.7493	1.7171	2.75237	138.59	-0.7500	1.7206	2.73131		
120	142.36	-0.7919	1.8599	2.57627	142.42	-0.7925	1.8643	2.55591	142.48	-0.7932	1.8686	2.53579		
125	146.09	-0.8299	2.0117	2.40305	146.15	-0.8305	2.0169	2.38357	146.21	-0.8310	2.0221	2.36431		
130	149.67	-0.8631	2.1665	2.25209	149.72	-0.8636	2.1726	2.23340	149.77	-0.8640	2.1788	2.21493		
135	153.10	-0.8918	2.3215	2.12149	153.15	-0.8922	2.3286	2.10353	153.19	-0.8925	2.3357	2.08577		
140	156.40	-0.9164	2.4735	2.00950	156.45	-0.9167	2.4816	1.99218	156.49	-0.9170	2.4897	1.97506		
145	159.59	-0.9373	2.6190	1.91450	159.63	-0.9375	2.6281	1.89774	159.67	-0.9377	2.6372	1.88117		
150	162.69	-0.9547	2.7546	1.83504	162.72	-0.9549	2.7646	1.81877	162.76	-0.9550	2.7746	1.80268		
155	165.70	-0.9690	2.8766	1.76989	165.73	-0.9691	2.8874	1.75402	165.76	-0.9693	2.8982	1.73834		
160	168.64	-0.9804	2.9817	1.71799	168.66	-0.9805	2.9932	1.70245	168.69	-0.9806	3.0048	1.68710		
165	171.53	-0.9891	3.0669	1.67850	171.55	-0.9891	3.0790	1.66321	171.56	-0.9892	3.0912	1.64811		
170	174.38	-0.9952	3.1296	1.65075	174.39	-0.9952	3.1422	1.63565	174.40	-0.9952	3.1548	1.62073		
175	177.19	-0.9988	3.1681	1.63429	177.20	-0.9988	3.1809	1.61929	177.21	-0.9988	3.1938	1.60448		
180	180.00	-1.0000	3.1810	1.62883	180.00	-1.0000	3.1940	1.61387	180.00	-1.0000	3.2069	1.59910		

x ² = 0.196					x ² = 0.197					x ² = 0.198				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.4804	10.61958	0.00	1.0000	0.4797	10.58220	0.00	1.0000	0.4789	10.54517		
5	7.21	0.9921	0.4817	10.58385	7.22	0.9921	0.4810	10.54650	7.22	0.9921	0.4802	10.50951		
10	14.41	0.9688	0.4855	10.47747	14.42	0.9685	0.4848	10.44024	14.43	0.9684	0.4840	10.40335		
15	21.58	0.9299	0.4919	10.30293	21.60	0.9298	0.4912	10.26587	21.61	0.9297	0.4905	10.22916		
20	28.71	0.8771	0.5011	10.06424	28.73	0.8769	0.5004	10.02742	28.75	0.8767	0.4996	9.99095		
25	35.78	0.8112	0.5132	9.76681	35.81	0.8109	0.5124	9.73032	35.84	0.8107	0.5117	9.69417		
30	42.79	0.7339	0.5283	9.41729	42.82	0.7335	0.5276	9.38119	42.86	0.7331	0.5269	9.34544		
35	49.71	0.6467	0.5469	9.02331	49.75	0.6461	0.5462	8.98769	49.79	0.6456	0.5455	8.95240		
40	56.53	0.5515	0.5692	8.59324	56.58	0.5508	0.5685	8.55817	56.62	0.5502	0.5678	8.52342		
45	63.24	0.4502	0.5956	8.13586	63.29	0.4495	0.5949	8.10141	63.34	0.4487	0.5943	8.06729		
50	69.82	0.3449	0.6266	7.66011	69.88	0.3440	0.6259	7.62637	69.93	0.3432	0.6253	7.59294		
55	76.26	0.2375	0.6627	7.17478	76.32	0.2365	0.6621	7.14181	76.38	0.2355	0.6615	7.10916		
60	82.54	0.1298	0.7045	6.68819	82.61	0.1287	0.7040	6.65608	82.67	0.1277	0.7035	6.62427		
65	88.66	0.0235	0.7528	6.20802	88.72	0.0223	0.7524	6.17682	88.78	0.0212	0.7520	6.14593		
70	94.58	-0.0799	0.8081	5.74103	94.65	-0.0811	0.8079	5.71081	94.72	-0.0822	0.8076	5.68089		
75	100.32	-0.1791	0.8713	5.29294	100.39	-0.1803	0.8712	5.26375	100.46	-0.1815	0.8711	5.23485		
80	105.85	-0.2731	0.9432	4.86832	105.92	-0.2743	0.9433	4.84021	105.99	-0.2755	0.9434	4.81237		
85	111.17	-0.3611	1.0243	4.47060	111.24	-0.3623	1.0246	4.44358	111.31	-0.3635	1.0250	4.41694		
90	116.28	-0.4427	1.1152	4.10204	116.35	-0.4438	1.1159	4.07614	116.42	-0.4450	1.1166	4.05050		
95	121.17	-0.5176	1.2166	3.76386	121.24	-0.5186	1.2177	3.73908	121.31	-0.5197	1.2188	3.71455		
100	125.85	-0.5856	1.3284	3.45637	125.92	-0.5866	1.3300	3.43269	125.99	-0.5876	1.3316	3.40925		
105	130.32	-0.6470	1.4507	3.17909	130.39	-0.6479	1.4529	3.15648	130.46	-0.6489	1.4550	3.13411		
110	134.58	-0.7019	1.5830	2.93096	134.65	-0.7028	1.5858	2.90938	134.72	-0.7036	1.5886	2.88803		
115	138.66	-0.7508	1.7242	2.71048	138.72	-0.7515	1.7277	2.68998	138.78	-0.7522	1.7313	2.66950		
120	142.54	-0.7938	1.8730	2.51588	142.61	-0.7945	1.8773	2.49620	142.67	-0.7951	1.8817	2.47674		
125	146.26	-0.8316	2.0274	2.34526	146.32	-0.8321	2.0326	2.32643	146.38	-0.8327	2.0379	2.30781		
130	149.82	-0.8645	2.1850	2.19667	149.88	-0.8650	2.1912	2.17861	149.93	-0.8654	2.1974	2.16077		
135	153.24	-0.8929	2.3429	2.06822	153.29	-0.8933	2.3501	2.05087	153.34	-0.8937	2.3573	2.03372		
140	156.53	-0.9173	2.4978	1.95814	156.58	-0.9176	2.5060	1.94141	156.62	-0.9179	2.5142	1.92488		
145	159.71	-0.9380	2.6463	1.86481	159.75	-0.9382	2.6554	1.84863	159.79	-0.9384	2.6646	1.83265		
150	162.79	-0.9552	2.7846	1.78679	162.82	-0.9554	2.7946	1.77109	162.86	-0.9556	2.8047	1.75557		
155	165.78	-0.9694	2.9091	1.72285	165.81	-0.9695	2.9200	1.70754	165.84	-0.9696	2.9310	1.69242		
160	168.71	-0.9806	3.0164	1.67193	168.73	-0.9807	3.0280	1.65695	168.75	-0.9808	3.0397	1.64		

$\frac{2}{x} = 0.199$
 $\frac{2}{x} = 0.200$
 $\frac{2}{x} = 0.201$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4782	10.50848	0.00	1.0000	0.4775	10.47214	0.00	1.0000	0.4767	10.43612
5	7.23	0.9921	0.4795	10.47285	7.23	0.9920	0.4787	10.43654	7.24	0.9920	0.4780	10.40056
10	14.44	0.9684	0.4833	10.36680	14.45	0.9683	0.4825	10.33059	14.47	0.9683	0.4818	10.29471
15	21.63	0.9296	0.4897	10.19278	21.65	0.9295	0.4890	10.15674	21.66	0.9294	0.4882	10.12103
20	28.78	0.8765	0.4989	9.95482	28.80	0.8763	0.4982	9.91903	28.82	0.8761	0.4974	9.88356
25	35.87	0.8104	0.5110	9.65835	35.89	0.8101	0.5102	9.62287	35.92	0.8098	0.5095	9.58771
30	42.89	0.7327	0.5262	9.31001	42.92	0.7323	0.5254	9.27492	42.95	0.7319	0.5247	9.24014
35	49.83	0.6451	0.5448	8.91744	49.86	0.6446	0.5441	8.88281	49.90	0.6441	0.5433	8.84849
40	56.66	0.5496	0.5671	8.48900	56.71	0.5489	0.5664	8.45490	56.75	0.5483	0.5657	8.42112
45	63.39	0.4480	0.5936	8.03349	63.43	0.4472	0.5929	8.00000	63.48	0.4465	0.5923	7.96682
50	69.98	0.3423	0.6247	7.55983	70.03	0.3415	0.6241	7.52703	70.09	0.3406	0.6235	7.49453
55	76.43	0.2346	0.6610	7.07681	76.49	0.2336	0.6604	7.04477	76.55	0.2327	0.6598	7.01303
60	82.73	0.1266	0.7030	6.59276	82.79	0.1256	0.7025	6.56155	82.85	0.1245	0.7020	6.53063
65	88.85	0.0201	0.7516	6.11532	88.91	0.0190	0.7512	6.08501	88.97	0.0179	0.7508	6.05499
70	94.78	-0.0834	0.8073	5.65125	94.85	-0.0845	0.8070	5.62189	94.92	-0.0857	0.8068	5.59282
75	100.52	-0.1827	0.8710	5.20623	100.59	-0.1838	0.8709	5.17788	100.66	-0.1850	0.8708	5.14981
80	106.06	-0.2766	0.9435	4.78481	106.13	-0.2778	0.9436	4.75751	106.20	-0.2790	0.9437	4.73048
85	111.38	-0.3646	1.0253	4.39036	111.46	-0.3658	1.0257	4.36414	111.53	-0.3669	1.0261	4.33818
90	116.49	-0.4461	1.1173	4.02612	116.57	-0.4472	1.1180	4.00000	116.64	-0.4483	1.1187	3.97512
95	121.38	-0.5208	1.2199	3.69027	121.46	-0.5218	1.2210	3.66624	121.53	-0.5229	1.2221	3.64244
100	126.06	-0.5886	1.3332	3.38605	126.13	-0.5896	1.3348	3.36310	126.20	-0.5906	1.3364	3.34038
105	130.52	-0.6498	1.4572	3.11197	130.59	-0.6507	1.4593	3.09006	130.66	-0.6516	1.4615	3.06839
110	134.78	-0.7044	1.5914	2.86591	134.85	-0.7053	1.5942	2.84601	134.92	-0.7061	1.5970	2.82534
115	138.85	-0.7530	1.7348	2.64935	138.91	-0.7537	1.7384	2.62941	138.97	-0.7544	1.7419	2.60968
120	142.73	-0.7958	1.8861	2.45749	142.79	-0.7964	1.8905	2.43945	142.85	-0.7970	1.8949	2.421961
125	146.43	-0.8332	2.0432	2.28940	146.49	-0.8338	2.0484	2.27119	146.55	-0.8343	2.0538	2.25318
130	149.98	-0.8659	2.2036	2.14312	150.03	-0.8663	2.2099	2.12567	150.09	-0.8668	2.2161	2.10842
135	153.39	-0.8941	2.3645	2.01676	153.43	-0.8944	2.3717	2.00000	153.48	-0.8948	2.3779	1.98343
140	156.66	-0.9182	2.5224	1.90854	156.71	-0.9185	2.5306	1.89239	156.75	-0.9188	2.5389	1.87643
145	159.83	-0.9386	2.6738	1.81685	159.86	-0.9389	2.6830	1.80123	159.90	-0.9391	2.6923	1.78580
150	162.89	-0.9557	2.8149	1.74024	162.92	-0.9559	2.8250	1.72508	162.95	-0.9561	2.8352	1.71010
155	165.87	-0.9697	2.9419	1.67747	165.89	-0.9698	2.9529	1.66270	165.92	-0.9700	2.9640	1.64811
160	168.78	-0.9809	3.0515	1.62752	168.80	-0.9809	3.0632	1.61306	168.82	-0.9810	3.0750	1.59878
165	171.63	-0.9893	3.1403	1.58952	171.65	-0.9894	3.1526	1.57531	171.66	-0.9894	3.1651	1.56126
170	174.44	-0.9953	3.2057	1.56284	174.45	-0.9953	3.2186	1.54880	174.47	-0.9953	3.2314	1.53493
175	177.23	-0.9988	3.2458	1.54701	177.23	-0.9988	3.2589	1.53307	177.24	-0.9988	3.2721	1.51930
180	180.00	-1.0000	3.2593	1.54177	180.00	-1.0000	3.2725	1.52786	180.00	-1.0000	3.2858	1.51413

 $\frac{2}{x} = 0.202$
 $\frac{2}{x} = 0.203$
 $\frac{2}{x} = 0.204$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4760	10.40044	0.00	1.0000	0.4753	10.36508	0.00	1.0000	0.4745	10.33004
5	7.24	0.9920	0.4773	10.36491	7.25	0.9920	0.4765	10.32958	7.26	0.9920	0.4758	10.29457
10	14.48	0.9683	0.4811	10.25916	14.49	0.9682	0.4803	10.22393	14.50	0.9682	0.4796	10.18902
15	21.68	0.9293	0.4875	10.08565	21.70	0.9292	0.4868	10.05059	21.71	0.9290	0.4861	10.01585
20	28.84	0.8759	0.4967	9.84842	28.86	0.8758	0.4960	9.81359	28.89	0.8756	0.4953	9.77909
25	35.95	0.8095	0.5088	9.55288	35.98	0.8093	0.5081	9.51836	36.00	0.8090	0.5074	9.48416
30	42.99	0.7315	0.5240	9.20569	43.02	0.7311	0.5233	9.17155	43.05	0.7307	0.5226	9.13772
35	49.94	0.6436	0.5426	8.81449	49.98	0.6431	0.5420	8.78080	50.01	0.6426	0.5413	8.74741
40	56.79	0.5477	0.5650	8.38764	56.83	0.5471	0.5644	8.35447	56.85	0.5464	0.5637	8.32161
45	63.53	0.4457	0.5916	7.93395	63.58	0.4450	0.5910	7.90137	63.63	0.4442	0.5903	7.86910
50	70.14	0.3397	0.6228	7.46233	70.19	0.3389	0.6222	7.43043	70.24	0.3380	0.6216	7.39882
55	76.60	0.2317	0.6593	6.98158	76.66	0.2308	0.6587	6.95042	76.71	0.2298	0.6582	6.91955
60	82.91	0.1235	0.7016	6.50000	82.97	0.1225	0.7011	6.46966	83.03	0.1214	0.7006	6.43959
65	89.04	0.0168	0.7504	6.02524	89.10	0.0157	0.7500	5.99578	89.16	0.0146	0.7496	5.96658
70	94.98	-0.0868	0.8065	5.56402	95.05	-0.0880	0.8062	5.53549	95.11	-0.0891	0.8059	5.50723
75	100.73	-0.1862	0.8707	5.12200	100.80	-0.1874	0.8706	5.09446	100.87	-0.1885	0.8705	5.06718
80	106.27	-0.2802	0.9438	4.70371	106.34	-0.2814	0.9439	4.67720	106.41	-0.2825	0.9440	4.65094
85	111.60	-0.3681	1.0265	4.31248	111.67	-0.3692	1.0268	4.28702	111.74	-0.3704	1.0272	4.26181
90	116.71	-0.4494	1.1194	3.95049	116.78	-0.4506	1.1201	3.92611	116.85	-0.4517	1.1208	3.90196
95	121.60	-0.5240	1.2232	3.61889	121.67	-0.5250	1.2243	3.59558	121.74	-0.5261	1.2254	3.57249
100	126.27	-0.5916	1.3379	3.31789	126.34	-0.5926	1.3395	3.29563	126.41	-0.5936	1.3411	3.27359
105	130.73	-0.6525	1.4637	3.04693	130.80	-0.6534	1.4658	3.02570	130.87	-0.6543	1.4680	3.00465
110	134.98	-0.7069	1.5998	2.80488	135.05	-0.7077	1.6027	2.78463	135.11	-0.7085	1.6055	2.76460
115	139.04	-0.7551	1.7455	2.59017	139.10	-0.7559	1.7491	2.57086	139.16	-0.7566	1.7527	2.55176
120	142.91	-0.7977	1.8993	2.40098	142.97	-0.7983	1.9037	2.38255	143.03	-0.7989	1.9081	2.36432
125	146.60	-0.8349	2.0591	2.23537	146.66	-0.8354	2.0644	2.21775	146.71	-0.8359	2.0697	2.20033
130	150.14	-0.8672	2.2224	2.09136	150.19	-0.8677	2.2287	2.07448	150.24	-0.8681	2.2350	2.05780
135	153.53	-0.8952	2.3862	1.96704	153.58	-0.8955	2.3935	1.95084	153.63	-0.8959	2.4009	1.93482
140	156.79	-0.9191	2.5472	1.86064	156.83	-0.9194	2.5555	1.84504	156.88	-0.9197	2.5638	1.82961
145	159.94	-0.9393	2.7015	1.77054	159.98	-0.9396	2.7108	1.75546	160.01	-0.9398	2.7202	1.74055
150	162.99	-0.9562	2.8454	1.69530	163.02	-0.9564	2.8557	1.68067	163.05	-0.9566	2.8660	1.66620
155	165.95	-0.9701	2.9751	1.63369	165.98	-0.9702	2.9862	1.61943	166.00	-0.9703	2.9974	1.60534
160	168.84	-0.9811	3.0869	1.58466	168.86	-0.9812	3.0988	1.57071	168.89	-0.9812	3.1107	1.55692
165	171.68	-0.9895	3.1775	1.54739	171.70	-0.9895	3.1901	1.55367	171.71	-0.9896	3.2026	1.52012
170	174.48	-0.9954	3.2444	1.52122	174.49	-0.9954	3.2573	1.50767	174.50	-0.9954	3.2704	1.49428
175	177.24	-0.9988	3.2853	1.50570	177.25	-0.9988	3.2986	1.49225	177.26	-0.9989	3.3119	1.47896
180	180.00	-1.0000	3.2991	1.50055	180.00	-1.0000	3.3125	1.48714	180.00	-1.0000	3.3259	1.47389

2 x = 0.205					2 x = 0.206					2 x = 0.207				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.4738	10.29531	0.00	1.0000	0.4731	10.26090	0.00	1.0000	0.4724	10.22679		
5	7.26	0.9920	0.4751	10.25988	7.27	0.9920	0.4744	10.22550	7.27	0.9920	0.4736	10.19142		
10	14.51	0.9681	0.4789	10.15443	14.52	0.9681	0.4782	10.12014	14.53	0.9680	0.4775	10.08617		
15	21.73	0.9289	0.4853	9.98142	21.75	0.9288	0.4846	9.94730	21.76	0.9287	0.4839	9.91348		
20	28.91	0.8754	0.4945	9.74469	28.93	0.8752	0.4938	9.71100	28.95	0.8750	0.4931	9.67741		
25	36.03	0.8087	0.5066	9.45026	36.06	0.8084	0.5059	9.41667	36.09	0.8081	0.5052	9.38337		
30	43.08	0.7303	0.5219	9.10419	43.12	0.7300	0.5212	9.07097	43.15	0.7296	0.5205	9.03804		
35	50.05	0.6421	0.5406	8.71433	50.09	0.6416	0.5399	8.68154	50.13	0.6411	0.5392	8.64905		
40	56.92	0.5458	0.5630	8.28904	56.96	0.5452	0.5623	8.25676	57.00	0.5446	0.5617	8.22477		
45	63.67	0.4435	0.5897	7.83712	63.72	0.4428	0.5890	7.80542	63.77	0.4420	0.5884	7.77402		
50	70.29	0.3372	0.6210	7.36750	70.35	0.3363	0.6204	7.33646	70.40	0.3355	0.6198	7.30571		
55	76.77	0.2289	0.6576	6.88696	76.83	0.2279	0.6570	6.85865	76.88	0.2270	0.6565	6.82861		
60	83.09	0.1204	0.7001	6.40981	83.15	0.1194	0.6996	6.38029	83.20	0.1183	0.6991	6.35104		
65	89.23	0.0135	0.7492	5.93766	89.29	0.0124	0.7488	5.90901	89.35	0.0113	0.7484	5.88061		
70	95.18	-0.0903	0.8057	5.47923	95.25	-0.0914	0.8054	5.45149	95.31	-0.0926	0.8052	5.42401		
75	100.93	-0.1897	0.8704	5.04016	101.00	-0.1908	0.8703	5.01339	101.07	-0.1920	0.8702	4.98687		
80	106.48	-0.2837	0.9441	4.62493	106.55	-0.2849	0.9442	4.59917	106.62	-0.2860	0.9443	4.57365		
85	111.81	-0.3715	1.0276	4.23684	111.88	-0.3727	1.0279	4.21211	111.95	-0.3738	1.0283	4.18762		
90	116.92	-0.4528	1.1215	3.87805	116.99	-0.4539	1.1223	3.85437	117.06	-0.4550	1.1230	3.83092		
95	121.81	-0.5271	1.2265	3.54963	121.88	-0.5282	1.2276	3.52700	121.95	-0.5292	1.2287	3.50459		
100	126.46	-0.5945	1.3427	3.25178	126.55	-0.5955	1.3443	3.23018	126.62	-0.5965	1.3459	3.20880		
105	130.93	-0.6552	1.4702	2.98388	131.00	-0.6561	1.4723	2.96329	131.07	-0.6570	1.4745	2.94291		
110	135.18	-0.7093	1.6083	2.74477	135.25	-0.7101	1.6112	2.72515	135.31	-0.7109	1.6140	2.70573		
115	139.23	-0.7573	1.7563	2.53286	139.29	-0.7580	1.7599	2.51415	139.35	-0.7587	1.7635	2.49564		
120	143.09	-0.7995	1.9126	2.34629	143.15	-0.8002	1.9170	2.32844	143.20	-0.8008	1.9215	2.31079		
125	146.77	-0.8365	2.0751	2.18309	146.83	-0.8370	2.0805	2.16605	146.88	-0.8375	2.0859	2.14918		
130	150.29	-0.8686	2.2413	2.04130	150.35	-0.8690	2.2477	2.02497	150.40	-0.8695	2.2541	2.00863		
135	153.67	-0.8963	2.4082	1.91898	153.72	-0.8966	2.4156	1.90331	153.77	-0.8970	2.4230	1.88782		
140	156.92	-0.9200	2.5722	1.81435	156.96	-0.9202	2.5806	1.79927	157.00	-0.9205	2.5890	1.78436		
145	160.05	-0.9400	2.7296	1.72581	160.09	-0.9402	2.7390	1.71123	160.13	-0.9404	2.7484	1.69682		
150	163.08	-0.9567	2.8763	1.65190	163.12	-0.9569	2.8867	1.63777	163.15	-0.9571	2.8971	1.62379		
155	166.03	-0.9704	3.0086	1.59141	166.06	-0.9705	3.0198	1.57764	166.09	-0.9707	3.0311	1.56403		
160	168.91	-0.9813	3.1227	1.54330	168.93	-0.9814	3.1347	1.52983	168.95	-0.9815	3.1467	1.51651		
165	171.73	-0.9896	3.2152	1.50672	171.75	-0.9896	3.2279	1.49349	171.76	-0.9897	3.2405	1.48040		
170	174.51	-0.9954	3.2834	1.48105	174.52	-0.9954	3.2966	1.46798	174.53	-0.9954	3.3097	1.45506		
175	177.26	-0.9989	3.3252	1.46583	177.27	-0.9989	3.3386	1.45285	177.27	-0.9989	3.3521	1.44003		
180	180.00	-1.0000	3.3393	1.46079	180.00	-1.0000	3.3528	1.44784	180.00	-1.0000	3.3664	1.43505		

2 x = 0.208					2 x = 0.209					2 x = 0.210				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.4717	10.19298	0.00	1.0000	0.4710	10.15948	0.00	1.0000	0.4703	10.12626		
5	7.28	0.9919	0.4729	10.15765	7.28	0.9919	0.4722	10.12417	7.29	0.9919	0.4715	10.09099		
10	14.54	0.9689	0.4768	10.05249	14.55	0.9679	0.4760	10.01911	14.56	0.9679	0.4753	9.98602		
15	21.78	0.9286	0.4832	9.87997	21.80	0.9285	0.4825	9.84675	21.81	0.9284	0.4818	9.81382		
20	28.97	0.8748	0.4924	9.64412	29.00	0.8747	0.4917	9.61112	29.02	0.8745	0.4910	9.57842		
25	36.11	0.8079	0.5045	9.35038	36.14	0.8076	0.5038	9.31767	36.17	0.8073	0.5031	9.28525		
30	43.18	0.7292	0.5198	9.00540	43.21	0.7288	0.5191	8.97306	43.25	0.7284	0.5184	8.94100		
35	50.16	0.6406	0.5385	8.61685	50.20	0.6401	0.5378	8.58493	50.24	0.6396	0.5372	8.55329		
40	57.05	0.5440	0.5610	8.19307	57.09	0.5433	0.5604	8.16165	57.13	0.5427	0.5597	8.13051		
45	63.81	0.4413	0.5877	7.74289	63.86	0.4406	0.5871	7.71204	63.91	0.4398	0.5865	7.68146		
50	70.45	0.3346	0.6192	7.27522	70.50	0.3338	0.6186	7.24501	70.55	0.3330	0.6180	7.21507		
55	76.94	0.2260	0.6559	6.79885	76.99	0.2251	0.6554	6.76935	77.03	0.2241	0.6548	6.74011		
60	83.26	0.1173	0.6986	6.32206	83.32	0.1163	0.6982	6.29334	83.38	0.1152	0.6977	6.26488		
65	89.41	0.0102	0.7480	5.85248	89.48	0.0091	0.7476	5.82460	89.54	0.0080	0.7472	5.79697		
70	95.38	-0.0937	0.8049	5.39678	95.44	-0.0948	0.8046	5.36980	95.51	-0.0960	0.8044	5.34307		
75	101.14	-0.1932	0.8701	4.96059	101.21	-0.1943	0.8700	4.93456	101.27	-0.1955	0.8699	4.90877		
80	106.69	-0.2872	0.9444	4.54837	106.76	-0.2883	0.9445	4.52332	106.83	-0.2895	0.9446	4.49851		
85	112.02	-0.3750	1.0287	4.16336	112.09	-0.3761	1.0291	4.13933	112.16	-0.3772	1.0295	4.11552		
90	117.13	-0.4561	1.1237	3.80769	117.20	-0.4572	1.1244	3.78469	117.27	-0.4583	1.1251	3.76190		
95	122.02	-0.5302	1.2299	3.48240	122.09	-0.5313	1.2310	3.46043	122.16	-0.5323	1.2321	3.43867		
100	126.69	-0.5975	1.3475	3.18763	126.76	-0.5984	1.3492	3.16667	126.83	-0.5994	1.3508	3.14591		
105	131.14	-0.6579	1.4767	2.92274	131.21	-0.6588	1.4789	2.90276	131.27	-0.6596	1.4811	2.88299		
110	135.38	-0.7117	1.6169	2.68651	135.44	-0.7125	1.6198	2.66748	135.51	-0.7133	1.6226	2.64865		
115	139.41	-0.7594	1.7671	2.47733	139.48	-0.7601	1.7708	2.45920	139.54	-0.7609	1.7744	2.44126		
120	143.26	-0.8014	1.9259	2.29332	143.32	-0.8020	1.9304	2.27603	143.38	-0.8026	1.9349	2.25893		
125	146.94	-0.8381	2.0913	2.13250	146.99	-0.8386	2.0967	2.11599	147.05	-0.8391	2.1021	2.09966		
130	150.45	-0.8699	2.2604	1.99286	150.50	-0.8704	2.2668	1.97706	150.55	-0.8708	2.2733	1.98144		
135	153.81	-0.8974	2.4304	1.87249	153.86	-0.8977	2.4378	1.85734	153.91	-0.8981	2.4452	1.84235		
140	157.05	-0.9208	2.5974	1.76961	157.09	-0.9211	2.6059	1.75502	157.13	-0.9214	2.6144	1.74059		
145	160.16	-0.9407	2.7578	1.68258	160.20	-0.9409	2.7673	1.66849	160.24	-0.9411	2.7769	1.65456		
150	163.18	-0.9572	2.9075	1.60998	163.21	-0.9574	2.9180	1.59632	163.25	-0.9576	2.9285	1.58281		
155	166.11	-0.9708	3.0424	1.55058	166.14	-0.9709	3.0538	1.53728	166.17	-0.9710	3.0652	1.52413		
160	168.97	-0.9815	3.1258	1.50335	169.00	-0.9816	3.1310	1.49034	169.02	-0.9817	3.1832	1.47748		
165	171.78	-0.9897	3.2533	1.46747	171.80	-0.9898	3.2661	1.45468	171.81	-0.9898	3.2789	1.44204		
170	174.54	-0.9955	3.3229	1.44228	174.55	-0.9955	3.3362	1.42965	174.56	-0.9955	3.3495	1.41717		
175	177.28	-0.9989	3.3656	1.42735	177.28	-0.9989	3.3792	1.41482	177.29	-0.9989	3.3928	1.40243		
180	180.00	-1.0000	3.3.											

$\frac{2}{x} = 0.211$
 $\frac{2}{x} = 0.212$
 $\frac{2}{x} = 0.213$

PSI	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4696	10.09334	0.00	1.0000	0.4689	10.06070	0.00	1.0000	0.4682	10.02835
5	7.29	0.9919	0.4703	10.05610	7.30	0.9919	0.4701	10.02550	7.31	0.9919	0.4694	9.99317
10	14.58	0.9678	0.4746	9.95322	14.59	0.9678	0.4739	9.92071	14.60	0.9677	0.4733	9.88648
15	21.83	0.9283	0.4811	9.78118	21.84	0.9282	0.4804	9.74882	21.86	0.9281	0.4797	9.71674
20	29.04	0.8743	0.4903	9.54600	29.06	0.8741	0.4896	9.51386	29.08	0.8739	0.4889	9.48200
25	36.19	0.8070	0.5024	9.25312	36.22	0.8067	0.5018	9.22127	36.25	0.8065	0.5011	9.18969
30	43.28	0.7280	0.5177	8.90921	43.31	0.7277	0.5171	8.87771	43.34	0.7273	0.5164	8.84648
35	50.28	0.6391	0.5365	8.52193	50.31	0.6386	0.5358	8.49084	50.35	0.6381	0.5351	8.46003
40	57.17	0.5421	0.5590	8.09984	57.22	0.5415	0.5584	8.06904	57.26	0.5409	0.5577	8.03871
45	63.95	0.4391	0.5858	7.65115	64.00	0.4384	0.5852	7.62111	64.05	0.4376	0.5846	7.59133
50	70.60	0.3321	0.6174	7.18539	70.65	0.3313	0.6168	7.15598	70.70	0.3304	0.6162	7.12682
55	77.10	0.2232	0.6543	6.71113	77.16	0.2223	0.6537	6.68241	77.21	0.2213	0.6532	6.65394
60	83.44	0.1142	0.6972	6.23667	83.50	0.1132	0.6967	6.20871	83.56	0.1122	0.6963	6.18099
65	89.60	0.0069	0.7469	5.76959	89.66	0.0059	0.7465	5.74245	89.73	0.0048	0.7461	5.71556
70	95.57	-0.0971	0.8041	5.31657	95.64	-0.0982	0.8038	5.29032	95.70	-0.0993	0.8036	5.26430
75	101.34	-0.1966	0.8698	4.88321	101.41	-0.1978	0.8697	4.85788	101.47	-0.1989	0.8696	4.83279
80	106.90	-0.2906	0.9447	4.47392	106.96	-0.2918	0.9449	4.44957	107.03	-0.2929	0.9450	4.42543
85	112.23	-0.3784	1.0298	4.09194	112.30	-0.3795	1.0302	4.06858	112.37	-0.3806	1.0306	4.04543
90	117.34	-0.4593	1.1258	3.73933	117.42	-0.4604	1.1265	3.71698	117.49	-0.4615	1.1272	3.69483
95	122.23	-0.5334	1.2332	3.41711	122.30	-0.5344	1.2343	3.39576	122.37	-0.5354	1.2355	3.37462
100	126.90	-0.6004	1.3524	3.12536	126.96	-0.6013	1.3540	3.10501	127.03	-0.6023	1.3556	3.08485
105	131.34	-0.6605	1.4833	2.86341	131.41	-0.6614	1.4855	2.84402	131.47	-0.6623	1.4877	2.82483
110	135.57	-0.7141	1.6255	2.63001	135.64	-0.7149	1.6284	2.61155	135.70	-0.7157	1.6313	2.59328
115	139.60	-0.7616	1.7780	2.42350	139.66	-0.7623	1.7817	2.40593	139.73	-0.7630	1.7845	2.38853
120	143.44	-0.8032	1.9394	2.24200	143.50	-0.8039	1.9439	2.22525	143.56	-0.8045	1.9481	2.20867
125	147.10	-0.8396	2.1075	2.08350	147.16	-0.8402	2.1130	2.06751	147.21	-0.8407	2.1185	2.05169
130	150.60	-0.8712	2.2797	1.94598	150.65	-0.8717	2.2861	1.93068	150.70	-0.8721	2.2926	1.91555
135	153.95	-0.8984	2.4527	1.82752	154.00	-0.8988	2.4602	1.81285	154.05	-0.8992	2.4677	1.79834
140	157.17	-0.9217	2.6229	1.72633	157.22	-0.9220	2.6315	1.71222	157.26	-0.9222	2.6401	1.69826
145	160.28	-0.9413	2.7864	1.64078	160.31	-0.9415	2.7960	1.62716	160.35	-0.9418	2.8056	1.61368
150	163.28	-0.9577	2.9390	1.56946	163.31	-0.9579	2.9496	1.55625	163.34	-0.9580	2.9602	1.54319
155	166.19	-0.9711	3.0766	1.51113	166.22	-0.9712	3.0881	1.49827	166.25	-0.9713	3.0996	1.48556
160	169.04	-0.9818	3.1954	1.46475	169.06	-0.9818	3.2077	1.45219	169.08	-0.9819	3.2200	1.44397
165	171.83	-0.9898	3.2916	1.42954	171.84	-0.9899	3.3047	1.41719	171.86	-0.9899	3.3176	1.40498
170	174.58	-0.9955	3.3628	1.40483	174.59	-0.9955	3.3762	1.39264	174.60	-0.9956	3.3897	1.38058
175	177.29	-0.9989	3.4064	1.39019	177.30	-0.9989	3.4201	1.37808	177.31	-0.9989	3.4339	1.36611
180	180.00	-1.0000	3.4211	1.38533	180.00	-1.0000	3.4349	1.37326	180.00	-1.0000	3.4487	1.36132

 $\frac{2}{x} = 0.214$
 $\frac{2}{x} = 0.215$
 $\frac{2}{x} = 0.216$

PSI	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$	$\frac{2}{x}$	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4675	9.99627	0.00	1.0000	0.4666	9.96447	0.00	1.0000	0.4661	9.93294
5	7.31	0.9919	0.4687	9.96113	7.32	0.9919	0.4680	9.92935	7.32	0.9918	0.4674	9.89786
10	14.61	0.9677	0.4726	9.85653	14.62	0.9676	0.4719	9.82485	14.63	0.9676	0.4712	9.79344
15	21.86	0.9280	0.4790	9.68494	21.89	0.9279	0.4783	9.65342	21.91	0.9278	0.4776	9.62216
20	29.10	0.8737	0.4882	9.45041	29.12	0.8736	0.4876	9.41910	29.15	0.8734	0.4869	9.38805
25	36.27	0.8062	0.5004	9.15838	36.30	0.8059	0.4997	9.12735	36.33	0.8056	0.4990	9.09657
30	43.37	0.7269	0.5157	8.81552	43.41	0.7265	0.5150	8.78482	43.44	0.7261	0.5144	8.75439
35	50.39	0.6376	0.5345	8.42948	50.42	0.6371	0.5338	8.39919	50.46	0.6366	0.5332	8.36916
40	57.30	0.5403	0.5571	8.00864	57.34	0.5396	0.5564	7.97882	57.38	0.5390	0.5558	7.94927
45	64.09	0.4369	0.5840	7.56180	64.14	0.4362	0.5833	7.53254	64.19	0.4355	0.5827	7.50352
50	70.76	0.3296	0.6156	7.09791	70.81	0.3288	0.6150	7.06926	70.86	0.3279	0.6145	7.04085
55	77.27	0.2204	0.6527	6.62572	77.32	0.2195	0.6521	6.59775	77.38	0.2185	0.6516	6.57001
60	83.62	0.1112	0.6958	6.15353	83.68	0.1102	0.6953	6.12630	83.73	0.1091	0.6948	6.09930
65	89.79	0.0037	0.7457	5.68890	89.85	0.0026	0.7453	5.66248	89.91	0.0015	0.7450	5.63629
70	95.77	-0.1005	0.8033	5.23851	95.83	-0.1016	0.8031	5.21295	95.90	-0.1027	0.8028	5.18762
75	101.54	-0.2001	0.8695	4.80792	101.61	-0.2012	0.8694	4.78327	101.67	-0.2024	0.8693	4.75884
80	107.10	-0.2941	0.9451	4.40152	107.17	-0.2952	0.9452	4.37782	107.24	-0.2964	0.9453	4.35433
85	112.44	-0.3817	1.0310	4.02250	112.51	-0.3829	1.0314	3.99977	112.58	-0.3840	1.0317	3.97726
90	117.56	-0.4626	1.1279	3.67289	117.62	-0.4637	1.1287	3.65116	117.69	-0.4648	1.1294	3.62963
95	122.44	-0.5364	1.2366	3.35368	122.51	-0.5375	1.2377	3.33293	122.58	-0.5385	1.2388	3.31238
100	127.10	-0.6032	1.3572	3.06489	127.17	-0.6042	1.3589	3.04512	127.24	-0.6051	1.3605	3.02554
105	131.54	-0.6637	1.4899	2.80582	131.61	-0.6640	1.4921	2.78700	131.67	-0.6649	1.4943	2.76836
110	135.77	-0.7165	1.6342	2.57519	135.83	-0.7173	1.6371	2.55728	135.90	-0.7181	1.6400	2.53954
115	139.79	-0.7637	1.7890	2.37131	139.85	-0.7644	1.7927	2.35426	139.91	-0.7650	1.7961	2.33739
120	143.62	-0.8051	1.9530	2.19226	143.68	-0.8057	1.9576	2.17602	143.73	-0.8063	1.9624	2.15995
125	147.27	-0.8412	2.1239	2.03603	147.32	-0.8417	2.1294	2.02053	147.38	-0.8422	2.1349	2.00520
130	150.76	-0.8725	2.2991	1.90058	150.81	-0.8730	2.3056	1.88577	150.86	-0.8734	2.3121	1.87111
135	154.09	-0.8995	2.4753	1.78399	154.14	-0.8999	2.4828	1.76979	154.19	-0.9002	2.4904	1.75574
140	157.30	-0.9225	2.6487	1.68445	157.34	-0.9228	2.6573	1.67079	157.38	-0.9231	2.6659	1.65728
145	160.39	-0.9420	2.8152	1.60036	160.42	-0.9422	2.8249	1.58717	160.46	-0.9424	2.8346	1.57414
150	163.37	-0.9582	2.9708	1.53027	163.41	-0.9583	2.9815	1.51750	163.44	-0.9585	2.9922	1.50487
155	166.27	-0.9714	3.1112	1.47299	166.30	-0.9716	3.1228	1.46055	166.33	-0.9717	3.1344	1.44826
160	169.10	-0.9820	3.2323	1.42747	169.12	-0.9820	3.2447	1.41531	169.15	-0.9821	3.2572	1.40329
165	171.88	-0.9900	3.3307	1.39290	171.89	-0.9900	3.3437	1.38096	171.91	-0.9900	3.3568	1.36915
170	174.61	-0.9956	3.4032	1.36865	174.62	-0.9956	3.4167	1.35686	174.63	-0.9956	3.4303	1.34521
175	177.31	-0.9989	3.4477	1.35428	177.32	-0.9989	3.4615	1.34258	177.32	-0.9989	3.4754	1.33102
180	180.00	-1.0000	3.4626	1.34952	180.00	-1.0000	3.4766	1.33785	180.00	-1.0000	3.4906	1.32631

2 x = 0.217					2 x = 0.218					2 x = 0.219				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4654	9.90168	0.00	1.0000	0.4647	9.87069	0.00	1.0000	0.4640	9.83995		
5	7.33	0.9916	0.4667	9.86663	7.33	0.9918	0.4660	9.83566	7.34	0.9918	0.4653	9.80495		
10	14.64	0.9675	0.4705	9.76229	14.65	0.9675	0.4698	9.73141	14.66	0.9674	0.4691	9.70079		
15	21.92	0.9277	0.4770	9.59116	21.94	0.9276	0.4763	9.56043	21.96	0.9275	0.4756	9.52996		
20	29.17	0.8732	0.4862	9.35727	29.19	0.8730	0.4855	9.32675	29.21	0.8728	0.4848	9.29648		
25	36.35	0.8054	0.4984	9.06606	36.38	0.8051	0.4977	9.03581	36.41	0.8048	0.4970	9.00581		
30	43.47	0.7257	0.5137	8.72421	43.50	0.7254	0.5130	8.69430	43.53	0.7250	0.5124	8.66463		
35	50.50	0.6361	0.5325	8.33939	50.53	0.6356	0.5318	8.30987	50.57	0.6351	0.5312	8.28060		
40	57.42	0.5384	0.5552	7.91996	57.46	0.5378	0.5545	7.89091	57.51	0.5372	0.5539	7.86210		
45	64.23	0.4347	0.5821	7.47475	64.28	0.4340	0.5815	7.44623	64.32	0.4333	0.5809	7.41795		
50	70.91	0.3271	0.6139	7.01269	70.96	0.3263	0.6133	6.98476	71.01	0.3254	0.6127	6.95708		
55	77.43	0.2176	0.6511	6.54252	77.49	0.2167	0.6505	6.51526	77.54	0.2157	0.6500	6.48824		
60	83.79	0.1081	0.6944	6.07255	83.85	0.1071	0.6939	6.04602	83.91	0.1061	0.6935	6.01972		
65	89.97	0.0005	0.7446	5.61033	90.03	-0.0006	0.7442	5.58460	90.10	-0.0017	0.7439	5.55908		
70	95.96	-0.1038	0.8026	5.16251	96.02	-0.1049	0.8023	5.13762	96.09	-0.1061	0.8021	5.11295		
75	101.74	-0.2035	0.8692	4.73463	101.81	-0.2046	0.8691	4.71064	101.87	-0.2058	0.8690	4.68685		
80	107.31	-0.2975	0.9454	4.33106	107.37	-0.2986	0.9456	4.30799	107.44	-0.2998	0.9457	4.28513		
85	112.65	-0.3851	1.0321	3.95495	112.72	-0.3862	1.0325	3.93284	112.79	-0.3873	1.0329	3.91093		
90	117.76	-0.4658	1.1301	3.60829	117.83	-0.4669	1.1308	3.58715	117.90	-0.4680	1.1316	3.56621		
95	122.65	-0.5395	1.2400	3.29202	122.72	-0.5405	1.2411	3.27185	122.79	-0.5415	1.2423	3.25187		
100	127.31	-0.6061	1.3621	3.00614	127.37	-0.6070	1.3638	2.98693	127.44	-0.6080	1.3654	2.96790		
105	131.74	-0.6658	1.4966	2.74990	131.81	-0.6666	1.4988	2.73162	131.87	-0.6675	1.5010	2.71352		
110	135.96	-0.7189	1.6429	2.52198	136.02	-0.7196	1.6458	2.50460	136.09	-0.7204	1.6487	2.48738		
115	139.97	-0.7657	1.8001	2.32068	140.03	-0.7664	1.8038	2.30414	140.10	-0.7671	1.8075	2.28776		
120	143.79	-0.8069	1.9667	2.14404	143.85	-0.8075	1.9713	2.12829	143.91	-0.8081	1.9759	2.11270		
125	147.43	-0.8428	2.1405	1.99002	147.49	-0.8433	2.1460	1.97500	147.54	-0.8438	2.1516	1.96014		
130	150.91	-0.8738	2.3187	1.85660	150.96	-0.8743	2.3253	1.84225	151.01	-0.8747	2.3318	1.82804		
135	154.23	-0.9006	2.4980	1.74183	154.28	-0.9009	2.5056	1.72808	154.32	-0.9013	2.5133	1.71447		
140	157.42	-0.9234	2.6746	1.64392	157.46	-0.9236	2.6833	1.63070	157.51	-0.9239	2.6921	1.61761		
145	160.50	-0.9426	2.8444	1.56124	160.53	-0.9428	2.8541	1.54848	160.57	-0.9430	2.8640	1.53586		
150	163.47	-0.9587	3.0030	1.49237	163.50	-0.9588	3.0138	1.48001	163.53	-0.9590	3.0246	1.46779		
155	166.35	-0.9718	3.1461	1.43610	166.38	-0.9719	3.1578	1.46779	166.41	-0.9720	3.1696	1.45518		
160	169.17	-0.9822	3.2697	1.39141	169.19	-0.9823	3.2822	1.45518	169.21	-0.9823	3.2948	1.44268		
165	171.92	-0.9901	3.3700	1.35748	171.94	-0.9901	3.3832	1.44268	171.96	-0.9902	3.3964	1.43041		
170	174.64	-0.9956	3.4440	1.33368	174.65	-0.9956	3.4577	1.43228	174.66	-0.9957	3.4714	1.41810		
175	177.33	-0.9989	3.4894	1.31958	177.33	-0.9989	3.5034	1.42087	177.34	-0.9989	3.5174	1.40497		
180	180.00	-1.0000	3.5047	1.31491	180.00	-1.0000	3.5188	1.40827	180.00	-1.0000	3.5329	1.39947		

2 x = 0.220					2 x = 0.221					2 x = 0.222				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4634	9.80947	0.00	1.0000	0.4627	9.77924	0.00	1.0000	0.4620	9.74927		
5	7.34	0.9918	0.4646	9.77450	7.35	0.9918	0.4640	9.74430	7.35	0.9918	0.4633	9.71436		
10	14.67	0.9674	0.4685	9.67043	14.68	0.9673	0.4678	9.64032	14.69	0.9673	0.4671	9.61046		
15	21.97	0.9274	0.4749	9.49974	21.99	0.9273	0.4743	9.46977	22.00	0.9272	0.4736	9.44006		
20	29.23	0.8727	0.4842	9.26647	29.25	0.8725	0.4835	9.23670	29.27	0.8723	0.4828	9.20719		
25	36.43	0.8045	0.4963	8.97607	36.46	0.8043	0.4957	8.94657	36.49	0.8040	0.4950	8.91731		
30	43.56	0.7246	0.5117	8.63521	43.59	0.7242	0.5110	8.60604	43.63	0.7239	0.5104	8.57711		
35	50.61	0.6346	0.5305	8.25157	50.64	0.6342	0.5299	8.22279	50.68	0.6337	0.5293	8.19425		
40	57.55	0.5366	0.5533	7.83353	57.59	0.5360	0.5526	7.80520	57.63	0.5354	0.5520	7.77711		
45	64.37	0.4326	0.5803	7.38991	64.42	0.4318	0.5797	7.36210	64.46	0.4311	0.5791	7.33452		
50	71.06	0.3246	0.6121	6.92962	71.11	0.3238	0.6116	6.90240	71.16	0.3230	0.6110	6.87541		
55	77.60	0.2148	0.6495	6.46144	77.65	0.2139	0.6490	6.43487	77.70	0.2130	0.6484	6.40853		
60	83.97	0.1051	0.6930	5.99364	84.02	0.1041	0.6925	5.96779	84.08	0.1031	0.6921	5.94216		
65	90.16	-0.0027	0.7435	5.53379	90.22	-0.0038	0.7431	5.50871	90.28	-0.0049	0.7428	5.48394		
70	96.15	-0.1072	0.8018	5.08849	96.22	-0.1083	0.8016	5.06424	96.28	-0.1094	0.8013	5.04020		
75	101.94	-0.2069	0.8690	4.66327	102.01	-0.2080	0.8689	4.63990	102.07	-0.2091	0.8688	4.61673		
80	107.51	-0.3009	0.9458	4.26247	107.58	-0.3020	0.9459	4.24001	107.65	-0.3031	0.9461	4.21775		
85	112.86	-0.3884	1.0333	3.88921	112.93	-0.3895	1.0337	3.86769	112.99	-0.3906	1.0341	3.84636		
90	117.97	-0.4690	1.1323	3.54545	118.04	-0.4701	1.1330	3.52488	118.11	-0.4712	1.1337	3.50450		
95	122.86	-0.5425	1.2434	3.23208	122.93	-0.5435	1.2445	3.21246	122.99	-0.5445	1.2457	3.19302		
100	127.51	-0.6089	1.3670	2.94905	127.58	-0.6098	1.3687	2.93037	127.65	-0.6108	1.3703	2.91187		
105	131.94	-0.6684	1.5033	2.69558	132.01	-0.6692	1.5055	2.67782	132.07	-0.6701	1.5078	2.66022		
110	136.15	-0.7212	1.6517	2.47033	136.22	-0.7220	1.6546	2.45344	136.28	-0.7227	1.6575	2.43672		
115	140.16	-0.7618	1.8112	2.27154	140.22	-0.7685	1.8150	2.25549	140.28	-0.7692	1.8187	2.23959		
120	143.97	-0.8087	1.9805	2.09726	144.02	-0.8093	1.9851	2.08198	144.08	-0.8099	1.9897	2.06685		
125	147.60	-0.8443	2.1571	1.94542	147.65	-0.8448	2.1627	1.93086	147.70	-0.8453	2.1683	1.93644		
130	151.06	-0.8751	2.3384	1.81398	151.11	-0.8755	2.3451	1.80007	151.16	-0.8760	2.3517	1.78630		
135	154.37	-0.9016	2.5210	1.70100	154.42	-0.9019	2.5287	1.68767	154.46	-0.9023	2.5364	1.67448		
140	157.55	-0.9242	2.7008	1.60467	157.59	-0.9245	2.7096	1.59186	157.63	-0.9247	2.7184	1.57919		
145	160.61	-0.9433	2.8738	1.52337	160.64	-0.9435	2.8837	1.51102	160.68	-0.9437	2.8936	1.49880		
150	163.56	-0.9591	3.0354	1.45570	163.59	-0.9593	3.0463	1.44373	163.63	-0.9594	3.0573	1.43190		
155	166.43	-0.9721	3.1814	1.40002	166.46	-0.9722	3.1932	1.38749	166.49	-0.9723	3.2051	1.37727		
160	169.23	-0.9824	3.3074	1.35653	169.25	-0.9825	3.3201	1.34516	169.27	-0.9826	3.3328	1.33391		
165	171.97	-0.9902	3.4232	1.32322	171.99	-0.9902	3.4231	1.31205	172.00	-0.9903				

$\frac{2}{x} = 0.223$
 $\frac{2}{x} = 0.224$
 $\frac{2}{x} = 0.225$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4614	9.71954	0.00	1.0000	0.4607	9.69006	0.00	1.0000	0.4600	9.66081
5	7.36	0.9918	0.4626	9.68466	7.36	0.9918	0.4620	9.65520	7.37	0.9917	0.4613	9.62599
10	14.70	0.9673	0.4665	9.58084	14.71	0.9672	0.4658	9.55147	14.72	0.9672	0.4652	9.52234
15	22.02	0.9271	0.4729	9.41058	22.04	0.9269	0.4723	9.38135	22.05	0.9268	0.4716	9.35236
20	29.29	0.8721	0.4822	9.17792	29.32	0.8719	0.4815	9.14889	29.34	0.8718	0.4809	9.12009
25	36.51	0.8037	0.4944	8.88830	36.54	0.8035	0.4937	8.85953	36.56	0.8032	0.4931	8.83099
30	43.66	0.7235	0.5097	8.54842	43.69	0.7231	0.5091	8.51996	43.72	0.7227	0.5085	8.49174
35	50.72	0.6332	0.5286	8.16594	50.75	0.6327	0.5280	8.13787	50.79	0.6322	0.5273	8.11002
40	57.67	0.5348	0.5514	7.74925	57.71	0.5342	0.5507	7.72152	57.75	0.5336	0.5501	7.69422
45	64.51	0.4304	0.5785	7.30718	64.55	0.4297	0.5779	7.28006	64.60	0.4290	0.5773	7.25316
50	71.21	0.3221	0.6104	6.84864	71.26	0.3213	0.6099	6.82210	71.31	0.3205	0.6093	6.79577
55	77.76	0.2121	0.6479	6.38240	77.81	0.2111	0.6474	6.35650	77.86	0.2102	0.6469	6.33080
60	84.14	0.1021	0.6916	5.91674	84.20	0.1011	0.6912	5.89153	84.25	0.1001	0.6907	5.86654
65	90.34	-0.0059	0.7424	5.45919	90.40	-0.0070	0.7420	5.43474	90.46	-0.0080	0.7417	5.41050
70	96.34	-0.1105	0.8011	5.01636	96.41	-0.1116	0.8009	4.99273	96.47	-0.1127	0.8006	4.96930
75	102.14	-0.2103	0.8687	4.59376	102.20	-0.2114	0.8686	4.57099	102.27	-0.2125	0.8685	4.54841
80	107.71	-0.3043	0.9462	4.19568	107.78	-0.3054	0.9463	4.17381	107.85	-0.3065	0.9464	4.15212
85	113.06	-0.3917	1.0345	3.82522	113.13	-0.3928	1.0349	3.80427	113.20	-0.3939	1.0353	3.78350
90	118.18	-0.4722	1.1345	3.48430	118.25	-0.4733	1.1352	3.46428	118.32	-0.4743	1.1359	3.44444
95	123.06	-0.5456	1.2468	3.17377	123.13	-0.5466	1.2480	3.15468	123.20	-0.5475	1.2491	3.13577
100	127.71	-0.6117	1.3720	2.89354	127.78	-0.6126	1.3736	2.87538	127.85	-0.6136	1.3753	2.85738
105	132.14	-0.6709	1.5100	2.64279	132.20	-0.6718	1.5123	2.62553	132.27	-0.6726	1.5145	2.60842
110	136.34	-0.7235	1.6605	2.42015	136.41	-0.7243	1.6634	2.40375	136.47	-0.7250	1.6664	2.38750
115	140.34	-0.7698	1.8225	2.22384	140.40	-0.7705	1.8262	2.20825	140.46	-0.7712	1.8300	2.19281
120	144.14	-0.8104	1.9944	2.05187	144.20	-0.8110	1.9990	2.03704	144.25	-0.8116	2.0037	2.02235
125	147.76	-0.8458	2.1740	1.90216	147.81	-0.8463	2.1796	1.88803	147.86	-0.8468	2.1852	1.87404
130	151.21	-0.8764	2.3584	1.77267	151.26	-0.8768	2.3650	1.75918	151.31	-0.8772	2.3717	1.74582
135	154.51	-0.9026	2.5441	1.66143	154.55	-0.9030	2.5519	1.64851	154.60	-0.9033	2.5597	1.63573
140	157.67	-0.9250	2.7273	1.55665	157.71	-0.9253	2.7362	1.54524	157.75	-0.9256	2.7451	1.54196
145	160.72	-0.9439	2.9035	1.46671	160.75	-0.9441	2.9135	1.47474	160.79	-0.9443	2.9235	1.46290
150	163.66	-0.9596	3.0683	1.42019	163.69	-0.9597	3.0793	1.40861	163.72	-0.9599	3.0903	1.39714
155	166.51	-0.9724	3.2170	1.36588	166.54	-0.9725	3.2290	1.35462	166.56	-0.9726	3.2410	1.34347
160	169.29	-0.9826	3.3455	1.32278	169.32	-0.9827	3.3584	1.31177	169.34	-0.9827	3.3712	1.30089
165	172.02	-0.9903	3.4499	1.29008	172.04	-0.9904	3.4634	1.27927	172.05	-0.9904	3.4770	1.26858
170	174.70	-0.9957	3.5270	1.26715	174.71	-0.9957	3.5410	1.25648	174.72	-0.9958	3.5550	1.24593
175	177.36	-0.9989	3.5742	1.25357	177.36	-0.9989	3.5885	1.24299	177.37	-0.9989	3.6029	1.23252
180	180.00	-1.0000	3.5901	1.24907	180.00	-1.0000	3.6045	1.23851	180.00	-1.0000	3.6190	1.22807

 $\frac{2}{x} = 0.226$
 $\frac{2}{x} = 0.227$
 $\frac{2}{x} = 0.228$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4594	9.63181	0.00	1.0000	0.4587	9.60304	0.00	1.0000	0.4581	9.57450
5	7.37	0.9917	0.4607	9.59701	7.38	0.9917	0.4600	9.56827	7.39	0.9917	0.4594	9.53976
10	14.74	0.9671	0.4645	9.49345	14.75	0.9671	0.4638	9.46479	14.76	0.9670	0.4632	9.43636
15	22.07	0.9267	0.4710	9.32361	22.08	0.9266	0.4703	9.29508	22.09	0.9265	0.4697	9.26679
20	29.36	0.8716	0.4802	9.09153	29.38	0.8714	0.4796	9.06320	29.40	0.8712	0.4789	9.03511
25	36.59	0.8029	0.4924	8.80269	36.62	0.8026	0.4918	8.77461	36.64	0.8024	0.4911	8.74676
30	43.75	0.7224	0.5078	8.46375	43.78	0.7220	0.5072	8.43599	43.81	0.7216	0.5065	8.40845
35	50.92	0.6317	0.5267	8.08241	50.96	0.6312	0.5261	8.05501	50.99	0.6307	0.5255	8.02784
40	57.79	0.5330	0.5495	7.66704	57.83	0.5324	0.5489	7.64009	57.87	0.5318	0.5483	7.61335
45	64.64	0.4283	0.5767	7.22648	64.69	0.4275	0.5761	7.20002	64.73	0.4268	0.5755	7.17378
50	71.36	0.3197	0.6087	6.76966	71.41	0.3189	0.6082	6.74376	71.46	0.3180	0.6076	6.71808
55	77.92	0.2093	0.6464	6.30532	77.97	0.2084	0.6458	6.28005	78.03	0.2075	0.6453	6.25499
60	84.31	0.0991	0.6903	5.84175	84.37	0.0981	0.6898	5.81716	84.43	0.0971	0.6894	5.79278
65	90.52	-0.0091	0.7413	5.38647	90.58	-0.0102	0.7409	5.36263	90.64	-0.0112	0.7406	5.33899
70	96.53	-0.1138	0.8004	4.94607	96.60	-0.1149	0.8001	4.92303	96.66	-0.1160	0.7999	4.90018
75	102.34	-0.2136	0.8685	4.52602	102.40	-0.2147	0.8684	4.50383	102.47	-0.2159	0.8683	4.48182
80	107.92	-0.3076	0.9466	4.13062	107.98	-0.3087	0.9467	4.10930	108.05	-0.3098	0.9468	4.08817
85	113.27	-0.3950	1.0357	3.76291	113.34	-0.3961	1.0361	3.74250	113.40	-0.3972	1.0365	3.72226
90	118.39	-0.4754	1.1367	3.42478	118.45	-0.4764	1.1374	3.40528	118.52	-0.4775	1.1381	3.38596
95	123.27	-0.5485	1.2503	3.11703	123.34	-0.5495	1.2514	3.09845	123.40	-0.5505	1.2526	3.08004
100	127.92	-0.6145	1.3769	2.83955	127.98	-0.6154	1.3786	2.82188	128.05	-0.6163	1.3803	2.80437
105	132.34	-0.6735	1.5168	2.59148	132.40	-0.6743	1.5190	2.57469	132.47	-0.6752	1.5213	2.55806
110	136.53	-0.7258	1.6694	2.37140	136.60	-0.7265	1.6723	2.35545	136.66	-0.7273	1.6753	2.33966
115	140.52	-0.7719	1.8338	2.17751	140.58	-0.7725	1.8375	2.16237	140.64	-0.7732	1.8413	2.14736
120	144.31	-0.8122	2.0083	2.00781	144.37	-0.8128	2.0130	1.99340	144.43	-0.8134	2.0177	1.97914
125	147.92	-0.8473	2.1909	1.86019	147.97	-0.8478	2.1966	1.84647	148.03	-0.8483	2.2023	1.83290
130	151.36	-0.8776	2.3785	1.73260	151.41	-0.8780	2.3852	1.71951	151.46	-0.8784	2.3920	1.70655
135	154.64	-0.9037	2.5675	1.62307	154.69	-0.9040	2.5754	1.61054	154.73	-0.9043	2.5832	1.59815
140	157.79	-0.9258	2.7540	1.52981	157.83	-0.9261	2.7630	1.51778	157.87	-0.9264	2.7720	1.50587
145	160.82	-0.9445	2.9335	1.45119	160.86	-0.9447	2.9436	1.43960	160.90	-0.9449	2.9537	1.42812
150	163.75	-0.9601	3.1014	1.38580	163.78	-0.9602	3.1125	1.37458	163.81	-0.9604	3.1237	1.36348
155	166.59	-0.9727	3.2531	1.33245	166.62	-0.9728	3.2652	1.32154	166.64	-0.9729	3.2773	1.31074
160	169.36	-0.9828	3.3841	1.29011	169.38	-0.9829	3.3971	1.27946	169.40	-0.9829	3.4101	1.26891
165	172.07	-0.9904	3.4906	1.25800	172.08	-0.9905	3.5042	1.24754	172.10	-0.9905	3.5179	1.23719
170	174.74	-0.9958	3.5692	1.23549	174.75	-0.9958	3.5833	1.22517	174.76	-0.9958	3.5975	1.21496
175	177.37	-0.9990	3.6173	1.22216	177.38	-0.9990	3.6318	1.21192	177.39	-0.9990	3.6464	1.20179
180	180.00	-1.0000	3.6336	1.21775	180.00	-1.0000	3.6482	1.20753	180.00	-1.0000	3.6628	1.19743

x = 0.229					x = 0.230					x = 0.231				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.4574	9.54620	0.00	1.0000	0.4568	9.51811	0.00	1.0000	0.4562	9.49026		
5	7.39	0.9917	0.4587	9.5148	7.40	0.9917	0.4581	9.48342	7.40	0.9917	0.4574	9.45559		
10	14.77	0.9670	0.4625	9.40816	14.78	0.9669	0.4619	9.38018	14.79	0.9669	0.4613	9.35243		
15	22.11	0.9264	0.4690	9.23873	22.13	0.9263	0.4684	9.21089	22.15	0.9262	0.4677	9.18327		
20	29.42	0.8710	0.4783	9.00723	29.44	0.8709	0.4776	8.97958	29.46	0.8707	0.4770	8.95215		
25	36.67	0.8021	0.4905	8.71914	36.69	0.8018	0.4898	8.69173	36.72	0.8016	0.4892	8.66455		
30	43.84	0.7212	0.5059	8.38113	43.87	0.7209	0.5053	8.35403	43.90	0.7205	0.5046	8.32715		
35	50.93	0.6303	0.5248	8.00089	50.97	0.6298	0.5242	7.97416	51.00	0.6293	0.5236	7.94764		
40	57.91	0.5312	0.5477	7.58683	57.96	0.5306	0.5471	7.56052	58.00	0.5300	0.5465	7.53442		
45	64.78	0.4261	0.5749	7.14775	64.82	0.4254	0.5743	7.12193	64.87	0.4247	0.5737	7.09631		
50	71.51	0.3172	0.6071	6.69260	71.55	0.3164	0.6065	6.66733	71.60	0.3156	0.6060	6.64226		
55	78.08	0.2066	0.6448	6.23013	78.13	0.2057	0.6443	6.20547	78.19	0.2047	0.6438	6.18101		
60	84.48	0.0861	0.6889	5.76860	84.54	0.0851	0.6885	5.74462	84.60	0.0842	0.6880	5.72083		
65	90.70	-0.0123	0.7402	5.31554	90.75	-0.0133	0.7399	5.29229	90.82	-0.0144	0.7395	5.26923		
70	96.72	-0.1171	0.7997	4.87752	96.79	-0.1182	0.7994	4.85505	96.85	-0.1193	0.7992	4.83277		
75	102.53	-0.2170	0.8682	4.45999	102.60	-0.2181	0.8682	4.43835	102.66	-0.2192	0.8681	4.41689		
80	108.12	-0.3110	0.9470	4.06721	108.18	-0.3121	0.9471	4.04644	108.25	-0.3132	0.9472	4.02583		
85	113.47	-0.3983	1.0369	3.70220	113.54	-0.3994	1.0373	3.68232	113.61	-0.4005	1.0377	3.66260		
90	118.59	-0.4785	1.1389	3.36681	118.66	-0.4796	1.1396	3.34782	118.73	-0.4806	1.1403	3.32900		
95	123.47	-0.5515	1.2537	3.06180	123.54	-0.5525	1.2549	3.04372	123.61	-0.5535	1.2560	3.02579		
100	128.12	-0.6173	1.3819	2.78702	128.18	-0.6182	1.3836	2.76983	128.25	-0.6191	1.3853	2.75278		
105	132.53	-0.6760	1.5236	2.54157	132.60	-0.6768	1.5259	2.52524	132.66	-0.6777	1.5281	2.50906		
110	136.72	-0.7280	1.6783	2.32401	136.79	-0.7288	1.6813	2.30851	136.85	-0.7296	1.6843	2.29315		
115	140.70	-0.7739	1.8451	2.13250	140.76	-0.7745	1.8489	2.11778	140.82	-0.7752	1.8528	2.10320		
120	144.48	-0.8139	2.0225	1.96502	144.54	-0.8145	2.0272	1.95103	144.60	-0.8151	2.0319	1.93718		
125	148.08	-0.8488	2.2080	1.81945	148.13	-0.8493	2.2137	1.80614	148.19	-0.8498	2.2195	1.79295		
130	151.50	-0.8789	2.3987	1.69372	151.55	-0.8793	2.4055	1.68102	151.60	-0.8797	2.4124	1.66845		
135	154.78	-0.9047	2.5911	1.58587	154.82	-0.9050	2.5991	1.57372	154.87	-0.9053	2.6070	1.56169		
140	157.91	-0.9266	2.7810	1.49409	157.96	-0.9269	2.7901	1.48243	158.00	-0.9272	2.7992	1.47088		
145	160.93	-0.9451	2.9639	1.41677	160.97	-0.9453	2.9740	1.40553	161.00	-0.9455	2.9842	1.39441		
150	163.84	-0.9605	3.1349	1.35249	163.87	-0.9607	3.1462	1.34162	163.90	-0.9608	3.1575	1.33086		
155	166.67	-0.9731	3.2895	1.30006	166.69	-0.9732	3.3017	1.28949	166.72	-0.9733	3.3140	1.27904		
160	169.42	-0.9830	3.4231	1.25948	169.44	-0.9831	3.4362	1.24816	169.46	-0.9831	3.4494	1.23794		
165	172.11	-0.9905	3.5317	1.22696	172.13	-0.9906	3.5455	1.21681	172.15	-0.9906	3.5593	1.20679		
170	174.77	-0.9958	3.6118	1.20485	174.78	-0.9958	3.6262	1.19485	174.79	-0.9959	3.6405	1.18496		
175	177.39	-0.9990	3.6610	1.19176	177.40	-0.9990	3.6756	1.18185	177.40	-0.9990	3.6903	1.17203		
180	180.00	-1.0000	3.6775	1.18743	180.00	-1.0000	3.6923	1.17754	180.00	-1.0000	3.7071	1.16775		

x = 0.232					x = 0.233					x = 0.234				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.4555	9.46262	0.00	1.0000	0.4549	9.43520	0.00	1.0000	0.4542	9.40800		
5	7.41	0.9917	0.4568	9.42798	7.41	0.9916	0.4561	9.40059	7.42	0.9916	0.4555	9.37341		
10	14.80	0.9668	0.4606	9.32490	14.81	0.9668	0.4600	9.29759	14.82	0.9667	0.4594	9.27049		
15	22.16	0.9261	0.4671	9.15587	22.18	0.9260	0.4665	9.12869	22.19	0.9259	0.4658	9.10172		
20	29.48	0.8705	0.4764	8.92494	29.50	0.8703	0.4757	8.89794	29.52	0.8702	0.4751	8.87116		
25	36.75	0.8013	0.4886	8.63758	36.77	0.8010	0.4879	8.61082	36.80	0.8008	0.4873	8.58427		
30	43.94	0.7201	0.5040	8.30048	43.97	0.7197	0.5034	8.27402	44.00	0.7194	0.5028	8.24777		
35	51.04	0.6288	0.5230	7.92133	51.07	0.6283	0.5224	7.89522	51.11	0.6278	0.5217	7.86933		
40	58.04	0.5294	0.5459	7.50853	58.08	0.5288	0.5453	7.48284	58.12	0.5282	0.5447	7.45736		
45	64.91	0.4240	0.5731	7.07090	64.96	0.4233	0.5726	7.04569	65.00	0.4226	0.5720	7.02068		
50	71.65	0.3148	0.6054	6.61740	71.70	0.3140	0.6049	6.59273	71.75	0.3132	0.6043	6.56825		
55	78.24	0.2038	0.6433	6.15675	78.29	0.2029	0.6428	6.13268	78.34	0.2020	0.6423	6.10881		
60	84.65	0.0932	0.6876	5.69723	84.71	0.0922	0.6872	5.67382	84.77	0.0912	0.6867	5.65060		
65	90.88	-0.0154	0.7392	5.24635	90.94	-0.0165	0.7388	5.22366	91.00	-0.0175	0.7385	5.20115		
70	96.91	-0.1203	0.7990	4.81066	96.97	-0.1214	0.7987	4.78874	97.04	-0.1225	0.7985	4.76700		
75	102.73	-0.2203	0.8680	4.39561	102.79	-0.2214	0.8679	4.37450	102.86	-0.2225	0.8679	4.35356		
80	108.32	-0.3143	0.9474	4.00540	108.38	-0.3154	0.9475	3.98514	108.45	-0.3165	0.9476	3.96505		
85	113.67	-0.4015	1.0381	3.64305	113.74	-0.4026	1.0385	3.62366	113.81	-0.4037	1.0389	3.60444		
90	118.79	-0.4817	1.1411	3.31034	118.86	-0.4827	1.1418	3.29184	118.93	-0.4837	1.1426	3.27350		
95	123.67	-0.5545	1.2572	3.00802	123.74	-0.5555	1.2584	2.99041	123.81	-0.5564	1.2595	2.97295		
100	128.32	-0.6200	1.3870	2.73590	128.38	-0.6209	1.3886	2.71916	128.45	-0.6218	1.3903	2.70256		
105	132.73	-0.6785	1.5304	2.49303	132.79	-0.6793	1.5327	2.47714	132.86	-0.6802	1.5350	2.46139		
110	136.91	-0.7303	1.6873	2.27793	136.97	-0.7310	1.6903	2.26286	137.04	-0.7318	1.6933	2.24792		
115	140.88	-0.7759	1.8566	2.08876	140.94	-0.7765	1.8604	2.07445	141.00	-0.7772	1.8643	2.06028		
120	144.65	-0.8157	2.0367	1.92346	144.71	-0.8162	2.0414	1.90986	144.77	-0.8168	2.0462	1.89640		
125	148.24	-0.8502	2.2252	1.77990	148.29	-0.8507	2.2310	1.76696	148.34	-0.8512	2.2368	1.75416		
130	151.65	-0.8801	2.4192	1.65599	151.70	-0.8805	2.4261	1.64367	151.75	-0.8809	2.4330	1.63146		
135	154.91	-0.9057	2.6130	1.54978	154.96	-0.9060	2.6230	1.53799	155.00	-0.9063	2.6310	1.52632		
140	158.04	-0.9274	2.8083	1.45946	158.08	-0.9277	2.8174	1.44814	158.12	-0.9279	2.8266	1.43695		
145	161.04	-0.9457	2.9945	1.38340	161.07	-0.9459	3.0048	1.37251	161.11	-0.9461	3.0151	1.36172		
150	163.94	-0.9610	3.1688	1.32021	163.97	-0.9611	3.1802	1.30967	164.00	-0.9612	3.1916	1.29924		
155	166.75	-0.9734	3.3263	1.26869	166.77	-0.9735	3.3387	1.25844	166.80	-0.9736	3.3511	1.24831		
160	169.48	-0.9832	3.4626	1.22784	169.50	-0.9833	3.4758	1.21784	169.52	-0.9833	3.4891	1.20797		

$\frac{2}{x} = 0.235$
 $\frac{2}{x} = 0.236$
 $\frac{2}{x} = 0.237$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4536	9.38100	0.00	1.0000	0.4530	9.35422	0.00	1.0000	0.4524	9.32765
5	7.42	0.9916	0.4549	9.34644	7.43	0.9916	0.4543	9.31969	7.43	0.9916	0.4536	9.29314
10	14.83	0.9667	0.4567	9.24360	14.84	0.9666	0.4561	9.21692	14.85	0.9666	0.4575	9.19045
15	22.21	0.9258	0.4652	9.07496	22.22	0.9257	0.4646	9.04841	22.24	0.9256	0.4639	9.02206
20	29.54	0.8700	0.4745	8.84458	29.56	0.8698	0.4738	8.81821	29.58	0.8696	0.4732	8.79205
25	36.82	0.8005	0.4867	8.55793	36.85	0.8002	0.4861	8.53180	36.87	0.8000	0.4854	8.50587
30	44.03	0.7190	0.5021	8.22172	44.06	0.7186	0.5015	8.19588	44.09	0.7183	0.5009	8.17024
35	51.14	0.6274	0.5211	7.84363	51.18	0.6269	0.5205	7.81814	51.21	0.6264	0.5199	7.79284
40	58.16	0.5276	0.5441	7.43207	58.20	0.5270	0.5435	7.40699	58.24	0.5264	0.5429	7.38210
45	65.05	0.4219	0.5714	6.99587	65.09	0.4212	0.5708	6.97125	65.14	0.4205	0.5703	6.94683
50	71.80	0.3123	0.6038	6.54397	71.85	0.3115	0.6032	6.51988	71.90	0.3107	0.6027	6.49599
55	78.40	0.2011	0.6418	6.08512	78.45	0.2002	0.6413	6.06162	78.50	0.1993	0.6408	6.03830
60	84.82	0.0902	0.6863	5.62757	84.88	0.0892	0.6859	5.60471	84.94	0.0883	0.6854	5.58204
65	91.06	-0.0185	0.7381	5.17882	91.12	-0.0196	0.7378	5.15668	91.18	-0.0206	0.7374	5.13470
70	97.10	-0.1236	0.7983	4.74543	97.16	-0.1247	0.7980	4.72404	97.22	-0.1257	0.7978	4.70282
75	102.92	-0.2236	0.8678	4.33280	102.99	-0.2247	0.8677	4.31221	103.05	-0.2258	0.8677	4.29173
80	108.52	-0.3176	0.9478	3.94513	108.58	-0.3187	0.9479	3.92537	108.65	-0.3198	0.9481	3.90577
85	113.88	-0.4048	1.0393	3.58538	113.94	-0.4058	1.0397	3.56647	114.01	-0.4069	1.0401	3.54773
90	119.00	-0.4848	1.1433	3.25532	119.06	-0.4858	1.1441	3.23729	119.13	-0.4868	1.1448	3.21941
95	123.88	-0.5574	1.2607	2.95564	123.94	-0.5584	1.2619	2.93848	124.01	-0.5593	1.2631	2.92147
100	128.52	-0.6227	1.3920	2.68612	128.58	-0.6236	1.3937	2.66982	128.65	-0.6245	1.3954	2.65366
105	132.92	-0.6810	1.5373	2.44578	132.99	-0.6818	1.5396	2.43032	133.05	-0.6826	1.5420	2.41499
110	137.10	-0.7325	1.6964	2.23311	137.16	-0.7333	1.6994	2.21845	137.22	-0.7340	1.7024	2.20391
115	141.06	-0.7778	1.8661	2.04623	141.12	-0.7785	1.8720	2.03232	141.18	-0.7791	1.8759	2.01854
120	144.82	-0.8174	2.0510	1.88307	144.88	-0.8179	2.0558	1.86986	144.94	-0.8185	2.0606	1.85677
125	148.40	-0.8517	2.2426	1.74148	148.45	-0.8522	2.2484	1.72892	148.50	-0.8527	2.2543	1.71647
130	151.80	-0.8813	2.4399	1.61937	151.85	-0.8817	2.4468	1.60739	151.90	-0.8821	2.4537	1.60454
135	155.05	-0.9067	2.6390	1.51476	155.09	-0.9070	2.6471	1.50332	155.14	-0.9073	2.6552	1.49199
140	158.16	-0.9282	2.8358	1.42586	158.20	-0.9285	2.8450	1.41408	158.24	-0.9287	2.8543	1.40402
145	161.14	-0.9463	3.0254	1.35104	161.18	-0.9465	3.0358	1.34048	161.21	-0.9467	3.0463	1.33001
150	164.03	-0.9614	3.2030	1.28891	164.06	-0.9615	3.2145	1.27869	164.09	-0.9617	3.2261	1.26555
155	166.82	-0.9737	3.3636	1.23828	166.85	-0.9738	3.3761	1.22835	166.87	-0.9739	3.3886	1.21852
160	169.54	-0.9834	3.5024	1.19815	169.56	-0.9835	3.5158	1.18845	169.58	-0.9835	3.5293	1.17350
165	172.21	-0.9908	3.6153	1.16773	172.22	-0.9908	3.6294	1.15822	172.24	-0.9908	3.6436	1.14891
170	174.83	-0.9959	3.6986	1.14643	174.84	-0.9959	3.7133	1.13704	174.85	-0.9960	3.7280	1.12773
175	177.42	-0.9990	3.7498	1.13381	177.43	-0.9990	3.7648	1.12450	177.43	-0.9990	3.7798	1.11530
180	180.00	-1.0000	3.7670	1.12953	180.00	-1.0000	3.7821	1.12035	180.00	-1.0000	3.7973	1.10617

 $\frac{2}{x} = 0.238$
 $\frac{2}{x} = 0.239$
 $\frac{2}{x} = 0.240$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4517	9.30128	0.00	1.0000	0.4511	9.27512	0.00	1.0000	0.4505	9.24915
5	7.44	0.9916	0.4530	9.26680	7.44	0.9916	0.4524	9.24065	7.45	0.9916	0.4518	9.21471
10	14.86	0.9666	0.4568	9.16418	14.87	0.9665	0.4562	9.13811	14.88	0.9665	0.4556	9.10925
15	22.25	0.9255	0.4633	8.99592	22.27	0.9254	0.4627	8.96998	22.28	0.9253	0.4621	8.94424
20	29.61	0.8695	0.4726	8.75603	29.63	0.8693	0.4720	8.74032	29.65	0.8691	0.4714	8.71476
25	36.90	0.7997	0.4848	8.48014	36.92	0.7994	0.4842	8.45461	36.95	0.7992	0.4836	8.42927
30	44.12	0.7179	0.5003	8.14479	44.15	0.7175	0.4997	8.11955	44.18	0.7172	0.4991	8.09449
35	51.25	0.6259	0.5193	7.76774	51.28	0.6255	0.5187	7.74284	51.32	0.6250	0.5181	7.71812
40	58.28	0.5258	0.5423	7.35740	58.32	0.5252	0.5417	7.33289	58.35	0.5247	0.5411	7.30857
45	65.18	0.4198	0.5697	6.92259	65.22	0.4191	0.5691	6.89854	65.27	0.4184	0.5686	6.87468
50	71.95	0.3099	0.6021	6.47227	71.99	0.3091	0.6016	6.44873	72.04	0.3083	0.6011	6.42539
55	78.55	0.1984	0.6403	6.01517	78.61	0.1975	0.6398	5.99221	78.66	0.1966	0.6393	5.96944
60	84.99	0.0873	0.6850	5.55955	85.05	0.0863	0.6846	5.53723	85.10	0.0853	0.6841	5.51509
65	91.24	-0.0217	0.7371	5.11290	91.30	-0.0227	0.7367	5.09128	91.36	-0.0237	0.7364	5.06982
70	97.29	-0.1268	0.7976	4.68176	97.35	-0.1279	0.7974	4.66088	97.41	-0.1290	0.7971	4.64016
75	103.11	-0.2269	0.8676	4.27151	103.18	-0.2280	0.8675	4.25141	103.24	-0.2291	0.8675	4.23147
80	108.71	-0.3208	0.9482	3.88533	108.78	-0.3219	0.9483	3.86705	108.85	-0.3230	0.9485	3.84793
85	114.08	-0.4080	1.0405	3.52914	114.14	-0.4090	1.0409	3.51070	114.21	-0.4101	1.0413	3.49242
90	119.20	-0.4879	1.1456	3.20168	119.27	-0.4889	1.1463	3.18410	119.33	-0.4899	1.1471	3.16666
95	124.08	-0.5603	1.2642	2.90460	124.14	-0.5613	1.2654	2.88788	124.21	-0.5622	1.2666	2.87130
100	128.71	-0.6254	1.3971	2.63764	128.78	-0.6263	1.3988	2.62176	128.85	-0.6272	1.4005	2.60602
105	133.11	-0.6835	1.5443	2.39979	133.18	-0.6843	1.5466	2.38473	133.24	-0.6851	1.5489	2.38980
110	137.29	-0.7347	1.7055	2.18951	137.35	-0.7355	1.7085	2.17523	137.41	-0.7362	1.7116	2.16108
115	141.24	-0.7798	1.8798	2.00488	141.30	-0.7804	1.8836	1.99134	141.36	-0.7811	1.8875	1.97793
120	144.99	-0.8191	2.0654	1.84381	145.05	-0.8196	2.0703	1.83097	145.10	-0.8202	2.0751	1.81824
125	148.55	-0.8531	2.2601	1.70415	148.61	-0.8536	2.2660	1.69194	148.66	-0.8541	2.2719	1.67985
130	151.95	-0.8825	2.4607	1.58380	151.99	-0.8829	2.4677	1.57217	152.04	-0.8833	2.4747	1.56965
135	155.18	-0.9076	2.6633	1.48077	155.22	-0.9080	2.6715	1.46966	155.27	-0.9083	2.6796	1.45965
140	158.28	-0.9290	2.8636	1.39326	158.32	-0.9292	2.8729	1.38260	158.35	-0.9295	2.8823	1.37206
145	161.25	-0.9469	3.0567	1.31966	161.28	-0.9471	3.0672	1.30940	161.32	-0.9473	3.0778	1.29925
150	164.12	-0.9618	3.2376	1.25856	164.15	-0.9620	3.2492	1.24865	164.18	-0.9621	3.2609	1.23884
155	166.90	-0.9740	3.4012	1.20880	166.92	-0.9741	3.4139	1.19917	166.95	-0.9742	3.4266	1.18964
160	169.51	-0.9836	3.5428	1.16937	169.53	-0.9837	3.5563	1.15997	169.55	-0.9837	3.5699	1.15067
165	172.25	-0.9909	3.6578	1.13949	172.27	-0.9909	3.6721	1.13027	172.28	-0.9909	3.6864	1.12114
170	174.86	-0.9960	3.7428	1.11857	174.87	-0.9960	3.7576	1.10947	174.88	-0.9960	3.7725	1.10047
175	177.44	-0.9990	3.7949	1.10618	177.44	-0.9990	3.8101	1.09716	177.45	-0.9990	3.8253	1.08824
180	180.00	-1.0000	3.8125	1.10208	180.00	-1.0000	3.8278	1.09309	180.00	-1.0000	3.8431	1.08418

x = 0.241					x = 0.242					x = 0.243				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.4499	9.22338	0.00	1.0000	0.4493	9.19781	0.00	1.0000	0.4487	9.17243		
5	7.45	0.9916	0.4511	9.18897	7.46	0.9915	0.4505	9.16342	7.46	0.9915	0.4499	9.13807		
10	14.89	0.9664	0.4550	9.08658	14.90	0.9664	0.4544	9.06110	14.91	0.9663	0.4538	9.03582		
15	22.30	0.9252	0.4615	8.91869	22.31	0.9251	0.4609	8.89334	22.33	0.9250	0.4603	8.86818		
20	29.67	0.8689	0.4707	8.68938	29.69	0.8688	0.4701	8.66421	29.71	0.8686	0.4695	8.63922		
25	36.97	0.7989	0.4830	8.40413	37.00	0.7986	0.4824	8.37917	37.02	0.7984	0.4818	8.35441		
30	44.21	0.7168	0.4985	8.06963	44.24	0.7164	0.4979	8.04496	44.27	0.7161	0.4973	8.02047		
35	51.35	0.6245	0.5175	7.69359	51.39	0.6240	0.5169	7.66925	51.42	0.6236	0.5163	7.64510		
40	58.39	0.5241	0.5405	7.28444	58.43	0.5235	0.5399	7.26049	58.47	0.5229	0.5394	7.23672		
45	65.31	0.4177	0.5680	6.85100	65.36	0.4170	0.5674	6.82750	65.40	0.4163	0.5669	6.80417		
50	72.09	0.3075	0.6005	6.40222	72.14	0.3067	0.6000	6.37922	72.19	0.3059	0.5995	6.35641		
55	78.71	0.1957	0.6388	5.94634	78.76	0.1949	0.6384	5.92441	78.82	0.1940	0.6379	5.90216		
60	85.16	0.0844	0.6837	5.49312	85.22	0.0834	0.6833	5.47131	85.27	0.0824	0.6829	5.44968		
65	91.42	-0.0248	0.7361	5.04853	91.48	-0.0258	0.7357	5.02741	91.54	-0.0268	0.7354	5.00645		
70	97.47	-0.1300	0.7969	4.61960	97.53	-0.1311	0.7967	4.59921	97.60	-0.1322	0.7965	4.57897		
75	103.31	-0.2302	0.8674	4.21169	103.37	-0.2312	0.8673	4.19207	103.43	-0.2323	0.8673	4.17260		
80	108.91	-0.3241	0.9486	3.82895	108.98	-0.3252	0.9488	3.81014	109.04	-0.3263	0.9489	3.79147		
85	114.28	-0.4112	1.0417	3.47428	114.34	-0.4122	1.0422	3.45629	114.41	-0.4133	1.0426	3.43845		
90	119.40	-0.4909	1.1478	3.14938	119.47	-0.4919	1.1486	3.13223	119.53	-0.4930	1.1493	3.11522		
95	124.28	-0.5632	1.2678	2.85485	124.34	-0.5642	1.2690	2.83855	124.41	-0.5651	1.2701	2.82238		
100	128.91	-0.6281	1.4022	2.59041	128.98	-0.6290	1.4039	2.57494	129.04	-0.6299	1.4056	2.55959		
105	133.31	-0.6859	1.5512	2.35501	133.37	-0.6867	1.5536	2.34034	133.43	-0.6875	1.5559	2.32580		
110	137.47	-0.7369	1.7147	2.14706	137.53	-0.7377	1.7177	2.13316	137.60	-0.7384	1.7208	2.11939		
115	141.42	-0.7817	1.8915	1.96464	141.48	-0.7824	1.8954	1.95147	141.54	-0.7830	1.8993	1.93842		
120	145.16	-0.8208	2.0800	1.80564	145.22	-0.8213	2.0849	1.79315	145.27	-0.8219	2.0898	1.78077		
125	148.71	-0.8546	2.2778	1.66787	148.76	-0.8550	2.2837	1.65601	148.82	-0.8555	2.2897	1.64425		
130	152.09	-0.8837	2.4817	1.54924	152.14	-0.8841	2.4888	1.53794	152.19	-0.8845	2.4958	1.52675		
135	155.31	-0.9086	2.6879	1.44776	155.36	-0.9089	2.6961	1.43696	155.40	-0.9092	2.7043	1.42628		
140	158.39	-0.9297	2.8917	1.36161	158.43	-0.9300	2.9011	1.35127	158.47	-0.9302	2.9106	1.34103		
145	161.35	-0.9475	3.0883	1.28920	161.39	-0.9477	3.0990	1.27925	161.42	-0.9479	3.1096	1.26939		
150	164.21	-0.9623	3.2726	1.22912	164.24	-0.9624	3.2843	1.21951	164.27	-0.9625	3.2961	1.20998		
155	166.97	-0.9743	3.4393	1.18020	167.00	-0.9744	3.4521	1.17086	167.02	-0.9745	3.4649	1.16162		
160	169.67	-0.9838	3.5835	1.14146	169.69	-0.9838	3.5972	1.13234	169.71	-0.9839	3.6110	1.12332		
165	172.30	-0.9910	3.7008	1.11211	172.31	-0.9910	3.7153	1.10377	172.33	-0.9911	3.7298	1.09432		
170	174.89	-0.9960	3.7875	1.09156	174.90	-0.9960	3.8025	1.08275	174.91	-0.9961	3.8176	1.07492		
175	177.45	-0.9990	3.8406	1.07940	177.46	-0.9990	3.8560	1.07066	177.46	-0.9990	3.8714	1.06200		
180	180.00	-1.0000	3.8585	1.07537	180.00	-1.0000	3.8740	1.06665	180.00	-1.0000	3.8895	1.05802		

x = 0.244					x = 0.245					x = 0.246				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.4480	9.14724	0.00	1.0000	0.4474	9.12224	0.00	1.0000	0.4468	9.09743		
5	7.47	0.9915	0.4493	9.11290	7.47	0.9915	0.4487	9.08793	7.48	0.9915	0.4481	9.06314		
10	14.92	0.9663	0.4532	9.01073	14.93	0.9662	0.4525	8.98582	14.94	0.9662	0.4519	8.96111		
15	22.35	0.9249	0.4596	8.84321	22.36	0.9248	0.4590	8.81843	22.38	0.9247	0.4584	8.79383		
20	29.73	0.8684	0.4689	8.61442	29.75	0.8682	0.4683	8.58980	29.77	0.8681	0.4677	8.56537		
25	37.05	0.7981	0.4812	8.32983	37.07	0.7979	0.4805	8.30544	37.10	0.7976	0.4800	8.28123		
30	44.30	0.7157	0.4967	7.99617	44.33	0.7153	0.4961	7.97204	44.36	0.7150	0.4955	7.94810		
35	51.46	0.6231	0.5157	7.62113	51.49	0.6226	0.5151	7.59733	51.53	0.6221	0.5146	7.57372		
40	58.51	0.5223	0.5388	7.21313	58.55	0.5217	0.5382	7.18972	58.59	0.5211	0.5376	7.16649		
45	65.44	0.4156	0.5663	6.78103	65.49	0.4149	0.5658	6.75806	65.53	0.4142	0.5652	6.73526		
50	72.23	0.3051	0.5990	6.33376	72.28	0.3043	0.5984	6.31129	72.33	0.3035	0.5979	6.28899		
55	78.87	0.1931	0.6374	5.88007	78.92	0.1922	0.6369	5.85816	78.97	0.1913	0.6364	5.83641		
60	85.33	0.0815	0.6824	5.42821	85.38	0.0805	0.6820	5.40691	85.44	0.0795	0.6816	5.38576		
65	91.60	-0.0278	0.7351	4.98565	91.65	-0.0289	0.7347	4.96501	91.71	-0.0299	0.7344	4.94453		
70	97.66	-0.1332	0.7963	4.55889	97.72	-0.1343	0.7960	4.53897	97.78	-0.1354	0.7958	4.51920		
75	103.50	-0.2334	0.8672	4.15328	103.56	-0.2345	0.8671	4.13412	103.63	-0.2356	0.8671	4.11510		
80	109.11	-0.3274	0.9491	3.77295	109.17	-0.3284	0.9492	3.75458	109.24	-0.3295	0.9494	3.73635		
85	114.48	-0.4143	1.0430	3.42075	114.54	-0.4154	1.0434	3.40320	114.61	-0.4164	1.0438	3.38578		
90	119.60	-0.4940	1.1501	3.09836	119.67	-0.4950	1.1509	3.08163	119.73	-0.4960	1.1516	3.06504		
95	124.48	-0.5661	1.2713	2.80635	124.54	-0.5670	1.2725	2.79045	124.61	-0.5680	1.2737	2.77468		
100	129.11	-0.6308	1.4073	2.54438	129.17	-0.6317	1.4090	2.52930	129.24	-0.6326	1.4108	2.51434		
105	133.50	-0.6883	1.5583	2.31138	133.56	-0.6891	1.5606	2.29709	133.63	-0.6899	1.5630	2.28292		
110	137.66	-0.7391	1.7239	2.10574	137.72	-0.7398	1.7270	2.09220	137.78	-0.7406	1.7301	2.07879		
115	141.60	-0.7836	1.9033	1.92549	141.65	-0.7843	1.9072	1.91267	141.71	-0.7849	1.9112	1.89997		
120	145.33	-0.8224	2.0947	1.76851	145.38	-0.8230	2.0996	1.75636	145.44	-0.8235	2.1045	1.74441		
125	148.87	-0.8560	2.2956	1.63260	148.92	-0.8564	2.3016	1.62106	148.97	-0.8569	2.3076	1.60963		
130	152.23	-0.8849	2.5029	1.51566	152.28	-0.8853	2.5101	1.50068	152.33	-0.8858	2.5172	1.49380		
135	155.44	-0.9096	2.7126	1.41569	155.49	-0.9099	2.7209	1.40520	155.53	-0.9102	2.7293	1.39482		
140	158.51	-0.9305	2.9201	1.33088	158.55	-0.9307	2.9296	1.32084	158.59	-0.9310	2.9392	1.31089		
145	161.46	-0.9481	3.1203	1.25963	161.49	-0.9483	3.1310	1.24997	161.53	-0.9485	3.1418	1.24040		
150	164.30	-0.9627	3.3080	1.20055	164.33	-0.9628	3.3198	1.19122	164.36	-0.9630	3.3318	1.18198		
155	167.05	-0.9746	3.4778	1.15246	167.07	-0.9747	3.4907	1.14340	167.10	-0.9748	3.5037	1.13443		
160	169.73	-0.9840	3.6248	1.11387	169.75	-0.9840	3.6387	1.10555	169.77	-0.9841	3.6526	1.0.		

$\frac{2}{x} = 0.247$
 $\frac{2}{x} = 0.248$
 $\frac{2}{x} = 0.249$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4462	9.07280	0.00	1.0000	0.4456	9.04835	0.00	1.0000	0.4450	9.02409
5	7.48	0.9915	0.4475	9.03553	7.49	0.9915	0.4469	9.01411	7.49	0.9915	0.4463	8.98987
10	14.95	0.9661	0.4513	8.93557	14.96	0.9661	0.4507	8.91222	14.97	0.9661	0.4502	8.88804
15	22.39	0.9245	0.4578	8.76941	22.41	0.9245	0.4572	8.74513	22.42	0.9244	0.4566	8.72112
20	29.79	0.8679	0.4671	8.54112	29.81	0.8677	0.4665	8.51705	29.83	0.8675	0.4659	8.49316
25	37.12	0.7973	0.4794	8.25719	37.15	0.7971	0.4788	8.23334	37.17	0.7968	0.4782	8.20966
30	44.39	0.7146	0.4949	7.92434	44.42	0.7143	0.4943	7.90075	44.45	0.7139	0.4937	7.87734
35	51.56	0.6217	0.5140	7.55028	51.60	0.6212	0.5134	7.52701	51.63	0.6207	0.5128	7.50391
40	58.63	0.5266	0.5371	7.14342	58.67	0.5260	0.5365	7.12053	58.71	0.5194	0.5359	7.09781
45	65.57	0.4135	0.5647	6.71263	65.62	0.4128	0.5641	6.69017	65.66	0.4121	0.5636	6.66788
50	72.38	0.3027	0.5974	6.26685	72.43	0.3019	0.5969	6.24488	72.47	0.3011	0.5963	6.22307
55	79.02	0.1904	0.6359	5.81432	79.08	0.1895	0.6355	5.79339	79.13	0.1886	0.6350	5.77213
60	85.49	0.0786	0.6812	5.36473	85.55	0.0776	0.6808	5.34396	85.60	0.0767	0.6804	5.32329
65	91.77	-0.0309	0.7341	4.92421	91.83	-0.0319	0.7337	4.90404	91.89	-0.0329	0.7334	4.88402
70	97.84	-0.1364	0.7956	4.49958	97.90	-0.1375	0.7954	4.48011	97.96	-0.1385	0.7952	4.46080
75	103.69	-0.2367	0.8670	4.09624	103.75	-0.2377	0.8670	4.07752	103.82	-0.2388	0.8669	4.05894
80	109.30	-0.3306	0.9495	3.71827	109.37	-0.3316	0.9497	3.70032	109.43	-0.3327	0.9498	3.68252
85	114.68	-0.4175	1.0442	3.36850	114.74	-0.4185	1.0447	3.35136	114.81	-0.4196	1.0451	3.33436
90	119.80	-0.4970	1.1524	3.04858	119.87	-0.4980	1.1532	3.03226	119.93	-0.4990	1.1539	3.01606
95	124.68	-0.5689	1.2749	2.75904	124.74	-0.5699	1.2761	2.74353	124.81	-0.5708	1.2773	2.72815
100	129.30	-0.6334	1.4125	2.49951	129.37	-0.6343	1.4142	2.48450	129.43	-0.6352	1.4159	2.47022
105	133.69	-0.6907	1.5653	2.26887	133.75	-0.6915	1.5677	2.25495	133.82	-0.6923	1.5701	2.24114
110	137.84	-0.7413	1.7332	2.06549	137.90	-0.7420	1.7363	2.05221	137.96	-0.7427	1.7395	2.03924
115	141.77	-0.7855	1.9152	1.88733	141.83	-0.7862	1.9191	1.87490	141.89	-0.7868	1.9231	1.86253
120	145.49	-0.8241	2.1095	1.73238	145.55	-0.8246	2.1144	1.72056	145.60	-0.8252	2.1194	1.70884
125	149.02	-0.8574	2.3136	1.59830	149.08	-0.8578	2.3197	1.58708	149.13	-0.8583	2.3257	1.57596
130	152.38	-0.8860	2.5244	1.48302	152.43	-0.8864	2.5316	1.47234	152.47	-0.8868	2.5388	1.46176
135	155.57	-0.9105	2.7376	1.38453	155.62	-0.9108	2.7460	1.37434	155.66	-0.9111	2.7545	1.36425
140	158.63	-0.9312	2.9488	1.30104	158.67	-0.9315	2.9584	1.29128	158.71	-0.9317	2.9680	1.28161
145	161.56	-0.9487	3.1526	1.23093	161.60	-0.9489	3.1634	1.22155	161.63	-0.9490	3.1743	1.22125
150	164.39	-0.9631	3.3437	1.17282	164.42	-0.9632	3.3557	1.16376	164.45	-0.9634	3.3679	1.15479
155	167.12	-0.9749	3.5168	1.12555	167.15	-0.9750	3.5298	1.11675	167.17	-0.9750	3.5430	1.14804
160	169.79	-0.9842	3.6665	1.08813	169.81	-0.9844	3.6805	1.07955	169.83	-0.9843	3.6946	1.07105
165	172.39	-0.9912	3.7884	1.05980	172.41	-0.9912	3.8032	1.05139	172.42	-0.9913	3.8180	1.04306
170	174.95	-0.9961	3.8784	1.03993	174.96	-0.9961	3.8938	1.03168	174.97	-0.9962	3.9092	1.02347
175	177.48	-0.9990	3.9337	1.02825	177.49	-0.9990	3.9494	1.02002	177.49	-0.9990	3.9652	1.01188
180	180.00	-1.0000	3.9523	1.02436	180.00	-1.0000	3.9681	1.01616	180.00	-1.0000	3.9840	1.00804

 $\frac{2}{x} = 0.250$
 $\frac{2}{x} = 0.251$
 $\frac{2}{x} = 0.252$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4444	9.00000	0.00	1.0000	0.4439	8.97609	0.00	1.0000	0.4433	8.95235
5	7.50	0.9915	0.4457	8.96580	7.50	0.9914	0.4451	8.94191	7.51	0.9914	0.4445	8.91820
10	14.98	0.9660	0.4496	8.86405	14.99	0.9660	0.4490	8.84023	15.00	0.9659	0.4484	8.81658
15	22.44	0.9243	0.4560	8.69724	22.45	0.9242	0.4555	8.67353	22.47	0.9241	0.4549	8.65000
20	29.85	0.8674	0.4653	8.46945	29.87	0.8672	0.4647	8.44590	29.89	0.8670	0.4642	8.42253
25	37.20	0.7965	0.4776	8.18616	37.22	0.7963	0.4770	8.16283	37.25	0.7960	0.4764	8.13966
30	44.48	0.7135	0.4931	7.85410	44.51	0.7132	0.4925	7.83103	44.54	0.7128	0.4920	7.80813
35	51.67	0.6202	0.5122	7.48099	51.70	0.6198	0.5117	7.45823	51.73	0.6193	0.5111	7.43564
40	58.75	0.5188	0.5354	7.07526	58.79	0.5182	0.5348	7.05287	58.82	0.5177	0.5342	7.03064
45	65.70	0.4114	0.5630	6.64575	65.75	0.4107	0.5625	6.62378	65.79	0.4101	0.5619	6.60198
50	72.52	0.3004	0.5958	6.20142	72.57	0.2996	0.5953	6.17993	72.62	0.2988	0.5948	6.15861
55	79.18	0.1878	0.6345	5.75102	79.23	0.1869	0.6340	5.73007	79.28	0.1860	0.6336	5.70927
60	85.66	0.0757	0.6799	5.30277	85.71	0.0747	0.6795	5.28241	85.77	0.0738	0.6791	5.26220
65	91.95	-0.0340	0.7331	4.86415	92.00	-0.0350	0.7327	4.84443	92.06	-0.0360	0.7324	4.82486
70	98.02	-0.1396	0.7950	4.44162	98.09	-0.1406	0.7948	4.42260	98.15	-0.1417	0.7946	4.40371
75	103.88	-0.2399	0.8669	4.04050	103.94	-0.2409	0.8668	4.02221	104.01	-0.2420	0.8668	4.00405
80	109.50	-0.3338	0.9500	3.66486	109.56	-0.3349	0.9501	3.64733	109.63	-0.3359	0.9503	3.62993
85	114.87	-0.4206	1.0455	3.31749	114.94	-0.4217	1.0459	3.30075	115.01	-0.4227	1.0464	3.28414
90	120.00	-0.5000	1.1547	3.00000	120.07	-0.5010	1.1555	2.98406	120.13	-0.5020	1.1562	2.96872
95	124.87	-0.5718	1.2785	2.71289	124.94	-0.5727	1.2797	2.69776	125.01	-0.5737	1.2809	2.68275
100	129.50	-0.6361	1.4177	2.45575	129.56	-0.6369	1.4194	2.44141	129.63	-0.6378	1.4212	2.42718
105	133.88	-0.6931	1.5725	2.22744	133.94	-0.6939	1.5748	2.21386	134.01	-0.6947	1.5772	2.20040
110	138.02	-0.7434	1.7426	2.02628	138.09	-0.7441	1.7457	2.01344	138.15	-0.7448	1.7489	2.00070
115	141.95	-0.7874	1.9271	1.85027	142.00	-0.7881	1.9312	1.83811	142.06	-0.7887	1.9352	1.82607
120	145.66	-0.8257	2.1244	1.69722	145.71	-0.8262	2.1294	1.82571	145.77	-0.8268	2.1344	1.67430
125	149.18	-0.8588	2.3318	1.56494	149.23	-0.8592	2.3379	1.55402	149.28	-0.8597	2.3440	1.54320
130	152.52	-0.8872	2.5460	1.45128	152.57	-0.8876	2.5533	1.44089	152.62	-0.8879	2.5605	1.43060
135	155.70	-0.9114	2.7629	1.35425	155.75	-0.9117	2.7714	1.34454	155.79	-0.9121	2.7799	1.33453
140	158.75	-0.9320	2.9777	1.27204	158.79	-0.9322	2.9875	1.26255	158.82	-0.9325	2.9972	1.25316
145	161.67	-0.9492	3.1852	1.20305	161.70	-0.9494	3.1962	1.19393	161.73	-0.9496	3.2072	1.18490
150	164.48	-0.9635	3.3799	1.14590	164.51	-0.9637	3.3920	1.13710	164.54	-0.9638	3.4042	1.12838
155	167.20	-0.9751	3.5561	1.09942	167.22	-0.9752	3.5694	1.09088	167.25	-0.9753	3.5826	1.08242
160	169.85	-0.9843	3.7087	1.06264	169.87	-0.9844	3.7229	1.05431	169.89	-0.9845	3.7372	1.04607
165	172.44	-0.9913	3.8329	1.03461	172.45	-0.9913	3.8479	1.02664	172.47	-0.9914	3.8629	1.01856
170	174.98	-0.9962	3.9247	1.01534	174.99	-0.9962	3.9402	1.00729	175.00	-0.9962	3.9559	0.99931
175	177.50	-0.9990	3.9810	1.00381	177.50	-0.9991	3.9969	0.99583	177.51	-0.9991	4.0129	0.98793
180	180.00	-1.0000	4.0000	1.00000	180.00	-1.0000	4.0160	0.99204	180.00	-1.0000	4.0321	0.98416

x = 0.253					x = 0.254					x = 0.255				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4427	8.92878	0.00	1.0000	0.4421	8.90539	0.00	1.0000	0.4415	8.88216		
5	7.51	0.9914	0.4439	8.89465	7.52	0.9914	0.4434	8.87128	7.52	0.9914	0.4428	8.84807		
10	15.01	0.9659	0.4478	8.79310	15.02	0.9658	0.4472	8.76980	15.03	0.9658	0.4466	8.74666		
15	22.48	0.9240	0.4543	8.62664	22.50	0.9239	0.4537	8.60344	22.51	0.9238	0.4531	8.58042		
20	29.91	0.8668	0.4636	8.39933	29.93	0.8667	0.4630	8.37629	29.95	0.8665	0.4624	8.35342		
25	37.27	0.7958	0.4758	8.11667	37.30	0.7955	0.4753	8.09384	37.32	0.7952	0.4747	8.07118		
30	44.57	0.7124	0.4914	7.78539	44.60	0.7121	0.4908	7.76282	44.62	0.7117	0.4902	7.74041		
35	51.77	0.6188	0.5105	7.41321	51.80	0.6184	0.5099	7.39095	51.84	0.6179	0.5094	7.36885		
40	58.86	0.5171	0.5337	7.00858	58.90	0.5165	0.5331	6.98667	58.94	0.5159	0.5326	6.96493		
45	65.83	0.4094	0.5614	6.58033	65.88	0.4087	0.5608	6.55884	65.92	0.4080	0.5603	6.53751		
50	72.66	0.2980	0.5943	6.13743	72.71	0.2972	0.5938	6.11641	72.76	0.2964	0.5933	6.09554		
55	79.33	0.1851	0.6331	5.68862	79.38	0.1842	0.6326	5.66813	79.43	0.1834	0.6322	5.64778		
60	85.82	0.0728	0.6787	5.24214	85.88	0.0719	0.6783	5.22222	85.93	0.0709	0.6779	5.20246		
65	92.12	-0.0370	0.7321	4.80544	92.18	-0.0380	0.7318	4.78615	92.24	-0.0390	0.7314	4.76701		
70	98.21	-0.1427	0.7943	4.38497	98.27	-0.1438	0.7941	4.36637	98.33	-0.1448	0.7939	4.34790		
75	104.07	-0.2431	0.8667	3.98603	104.13	-0.2441	0.8667	3.96815	104.19	-0.2452	0.8666	3.95040		
80	109.69	-0.3370	0.9504	3.61267	109.76	-0.3380	0.9506	3.59555	109.82	-0.3391	0.9507	3.57855		
85	115.07	-0.4237	1.0468	3.26766	115.14	-0.4248	1.0472	3.25131	115.20	-0.4258	1.0476	3.23509		
90	120.20	-0.5030	1.1570	2.95257	120.26	-0.5040	1.1578	2.93701	120.33	-0.5050	1.1586	2.92157		
95	125.07	-0.5746	1.2821	2.66785	125.14	-0.5755	1.2834	2.65308	125.20	-0.5765	1.2846	2.63843		
100	129.69	-0.6387	1.4229	2.41307	129.76	-0.6395	1.4247	2.39908	129.82	-0.6404	1.4264	2.38520		
105	134.07	-0.6955	1.5796	2.18705	134.13	-0.6963	1.5820	2.37381	134.19	-0.6971	1.5844	2.36068		
110	138.21	-0.7456	1.7520	1.98808	138.27	-0.7463	1.7552	1.97556	138.33	-0.7470	1.7584	1.96314		
115	142.12	-0.7893	1.9392	1.81412	142.18	-0.7899	1.9433	1.80228	142.24	-0.7905	1.9473	1.79055		
120	145.82	-0.8273	2.1394	1.66300	145.88	-0.8278	2.1445	1.65179	145.93	-0.8284	2.1495	1.64068		
125	149.33	-0.8601	2.3501	1.53247	149.38	-0.8606	2.3562	1.52184	149.43	-0.8610	2.3624	1.51131		
130	152.66	-0.8883	2.5678	1.42041	152.71	-0.8887	2.5732	1.41031	152.76	-0.8891	2.5825	1.40029		
135	155.83	-0.9124	2.7884	1.32481	155.88	-0.9127	2.7970	1.31517	155.92	-0.9130	2.8056	1.30563		
140	158.86	-0.9327	3.0070	1.24386	158.90	-0.9330	3.0168	1.23464	158.94	-0.9332	3.0267	1.22551		
145	161.77	-0.9498	3.2182	1.17596	161.80	-0.9500	3.2293	1.16710	161.84	-0.9502	3.2404	1.15833		
150	164.57	-0.9639	3.4164	1.11975	164.60	-0.9641	3.4287	1.11120	164.62	-0.9642	3.4410	1.10273		
155	167.27	-0.9754	3.5960	1.07404	167.30	-0.9755	3.6094	1.06575	167.32	-0.9756	3.6228	1.05754		
160	169.91	-0.9845	3.7515	1.03790	169.93	-0.9846	3.7658	1.02981	169.95	-0.9846	3.7802	1.02180		
165	172.48	-0.9914	3.8780	1.01055	172.50	-0.9914	3.8932	1.00262	172.51	-0.9915	3.9084	0.99477		
170	175.01	-0.9962	3.9715	0.99142	175.02	-0.9962	3.9873	0.98360	175.03	-0.9962	4.0031	0.97587		
175	177.51	-0.9991	4.0289	0.98010	177.52	-0.9991	4.0450	0.97235	177.52	-0.9991	4.0612	0.96468		
180	180.00	-1.0000	4.0483	0.97636	180.00	-1.0000	4.0645	0.96863	180.00	-1.0000	4.0808	0.96098		

x = 0.256					x = 0.257					x = 0.258				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4409	8.85910	0.00	1.0000	0.4404	8.83620	0.00	1.0000	0.4398	8.81347		
5	7.53	0.9914	0.4422	8.82503	7.53	0.9914	0.4416	8.80216	7.54	0.9914	0.4410	8.77944		
10	15.04	0.9657	0.4460	8.72368	15.05	0.9657	0.4455	8.70087	15.06	0.9657	0.4449	8.67823		
15	22.52	0.9237	0.4525	8.55755	22.54	0.9236	0.4520	8.53485	22.55	0.9235	0.4514	8.51231		
20	29.97	0.8663	0.4618	8.33072	29.98	0.8662	0.4612	8.30817	30.00	0.8660	0.4607	8.28579		
25	37.35	0.7950	0.4741	8.04867	37.37	0.7947	0.4735	8.02633	37.40	0.7945	0.4730	8.00415		
30	44.65	0.7114	0.4896	7.71816	44.68	0.7110	0.4891	7.69607	44.71	0.7106	0.4885	7.67414		
35	51.87	0.6174	0.5088	7.34690	51.90	0.6170	0.5082	7.32511	51.94	0.6165	0.5077	7.30348		
40	58.98	0.5153	0.5320	6.94334	59.02	0.5148	0.5315	6.92190	59.06	0.5142	0.5309	6.90062		
45	65.96	0.4073	0.5598	6.51632	66.01	0.4066	0.5592	6.49530	66.05	0.4060	0.5587	6.47442		
50	72.80	0.2956	0.5928	6.07483	72.85	0.2948	0.5923	6.05426	72.90	0.2941	0.5917	6.03384		
55	79.49	0.1825	0.6317	5.62759	79.54	0.1816	0.6312	5.60753	79.59	0.1807	0.6308	5.58763		
60	85.99	0.0700	0.6775	5.18283	86.04	0.0690	0.6771	5.16335	86.10	0.0681	0.6767	5.14401		
65	92.29	-0.0400	0.7311	4.74801	92.35	-0.0410	0.7308	4.72915	92.41	-0.0420	0.7305	4.71043		
70	98.39	-0.1459	0.7937	4.32957	98.45	-0.1469	0.7935	4.31138	98.51	-0.1480	0.7933	4.29332		
75	104.26	-0.2463	0.8666	3.93279	104.32	-0.2473	0.8665	3.91531	104.38	-0.2484	0.8665	3.89795		
80	109.89	-0.3402	0.9509	3.56168	109.95	-0.3412	0.9511	3.54494	110.01	-0.3423	0.9512	3.52832		
85	115.27	-0.4268	1.0481	3.21899	115.33	-0.4279	1.0485	3.20301	115.40	-0.4289	1.0489	3.18716		
90	120.40	-0.5060	1.1593	2.90625	120.46	-0.5070	1.1601	2.89105	120.53	-0.5079	1.1609	2.87597		
95	125.27	-0.5774	1.2858	2.62389	125.33	-0.5783	1.2870	2.60947	125.40	-0.5793	1.2882	2.59516		
100	129.89	-0.6413	1.4282	2.37143	129.95	-0.6421	1.4299	2.35777	130.01	-0.6430	1.4317	2.34423		
105	134.26	-0.6979	1.5868	2.14766	134.32	-0.6987	1.5892	2.13474	134.38	-0.6994	1.5917	2.12193		
110	138.39	-0.7477	1.7615	1.95083	138.45	-0.7484	1.7647	1.93863	138.51	-0.7491	1.7679	1.92652		
115	142.29	-0.7912	1.9514	1.77891	142.35	-0.7918	1.9555	1.76737	142.41	-0.7924	1.9596	1.75593		
120	145.99	-0.8289	2.1546	1.62966	146.04	-0.8294	2.1597	1.61875	146.10	-0.8300	2.1648	1.60793		
125	149.49	-0.8615	2.3686	1.50087	149.54	-0.8620	2.3748	1.49052	149.59	-0.8624	2.3810	1.48027		
130	152.80	-0.8895	2.5899	1.39037	152.85	-0.8898	2.5973	1.38054	152.90	-0.8902	2.6047	1.37080		
135	155.96	-0.9133	2.8142	1.29617	156.01	-0.9136	2.8229	1.28680	156.05	-0.9139	2.8315	1.27752		
140	158.98	-0.9335	3.0366	1.21646	159.02	-0.9337	3.0465	1.20750	159.06	-0.9339	3.0565	1.19862		
145	161.87	-0.9504	3.2516	1.14964	161.90	-0.9505	3.2628	1.14103	161.94	-0.9507	3.2740	1.13250		
150	164.65	-0.9643	3.4534	1.09434	164.68	-0.9645	3.4658	1.08603	164.71	-0.9646	3.4783	1.07780		
155	167.35	-0.9757	3.6363	1.04940	167.37	-0.9758	3.6498	1.04134	167.40	-0.9759	3.6634	1.03336		
160	169.97	-0.9847	3.7947	1.01387	169.98	-0.9848	3.8092	1.00602	170.00	-0.9848	3.8238	0.99824		

$$x^2 = 0.259$$

$$x^2 = 0.260$$

$$x^2 = 0.261$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4392	8.79089	0.00	1.0000	0.4386	8.76848	0.00	1.0000	0.4381	8.74622
5	7.54	0.9913	0.4405	8.75699	7.55	0.9913	0.4399	8.73450	7.55	0.9913	0.4393	8.71226
10	15.07	0.9656	0.4443	8.65574	15.08	0.9656	0.4437	8.63341	15.09	0.9655	0.4432	8.61124
15	22.57	0.9234	0.4508	8.48994	22.58	0.9233	0.4502	8.46771	22.60	0.9232	0.4497	8.44565
20	30.02	0.8658	0.4601	8.26356	30.04	0.8656	0.4595	8.24149	30.06	0.8655	0.4590	8.21958
25	37.42	0.7942	0.4724	7.98212	37.44	0.7939	0.4718	7.96025	37.47	0.7937	0.4713	7.93854
30	44.74	0.7103	0.4879	7.65236	44.77	0.7099	0.4874	7.63073	44.80	0.7096	0.4868	7.60926
35	51.97	0.6160	0.5071	7.28199	52.01	0.6156	0.5066	7.26067	52.04	0.6151	0.5060	7.23949
40	59.09	0.5136	0.5304	6.87948	59.13	0.5131	0.5298	6.85850	59.17	0.5125	0.5293	6.83767
45	66.09	0.4053	0.5582	6.45369	66.13	0.4046	0.5577	6.43310	66.18	0.4039	0.5571	6.41266
50	72.95	0.2933	0.5912	6.01356	72.99	0.2925	0.5907	5.99343	73.04	0.2917	0.5902	5.97344
55	79.64	0.1799	0.6303	5.56786	79.69	0.1790	0.6299	5.54824	79.74	0.1781	0.6294	5.52875
60	86.15	0.0671	0.6763	5.12481	86.21	0.0662	0.6759	5.10574	86.26	0.0652	0.6755	5.08681
65	92.47	-0.0430	0.7302	4.69184	92.52	-0.0440	0.7298	4.67339	92.58	-0.0450	0.7295	4.65506
70	98.57	-0.1490	0.7931	4.27539	98.63	-0.1501	0.7929	4.25760	98.69	-0.1511	0.7927	4.23993
75	104.44	-0.2434	0.8664	3.88073	104.51	-0.2505	0.8664	3.86363	104.57	-0.2515	0.8663	3.84665
80	110.08	-0.3433	0.9514	3.51183	110.14	-0.3444	0.9515	3.49586	110.21	-0.3454	0.9517	3.47922
85	115.46	-0.4239	1.0494	3.17142	115.53	-0.4310	1.0498	3.15581	115.59	-0.4320	1.0502	3.14031
90	120.59	-0.5089	1.1617	2.86100	120.66	-0.5099	1.1625	2.84615	120.72	-0.5109	1.1633	2.83142
95	125.46	-0.5802	1.2894	2.58096	125.53	-0.5811	1.2907	2.56688	125.59	-0.5820	1.2919	2.55290
100	130.08	-0.6438	1.4335	2.33079	130.14	-0.6447	1.4352	2.31746	130.21	-0.6455	1.4370	2.30423
105	134.44	-0.7072	1.5941	2.10923	134.51	-0.7070	1.5965	2.09663	134.57	-0.7078	1.5989	2.08413
110	138.57	-0.7498	1.7711	1.91452	138.63	-0.7505	1.7743	1.90262	138.69	-0.7511	1.7776	1.89081
115	142.47	-0.7930	1.9637	1.74459	142.52	-0.7936	1.9678	1.73334	142.58	-0.7942	1.9719	1.72719
120	146.15	-0.8395	2.1699	1.59720	146.21	-0.8310	2.1750	1.58656	146.26	-0.8316	2.1802	1.57602
125	149.64	-0.8628	2.3872	1.47010	149.69	-0.8633	2.3935	1.46003	149.74	-0.8637	2.3998	1.45004
130	152.95	-0.8906	2.6121	1.36115	152.99	-0.8909	2.6196	1.35158	153.04	-0.8913	2.6271	1.34209
135	156.09	-0.9142	2.8402	1.26832	156.13	-0.9145	2.8490	1.25920	156.18	-0.9148	2.8578	1.25017
140	159.09	-0.9342	3.0665	1.18982	159.13	-0.9344	3.0765	1.18110	159.17	-0.9346	3.0866	1.17246
145	161.97	-0.9509	3.2953	1.12405	162.01	-0.9511	3.2966	1.11568	162.04	-0.9513	3.3080	1.10739
150	164.74	-0.9647	3.4908	1.06965	164.77	-0.9649	3.5033	1.06157	164.80	-0.9650	3.5159	1.05357
155	167.42	-0.9760	3.6770	1.02546	167.44	-0.9761	3.6907	1.01763	167.47	-0.9762	3.7048	1.00987
160	170.02	-0.9849	3.8384	0.99053	170.04	-0.9849	3.8531	0.98290	170.06	-0.9850	3.8678	0.97534
165	172.57	-0.9910	3.9698	0.96412	172.58	-0.9916	3.9853	0.95664	172.60	-0.9917	4.0009	0.94924
170	175.07	-0.9963	4.0669	0.94565	175.08	-0.9963	4.0830	0.93828	175.09	-0.9963	4.0992	0.93098
175	177.54	-0.9991	4.1265	0.93473	177.55	-0.9991	4.1430	0.92742	177.55	-0.9991	4.1596	0.92019
180	180.00	-1.0000	4.1466	0.93112	180.00	-1.0000	4.1633	0.92383	180.00	-1.0000	4.1800	0.91662

$$x^2 = 0.262$$

$$x^2 = 0.263$$

$$x^2 = 0.264$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4375	8.72412	0.00	1.0000	0.4369	8.70217	0.00	1.0000	0.4364	8.68037
5	7.56	0.9913	0.4388	8.69018	7.56	0.9913	0.4382	8.66825	7.57	0.9913	0.4376	8.64648
10	15.10	0.9655	0.4426	8.58922	15.11	0.9654	0.4420	8.56735	15.12	0.9654	0.4415	8.54564
15	22.61	0.9231	0.4491	8.42374	22.63	0.9230	0.4485	8.40198	22.64	0.9229	0.4480	8.38037
20	30.08	0.8653	0.4584	8.19782	30.10	0.8651	0.4578	8.17621	30.12	0.8650	0.4573	8.15475
25	37.49	0.7934	0.4707	7.91697	37.52	0.7932	0.4701	7.89555	37.54	0.7929	0.4696	7.87429
30	44.83	0.7092	0.4863	7.58794	44.86	0.7089	0.4857	7.56676	44.89	0.7085	0.4851	7.54571
35	52.07	0.6147	0.5055	7.21845	52.11	0.6142	0.5049	7.19757	52.14	0.6137	0.5044	7.17693
40	59.21	0.5119	0.5287	6.81698	59.25	0.5113	0.5282	6.79643	59.29	0.5108	0.5276	6.77603
45	66.22	0.4032	0.5566	6.39237	66.26	0.4026	0.5561	6.37221	66.30	0.4019	0.5556	6.35220
50	73.09	0.2909	0.5898	5.95359	73.13	0.2902	0.5893	5.93389	73.18	0.2894	0.5888	5.91431
55	79.79	0.1773	0.6289	5.50940	79.84	0.1764	0.6285	5.49019	79.89	0.1755	0.6280	5.47112
60	86.31	0.0643	0.6751	5.06802	86.37	0.0634	0.6747	5.04936	86.42	0.0624	0.6743	5.03083
65	92.64	-0.0460	0.7292	4.63687	92.70	-0.0470	0.7289	4.61881	92.75	-0.0480	0.7286	4.60088
70	98.75	-0.1521	0.7925	4.22239	98.81	-0.1532	0.7923	4.20497	98.87	-0.1542	0.7921	4.18769
75	104.63	-0.2526	0.8663	3.82980	104.69	-0.2536	0.8662	3.81308	104.76	-0.2547	0.8662	3.79647
80	110.27	-0.3465	0.9519	3.46309	110.33	-0.3475	0.9520	3.44708	110.40	-0.3485	0.9522	3.43119
85	115.66	-0.4330	1.0507	3.12493	115.72	-0.4340	1.0511	3.10966	115.79	-0.4350	1.0516	3.09451
90	120.79	-0.5119	1.1641	2.81679	120.85	-0.5128	1.1648	2.80228	120.92	-0.5138	1.1656	2.78788
95	125.66	-0.5829	1.2931	2.53904	125.72	-0.5839	1.2944	2.52528	125.79	-0.5848	1.2956	2.51163
100	130.27	-0.6464	1.4388	2.29111	130.33	-0.6472	1.4406	2.27809	130.40	-0.6481	1.4423	2.26518
105	134.63	-0.7025	1.6014	2.07173	134.69	-0.7033	1.6038	2.05943	134.76	-0.7041	1.6063	2.04723
110	138.75	-0.7518	1.7808	1.87911	138.81	-0.7525	1.7840	1.86749	138.87	-0.7532	1.7873	1.85598
115	142.64	-0.7948	1.9760	1.71113	142.70	-0.7954	1.9802	1.70017	142.75	-0.7960	1.9843	1.68930
120	146.31	-0.8321	2.1853	1.56557	146.37	-0.8326	2.1905	1.55520	146.42	-0.8331	2.1957	1.54493
125	149.79	-0.8642	2.4061	1.44014	149.84	-0.8646	2.4124	1.43033	149.89	-0.8651	2.4187	1.42060
130	153.09	-0.8917	2.6346	1.33269	153.13	-0.8921	2.6427	1.32338	153.18	-0.8924	2.6497	1.31414
135	156.22	-0.9151	2.8666	1.24122	156.26	-0.9154	2.8754	1.23235	156.30	-0.9157	2.8842	1.22355
140	159.21	-0.9349	3.0967	1.16391	159.25	-0.9351	3.1069	1.15543	159.29	-0.9354	3.1170	1.14702
145	162.07	-0.9514	3.3194	1.09917	162.11	-0.9516	3.3309	1.09103	162.14	-0.9518	3.3423	1.08297
150	164.83	-0.9651	3.5286	1.04565	164.86	-0.9653	3.5413	1.03780	164.89	-0.9654	3.5540	1.03002
155	167.49	-0.9763	3.7183	1.00219	167.52	-0.9764	3.7321	0.99458	167.54	-0.9765	3.7460	0.98704
160	170.08	-0.9851	3.8826	0.96786	170.10	-0.9851	3.8975	0.96044	170.12	-0.9852	3.9124	0.95310
165	172.61	-0.9917	4.0165	0.94190	172.63	-0.9917	4.0322	0.93463	172.64	-0.9918	4.0480	0.92744
170	175.10	-0.9963	4.1155	0.92375	175.11	-0.9964	4.1318	0.91659	175.12	-0.9964	4.1482	0.90950
175	177.56	-0.9991	4.1762	0.91302	177.56	-0.9991	4.1929	0.90592	177.57	-0.9991	4.2097	0.89889
180	180.00	-1.0000	4.1967	0.90947	180.00	-1.0000	4.2136	0.90239	180.00	-1.0000	4.2305	0.89538

x = 0.265					x = 0.266					x = 0.267				
PSI	θ	cos θ	q	S	θ	cos θ	q	S	θ	cos θ	q	S		
0	0.00	1.0000	0.4358	8.65873	0.00	1.0000	0.4353	8.63723	0.00	1.0000	0.4347	8.61588		
5	7.57	0.9913	0.4371	8.62485	7.58	0.9913	0.4365	8.60338	7.58	0.9913	0.4360	8.58205		
10	15.13	0.9653	0.4409	8.52408	15.14	0.9653	0.4404	8.50267	15.15	0.9653	0.4398	8.48140		
15	22.66	0.9228	0.4474	8.35891	22.67	0.9227	0.4469	8.33760	22.69	0.9226	0.4463	8.31644		
20	30.14	0.8648	0.4567	8.13344	30.16	0.8646	0.4562	8.11227	30.18	0.8645	0.4556	8.09125		
25	37.57	0.7927	0.4690	7.85317	37.59	0.7924	0.4685	7.83219	37.61	0.7921	0.4679	7.81136		
30	44.92	0.7082	0.4846	7.52485	44.94	0.7078	0.4840	7.50412	44.97	0.7074	0.4835	7.48352		
35	52.17	0.6133	0.5038	7.15623	52.21	0.6128	0.5033	7.13578	52.24	0.6124	0.5027	7.11587		
40	59.32	0.5102	0.5271	6.75577	59.36	0.5096	0.5266	6.73565	59.40	0.5091	0.5260	6.71566		
45	66.35	0.4012	0.5550	6.33233	66.39	0.4005	0.5545	6.31259	66.43	0.3999	0.5540	6.29299		
50	73.23	0.2886	0.5883	5.89488	73.27	0.2878	0.5878	5.87558	73.32	0.2871	0.5873	5.85641		
55	79.94	0.1747	0.6276	5.45217	79.99	0.1738	0.6271	5.43336	80.04	0.1729	0.6267	5.41468		
60	86.48	0.0615	0.6739	5.01243	86.53	0.0605	0.6735	4.99416	86.58	0.0596	0.6731	4.97601		
65	92.81	-0.0490	0.7283	4.58308	92.87	-0.0500	0.7280	4.56540	92.92	-0.0510	0.7276	4.54784		
70	98.93	-0.1552	0.7919	4.17052	98.99	-0.1563	0.7917	4.15348	99.05	-0.1573	0.7915	4.13655		
75	104.82	-0.2557	0.8661	3.77998	104.88	-0.2568	0.8661	3.76362	104.94	-0.2578	0.8661	3.74737		
80	110.46	-0.3496	0.9524	3.41542	110.53	-0.3506	0.9525	3.39976	110.59	-0.3517	0.9527	3.38421		
85	115.85	-0.4360	1.0520	3.07947	115.92	-0.4371	1.0524	3.06454	115.98	-0.4381	1.0529	3.04972		
90	120.98	-0.5148	1.1664	2.77358	121.05	-0.5158	1.1672	2.75940	121.11	-0.5167	1.1680	2.74532		
95	125.85	-0.5857	1.2968	2.49808	125.92	-0.5866	1.2981	2.48463	125.98	-0.5875	1.2993	2.47129		
100	130.46	-0.6489	1.4441	2.25236	130.53	-0.6498	1.4459	2.23965	130.59	-0.6506	1.4477	2.22704		
105	134.82	-0.7049	1.6087	2.03513	134.88	-0.7056	1.6112	2.02313	134.94	-0.7064	1.6137	2.01122		
110	138.93	-0.7539	1.7905	1.84456	138.99	-0.7546	1.7938	1.83323	139.05	-0.7553	1.7970	1.82199		
115	142.81	-0.7966	1.9885	1.67852	142.87	-0.7972	1.9927	1.66782	142.92	-0.7978	1.9969	1.65722		
120	146.48	-0.8336	2.2009	1.53474	146.53	-0.8342	2.2061	1.52464	146.58	-0.8347	2.2114	1.51462		
125	149.94	-0.8655	2.4251	1.41095	149.99	-0.8659	2.4314	1.40139	150.04	-0.8664	2.4378	1.39191		
130	153.23	-0.8928	2.6573	1.30499	153.27	-0.8931	2.6649	1.29592	153.32	-0.8935	2.6726	1.28693		
135	156.35	-0.9160	2.8931	1.21484	156.39	-0.9163	2.9021	1.20620	156.43	-0.9166	2.9110	1.19764		
140	159.32	-0.9356	3.1273	1.13870	159.36	-0.9358	3.1375	1.13044	159.40	-0.9361	3.1478	1.12227		
145	162.17	-0.9520	3.3539	1.07497	162.21	-0.9522	3.3655	1.06706	162.24	-0.9523	3.3771	1.05921		
150	164.92	-0.9655	3.5668	1.02231	164.94	-0.9657	3.5797	1.01468	164.97	-0.9658	3.5926	1.00712		
155	167.57	-0.9765	3.7600	0.97958	167.59	-0.9766	3.7740	0.97218	167.61	-0.9767	3.7881	0.96485		
160	170.14	-0.9852	3.9274	0.94582	170.16	-0.9853	3.9425	0.93861	170.18	-0.9853	3.9576	0.93147		
165	172.66	-0.9918	4.0638	0.92031	172.67	-0.9918	4.0797	0.91325	172.69	-0.9919	4.0956	0.90625		
170	175.13	-0.9964	4.1646	0.90248	175.14	-0.9964	4.1812	0.89552	175.15	-0.9964	4.1977	0.88862		
175	177.57	-0.9991	4.2265	0.89193	177.58	-0.9991	4.2435	0.88503	177.58	-0.9991	4.2604	0.87820		
180	180.00	-1.0000	4.2474	0.88844	180.00	-1.0000	4.2645	0.88156	180.00	-1.0000	4.2816	0.87475		

x = 0.268					x = 0.269					x = 0.270				
PSI	θ	cos θ	q	S	θ	cos θ	q	S	θ	cos θ	q	S		
0	0.00	1.0000	0.4341	8.59468	0.00	1.0000	0.4336	8.57362	0.00	1.0000	0.4330	8.55271		
5	7.59	0.9912	0.4354	8.56087	7.59	0.9912	0.4349	8.53983	7.60	0.9912	0.4343	8.51893		
10	15.16	0.9652	0.4393	8.46028	15.17	0.9652	0.4387	8.43930	15.18	0.9651	0.4382	8.41846		
15	22.70	0.9225	0.4458	8.29542	22.71	0.9224	0.4452	8.27454	22.73	0.9223	0.4447	8.25380		
20	30.20	0.8643	0.4550	8.07038	30.22	0.8641	0.4545	8.04964	30.24	0.8640	0.4539	8.02905		
25	37.64	0.7919	0.4673	7.79068	37.66	0.7916	0.4668	7.77013	37.69	0.7914	0.4662	7.74972		
30	45.00	0.7071	0.4829	7.46306	45.03	0.7067	0.4824	7.44275	45.06	0.7064	0.4818	7.42257		
35	52.27	0.6119	0.5022	7.09529	52.31	0.6114	0.5016	7.07525	52.34	0.6110	0.5011	7.05535		
40	59.44	0.5085	0.5255	6.69582	59.47	0.5079	0.5250	6.67611	59.51	0.5074	0.5244	6.65653		
45	66.47	0.3992	0.5535	6.27352	66.51	0.3985	0.5530	6.25419	66.56	0.3978	0.5525	6.23499		
50	73.36	0.2863	0.5868	5.83738	73.41	0.2855	0.5863	5.81847	73.46	0.2847	0.5858	5.79970		
55	80.09	0.1721	0.6262	5.39613	80.14	0.1712	0.6258	5.37770	80.19	0.1704	0.6253	5.35941		
60	86.64	0.0587	0.6727	4.95800	86.69	0.0577	0.6723	4.94011	86.74	0.0568	0.6719	4.92234		
65	92.98	-0.0520	0.7273	4.53041	93.04	-0.0530	0.7270	4.51309	93.09	-0.0540	0.7267	4.49590		
70	99.11	-0.1583	0.7913	4.11975	99.17	-0.1593	0.7911	4.10306	99.23	-0.1604	0.7909	4.08649		
75	105.00	-0.2589	0.8660	3.73123	105.06	-0.2599	0.8660	3.71521	105.13	-0.2609	0.8659	3.69930		
80	110.65	-0.3527	0.9529	3.36878	110.72	-0.3537	0.9530	3.35345	110.78	-0.3548	0.9532	3.33824		
85	116.05	-0.4391	1.0533	3.03501	116.11	-0.4401	1.0538	3.02041	116.17	-0.4411	1.0542	3.00592		
90	121.18	-0.5177	1.1688	2.73134	121.24	-0.5187	1.1696	2.71747	121.31	-0.5196	1.1704	2.70370		
95	126.05	-0.5884	1.3006	2.45805	126.11	-0.5893	1.3018	2.44491	126.17	-0.5902	1.3031	2.43187		
100	130.65	-0.6515	1.4495	2.21452	130.72	-0.6523	1.4513	2.20210	130.78	-0.6531	1.4531	2.18978		
105	135.00	-0.7071	1.6162	1.99940	135.06	-0.7079	1.6186	1.98768	135.13	-0.7087	1.6211	1.97605		
110	139.11	-0.7560	1.8003	1.81084	139.17	-0.7566	1.8036	1.79979	139.23	-0.7573	1.8069	1.78882		
115	142.98	-0.7984	2.0011	1.64670	143.04	-0.7990	2.0053	1.63627	143.09	-0.7996	2.0095	1.62593		
120	146.64	-0.8352	2.2166	1.50469	146.69	-0.8357	2.2219	1.49484	146.74	-0.8362	2.2272	1.48507		
125	150.09	-0.8668	2.4443	1.38251	150.14	-0.8673	2.4507	1.37320	150.19	-0.8677	2.4571	1.36396		
130	153.36	-0.8939	2.6802	1.27801	153.41	-0.8942	2.6879	1.26917	153.46	-0.8946	2.6957	1.26041		
135	156.47	-0.9169	2.9200	1.18816	156.51	-0.9172	2.9290	1.18075	156.56	-0.9175	2.9381	1.17242		
140	159.44	-0.9363	3.1582	1.11416	159.47	-0.9365	3.1685	1.10613	159.51	-0.9367	3.1789	1.09817		
145	162.27	-0.9525	3.3888	1.05143	162.31	-0.9527	3.4005	1.04373	162.34	-0.9529	3.4122	1.03609		
150	165.00	-0.9659	3.6055	0.99962	165.03	-0.9661	3.6185	0.99219	165.06	-0.9662	3.6316	0.98484		
155	167.64	-0.9768	3.8022	0.95758	167.66	-0.9769	3.8164	0.95039	167.69	-0.9770	3.8306	0.94326		
160	170.20	-0.9854	3.9727	0.92440	170.22	-0.9855	3.9880	0.91739	170.24	-0.9855	4.0033	0.91		

$x = 0.27$					$x = 0.272$					$x = 0.273$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.4325	8.53193	0.00	1.0000	0.4320	8.51130	0.00	1.0000	0.4314	8.49080	0.00	1.0000
5	7.60	0.9912	0.4338	8.49818	7.61	0.9912	0.4332	8.47756	7.61	0.9912	0.4327	8.45708	7.61	0.9912
10	15.19	0.9651	0.4376	8.39777	15.20	0.9650	0.4371	8.37721	15.21	0.9650	0.4365	8.35679	15.21	0.9650
15	22.74	0.9222	0.4441	8.23321	22.76	0.9221	0.4436	8.21275	22.77	0.9221	0.4430	8.19243	22.77	0.9221
20	30.26	0.8638	0.4534	8.00860	30.28	0.8636	0.4529	7.98828	30.29	0.8634	0.4523	7.96810	30.29	0.8634
25	37.71	0.7911	0.4657	7.72945	37.73	0.7909	0.4652	7.70932	37.76	0.7906	0.4646	7.68932	37.76	0.7906
30	45.09	0.7060	0.4813	7.40253	45.12	0.7057	0.4808	7.38262	45.14	0.7053	0.4802	7.36285	45.14	0.7053
35	52.37	0.6105	0.5006	7.03558	52.41	0.6101	0.5000	7.01595	52.44	0.6096	0.4995	6.99645	52.44	0.6096
40	59.55	0.5068	0.5239	6.63709	59.59	0.5062	0.5234	6.61777	59.62	0.5057	0.5229	6.59859	59.62	0.5057
45	66.60	0.3972	0.5520	6.21592	66.64	0.3965	0.5515	6.19697	66.68	0.3958	0.5509	6.17816	66.68	0.3958
50	73.50	0.2840	0.5853	5.78105	73.55	0.2832	0.5849	5.76253	73.59	0.2824	0.5844	5.74413	73.59	0.2824
55	80.24	0.1635	0.6249	5.34123	80.29	0.1628	0.6245	5.32318	80.34	0.1620	0.6240	5.30526	80.34	0.1620
60	86.80	0.0359	0.6716	4.90469	86.85	0.0354	0.6712	4.88716	86.90	0.0348	0.6708	4.86975	86.90	0.0348
65	93.15	-0.0950	0.7264	4.47883	93.21	-0.0940	0.7261	4.46187	93.26	-0.0934	0.7258	4.44504	93.26	-0.0934
70	99.29	-0.1614	0.7907	4.07004	99.35	-0.1624	0.7906	4.05370	99.41	-0.1634	0.7904	4.03748	99.41	-0.1634
75	105.19	-0.2620	0.8659	3.68351	105.25	-0.2630	0.8659	3.66783	105.31	-0.2641	0.8658	3.65225	105.31	-0.2641
80	110.84	-0.3558	0.9534	3.32314	110.90	-0.3568	0.9536	3.30814	110.97	-0.3578	0.9537	3.29325	110.97	-0.3578
85	116.24	-0.4421	1.0547	2.99152	116.30	-0.4431	1.0551	2.97724	116.37	-0.4441	1.0556	2.96305	116.37	-0.4441
90	121.37	-0.5206	1.1712	2.69003	121.44	-0.5215	1.1720	2.67647	121.50	-0.5225	1.1728	2.66300	121.50	-0.5225
95	126.24	-0.5911	1.3043	2.41893	126.30	-0.5920	1.3056	2.40608	126.37	-0.5929	1.3068	2.39333	126.37	-0.5929
100	130.84	-0.6540	1.4549	2.17755	130.90	-0.6548	1.4568	2.16541	130.97	-0.6556	1.4586	2.15337	130.97	-0.6556
105	135.19	-0.7094	1.6236	1.96451	135.25	-0.7102	1.6261	1.95306	135.31	-0.7109	1.6286	1.94170	135.31	-0.7109
110	139.29	-0.7580	1.8102	1.77794	139.35	-0.7587	1.8135	1.76715	139.41	-0.7593	1.8168	1.75644	139.41	-0.7593
115	143.15	-0.8002	2.0137	1.61566	143.21	-0.8008	2.0180	1.60549	143.26	-0.8014	2.0222	1.59539	143.26	-0.8014
120	146.80	-0.8367	2.2325	1.47538	146.85	-0.8372	2.2378	1.46578	146.90	-0.8378	2.2431	1.45625	146.90	-0.8378
125	150.24	-0.8681	2.4636	1.35480	150.29	-0.8686	2.4701	1.34571	150.34	-0.8690	2.4766	1.33671	150.34	-0.8690
130	153.60	-0.8950	2.7034	1.25171	153.65	-0.8955	2.7112	1.24312	153.69	-0.8957	2.7190	1.23458	153.69	-0.8957
135	156.60	-0.9177	2.9471	1.16416	156.64	-0.9180	2.9553	1.15597	156.68	-0.9183	2.9654	1.14785	156.68	-0.9183
140	159.55	-0.9370	3.1894	1.09028	159.59	-0.9372	3.1999	1.08246	159.62	-0.9374	3.2104	1.07471	159.62	-0.9374
145	162.37	-0.9530	3.4240	1.02853	162.41	-0.9532	3.4359	1.02103	162.44	-0.9534	3.4478	1.01360	162.44	-0.9534
150	165.09	-0.9663	3.6447	0.97754	165.12	-0.9664	3.6578	0.97032	165.14	-0.9666	3.6710	0.96316	165.14	-0.9666
155	167.71	-0.9771	3.8449	0.93620	167.73	-0.9772	3.8593	0.92920	167.76	-0.9773	3.8737	0.92226	167.76	-0.9773
160	170.26	-0.9856	4.0186	0.90357	170.28	-0.9856	4.0340	0.89675	170.29	-0.9857	4.0495	0.89000	170.29	-0.9857
165	172.74	-0.9920	4.1601	0.87892	172.76	-0.9920	4.1764	0.87224	172.77	-0.9921	4.1927	0.86563	172.77	-0.9921
170	175.19	-0.9965	4.2648	0.86169	175.20	-0.9965	4.2817	0.85512	175.21	-0.9965	4.2987	0.84860	175.21	-0.9965
175	177.60	-0.9991	4.3290	0.85151	177.61	-0.9991	4.3464	0.84499	177.61	-0.9991	4.3638	0.83854	177.61	-0.9991
180	180.00	-1.0000	4.3507	0.84814	180.00	-1.0000	4.3682	0.84165	180.00	-1.0000	4.3857	0.83521	180.00	-1.0000

x = 0.274					x = 0.275					x = 0.276				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4309	8.47044	0.00	1.0000	0.4303	8.45021	0.00	1.0000	0.4298	8.43012		
5	7.61	0.9912	0.4321	8.43674	7.62	0.9912	0.4316	8.41654	7.62	0.9912	0.4311	8.39647		
10	15.22	0.9649	0.4360	8.33651	15.22	0.9649	0.4354	8.31636	15.23	0.9649	0.4349	8.29635		
15	22.79	0.9220	0.4425	8.17225	22.80	0.9219	0.4419	8.15220	22.81	0.9218	0.4414	8.13228		
20	30.31	0.8633	0.4518	7.94805	30.33	0.8631	0.4512	7.92814	30.35	0.8629	0.4507	7.90836		
25	37.78	0.7904	0.4641	7.66945	37.80	0.7901	0.4635	7.64972	37.83	0.7899	0.4630	7.63011		
30	45.17	0.7050	0.4797	7.34321	45.20	0.7046	0.4791	7.32370	45.23	0.7043	0.4786	7.30431		
35	52.47	0.6091	0.4990	6.97708	52.50	0.6087	0.4984	6.95783	52.54	0.6082	0.4979	6.93872		
40	59.66	0.5051	0.5224	6.57953	59.70	0.5045	0.5218	6.56061	59.74	0.5040	0.5213	6.54180		
45	66.72	0.3952	0.5504	6.15947	66.77	0.3945	0.5499	6.14090	66.81	0.3938	0.5494	6.12246		
50	73.64	0.2817	0.5839	5.72586	73.69	0.2809	0.5834	5.70770	73.73	0.2801	0.5830	5.68967		
55	80.39	0.1669	0.6236	5.28745	80.44	0.1661	0.6231	5.26976	80.49	0.1652	0.6227	5.25219		
60	86.96	0.0531	0.6704	4.85246	87.01	0.0522	0.6700	4.83529	87.06	0.0512	0.6696	4.81823		
65	93.32	-0.0579	0.7255	4.42831	93.38	-0.0589	0.7252	4.41170	93.43	-0.0599	0.7249	4.39520		
70	99.46	-0.1644	0.7902	4.02136	99.52	-0.1655	0.7900	4.00536	99.58	-0.1665	0.7898	3.98946		
75	105.37	-0.2651	0.8658	3.63679	105.43	-0.2661	0.8658	3.62143	105.49	-0.2671	0.8657	3.60618		
80	111.03	-0.3589	0.9539	3.27847	111.09	-0.3599	0.9541	3.26379	111.16	-0.3609	0.9543	3.24921		
85	116.43	-0.4451	1.0560	2.94897	116.49	-0.4461	1.0565	2.93499	116.56	-0.4471	1.0569	2.92111		
90	121.56	-0.5235	1.1736	2.64963	121.63	-0.5244	1.1744	2.63636	121.69	-0.5254	1.1753	2.62319		
95	126.43	-0.5938	1.3081	2.38068	126.49	-0.5947	1.3094	2.36812	126.56	-0.5956	1.3106	2.35565		
100	131.03	-0.6565	1.4604	2.14141	131.09	-0.6573	1.4622	2.12955	131.16	-0.6581	1.4641	2.11778		
105	135.37	-0.7117	1.6311	1.93043	135.43	-0.7124	1.6336	1.91924	135.49	-0.7132	1.6362	1.90814		
110	139.46	-0.7600	1.8201	1.74582	139.52	-0.7607	1.8235	1.73528	139.58	-0.7613	1.8268	1.72482		
115	143.32	-0.8020	2.0265	1.58538	143.38	-0.8026	2.0308	1.57545	143.43	-0.8032	2.0351	1.56559		
120	146.96	-0.8383	2.2485	1.44680	147.01	-0.8388	2.2538	1.43743	147.06	-0.8393	2.2592	1.42814		
125	150.39	-0.8694	2.4832	1.32778	150.44	-0.8698	2.4897	1.31892	150.49	-0.8703	2.4963	1.31014		
130	153.64	-0.8960	2.7268	1.22611	153.69	-0.8964	2.7347	1.21772	153.73	-0.8967	2.7425	1.20940		
135	156.72	-0.9186	2.9744	1.13980	156.77	-0.9189	2.9838	1.13102	156.81	-0.9192	2.9930	1.12391		
140	159.66	-0.9377	3.2109	1.06703	159.70	-0.9379	3.2315	1.05942	159.74	-0.9381	3.2427	1.05187		
145	162.47	-0.9536	3.4597	1.00623	162.50	-0.9537	3.4717	0.99893	162.54	-0.9539	3.4837	0.99170		
150	165.17	-0.9667	3.6843	0.95606	165.20	-0.9668	3.6976	0.94903	165.23	-0.9670	3.7110	0.94206		
155	167.78	-0.9773	3.8882	0.91539	167.80	-0.9774	3.9027	0.90858	167.83	-0.9775	3.9173	0.90184		
160	170.31	-0.9857	4.0650	0.88331	170.33	-0.9858	4.0806	0.87668	170.35	-0.9859	4.0963	0.87011		
165	172.79	-0.9921	4.2092	0.85907	172.80	-0.9921	4.2257	0.86528	172.81	-0.9921	4.2422	0.86415		
170	175.22	-0.9965	4.3158	0.84215	175.22	-0.9965	4.3329	0.83575	175.23	-0.9965	4.3501	0.82942		
175	177.61	-0.9991	4.3813	0.83214	177.62	-0.9991	4.3988	0.82580	177.62	-0.9991	4.4164	0.81953		
180	180.00	-1.0000	4.4034	0.82883	180.00	-1.0000	4.4210	0.82251	180.00	-1.0000	4.4388	0.81635		

x = 0.277					x = 0.278					x = 0.279				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4293	8.41017	0.00	1.0000	0.4287	8.39034	0.00	1.0000	0.4282	8.37064		
5	7.63	0.9911	0.4305	8.37653	7.63	0.9911	0.4300	8.35672	7.64	0.9911	0.4295	8.33704		
10	15.24	0.9648	0.4344	8.27646	15.25	0.9648	0.4338	8.25671	15.26	0.9647	0.4333	8.23709		
15	22.83	0.9217	0.4409	8.11249	22.84	0.9216	0.4403	8.09284	22.86	0.9215	0.4398	8.07331		
20	30.37	0.8628	0.4502	7.88871	30.39	0.8626	0.4496	7.86919	30.41	0.8624	0.4491	7.84979		
25	37.85	0.7896	0.4625	7.61064	37.88	0.7893	0.4619	7.59130	37.90	0.7891	0.4614	7.57208		
30	45.26	0.7039	0.4781	7.28506	45.29	0.7036	0.4776	7.26393	45.31	0.7032	0.4770	7.24693		
35	52.57	0.6078	0.4974	6.91973	52.60	0.6073	0.4968	6.90086	52.64	0.6069	0.4963	6.88212		
40	59.77	0.5034	0.5208	6.52313	59.81	0.5029	0.5203	6.50487	59.85	0.5023	0.5198	6.48614		
45	66.85	0.3932	0.5489	6.10414	66.89	0.3925	0.5484	6.08554	66.93	0.3918	0.5479	6.06787		
50	73.78	0.2794	0.5825	5.67176	73.82	0.2786	0.5820	5.65397	73.87	0.2779	0.5815	5.63630		
55	80.54	0.1644	0.6223	5.23474	80.59	0.1635	0.6218	5.21741	80.64	0.1627	0.6214	5.20019		
60	87.12	0.0503	0.6693	4.80129	87.17	0.0494	0.6689	4.78446	87.22	0.0485	0.6685	4.76774		
65	93.49	-0.0609	0.7246	4.37882	93.55	-0.0618	0.7243	4.36254	93.60	-0.0628	0.7240	4.34637		
70	99.64	-0.1675	0.7896	3.97368	99.70	-0.1685	0.7894	3.95800	99.76	-0.1695	0.7892	3.94243		
75	105.56	-0.2682	0.8657	3.59103	105.62	-0.2692	0.8657	3.57599	105.68	-0.2702	0.8656	3.56105		
80	111.22	-0.3619	0.9544	3.23473	111.28	-0.3630	0.9546	3.22036	111.34	-0.3640	0.9548	3.20608		
85	116.62	-0.4481	1.0574	2.90732	116.69	-0.4491	1.0578	2.89364	116.75	-0.4501	1.0583	2.88005		
90	121.76	-0.5263	1.1761	2.61011	121.82	-0.5273	1.1769	2.59712	121.88	-0.5282	1.1777	2.58423		
95	126.62	-0.5965	1.3119	2.34327	126.69	-0.5974	1.3132	2.33099	126.75	-0.5983	1.3144	2.31879		
100	131.22	-0.6589	1.4659	2.10610	131.28	-0.6598	1.4677	2.09450	131.34	-0.6606	1.4696	2.08299		
105	135.56	-0.7139	1.6387	1.89713	135.62	-0.7147	1.6412	1.88620	135.68	-0.7154	1.6438	1.87536		
110	139.64	-0.7620	1.8301	1.71445	139.70	-0.7627	1.8335	1.70415	139.76	-0.7633	1.8369	1.69394		
115	143.49	-0.8037	2.0394	1.55582	143.55	-0.8043	2.0437	1.54613	143.60	-0.8049	2.0480	1.53551		
120	147.12	-0.8398	2.2646	1.41892	147.17	-0.8403	2.2700	1.40978	147.22	-0.8408	2.2754	1.40071		
125	150.54	-0.8707	2.5029	1.30143	150.59	-0.8711	2.5095	1.29279	150.64	-0.8715	2.5162	1.28423		
130	153.78	-0.8971	2.7504	1.20115	153.82	-0.8974	2.7584	1.19297	153.87	-0.8978	2.7663	1.18486		
135	156.85	-0.9195	3.0023	1.11607	156.89	-0.9198	3.0116	1.10830	156.93	-0.9200	3.0210	1.10059		
140	159.77	-0.9383	3.2529	1.04439	159.81	-0.9386	3.2636	1.03697	159.85	-0.9388	3.2743	1.02962		
145	162.57	-0.9541	3.4958	0.98453	162.60	-0.9543	3.5079	0.97742	162.64	-0.9544	3.5201	0.97037		
150	165.26	-0.9671	3.7244	0.93516	165.29	-0.9672	3.7378	0.92831	165.31	-0.9673	3.7514	0.92153		
155	167.85	-0.9776	3.9319	0.89515	167.88	-0.9777	3.9466	0.88852	167.90	-0.9778	3.9614	0.88196		
160	170.37	-0.9859	4.1120	0.86360	170.39	-0.9860	4.1278	0.85715	170.41	-0.9860	4.1437	0.85075		
165	172.83	-0.9922	4.2588	0.83977	172.84	-0.9922	4.2755	0.83346	172.86	-0.9922	4.2923	0.82720		
170	175.24	-0.9966	4.3674	0.82314	175.25	-0.9966	4.3848	0.81692	175.26	-0.9966	4.4022	0.81075		
175	177.63	-0.9991	4.4341	0.81330	177.63	-0.9991	4.4519	0.80714	177.64	-0.9992	4.4698	0.80103		
180	180.00	-1.0000	4.4566	0.81005	180.00	-1.0000	4.4746	0.80391	180.00	-1.0000	4.4925	0.79782		

x = 0.280					x = 0.281					x = 0.282				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4277	8.35107	0.00	1.0000	0.4271	8.33163	0.00	1.0000	0.4266	8.31232		
5	7.64	0.9911	0.4289	8.31749	7.65	0.9911	0.4284	8.29807	7.65	0.9911	0.4279	8.27877		
10	15.27	0.9647	0.4328	8.21760	15.28	0.9646	0.4322	8.19823	15.29	0.9646	0.4317	8.17899		
15	22.87	0.9214	0.4393	8.05391	22.89	0.9213	0.4387	8.03464	22.90	0.9212	0.4382	8.01549		
20	30.43	0.8623	0.4486	7.83053	30.45	0.8621	0.4480	7.81139	30.46	0.8619	0.4475	7.79237		
25	37.92	0.7888	0.4609	7.55298	37.95	0.7886	0.4603	7.53401	37.97	0.7883	0.4598	7.51517		
30	45.34	0.7029	0.4765	7.22805	45.37	0.7025	0.4760	7.20930	45.40	0.7022	0.4755	7.19066		
35	52.67	0.6064	0.4958	6.86350	52.70	0.6060	0.4953	6.84501	52.73	0.6055	0.4948	6.82663		
40	59.88	0.5017	0.5193	6.46782	59.92	0.5012	0.5188	6.44963	59.96	0.5006	0.5182	6.43155		
45	66.97	0.3912	0.5474	6.04991	67.01	0.3905	0.5470	6.03206	67.06	0.3898	0.5465	6.01434		
50	73.91	0.2771	0.5811	5.61874	73.96	0.2763	0.5806	5.60130	74.00	0.2756	0.5801	5.58397		
55	80.69	0.1618	0.6210	5.18308	80.74	0.1610	0.6205	5.16608	80.79	0.1601	0.6201	5.14920		
60	87.27	0.0475	0.6681	4.75114	87.33	0.0466	0.6677	4.73464	87.38	0.0457	0.6674	4.71825		
65	93.66	-0.0638	0.7237	4.33031	93.71	-0.0648	0.7234	4.31436	93.77	-0.0657	0.7231	4.29851		
70	99.82	-0.1705	0.7891	3.92696	99.88	-0.1715	0.7889	3.91159	99.93	-0.1725	0.7887	3.89633		
75	105.74	-0.2712	0.8656	3.54621	105.80	-0.2723	0.8656	3.53147	105.86	-0.2733	0.8656	3.51684		
80	111.41	-0.3650	0.9550	3.19190	111.47	-0.3660	0.9552	3.17782	111.53	-0.3670	0.9553	3.16384		
85	116.81	-0.4511	1.0587	2.86655	116.88	-0.4521	1.0592	2.85315	116.94	-0.4530	1.0597	2.83984		
90	121.95	-0.5292	1.1785	2.57143	122.01	-0.5301	1.1793	2.55872	122.08	-0.5310	1.1802	2.54610		
95	126.81	-0.5992	1.3157	2.30669	126.88	-0.6001	1.3170	2.29467	126.94	-0.6010	1.3183	2.28273		
100	131.41	-0.6614	1.4714	2.07157	131.47	-0.6622	1.4733	2.06023	131.53	-0.6630	1.4751	2.04897		
105	135.74	-0.7162	1.6463	1.86459	135.80	-0.7169	1.6488	1.85391	135.86	-0.7176	1.6514	1.84331		
110	139.82	-0.7640	1.8402	1.68381	139.88	-0.7647	1.8436	1.67375	139.93	-0.7653	1.8470	1.66377		
115	143.66	-0.8055	2.0524	1.52696	143.71	-0.8061	2.0568	1.51750	143.77	-0.8066	2.0611	1.50811		
120	147.27	-0.8413	2.2809	1.39172	147.33	-0.8418	2.2864	1.38279	147.38	-0.8423	2.2918	1.37394		
125	150.69	-0.8720	2.5228	1.27574	150.74	-0.8724	2.5295	1.26731	150.79	-0.8728	2.5362	1.25896		
130	153.91	-0.8981	2.7743	1.17682	153.96	-0.8985	2.7823	1.16884	154.00	-0.8988	2.7904	1.16093		
135	156.97	-0.9203	3.0303	1.09295	157.01	-0.9206	3.0397	1.08537	157.06	-0.9209	3.0492	1.07786		
140	159.88	-0.9390	3.2851	1.02233	159.92	-0.9392	3.2960	1.01510	159.96	-0.9394	3.3069	1.00794		
145	162.67	-0.9546	3.5323	0.96339	162.70	-0.9548	3.5445	0.95647	162.73	-0.9549	3.5568	0.94961		
150	165.34	-0.9675	3.7649	0.91480	165.37	-0.9676	3.7785	0.90814	165.40	-0.9677	3.7922	0.90153		
155	167.92	-0.9779	3.9762	0.87545	167.95	-0.9780	3.9911	0.86900	167.97	-0.9780	4.0061	0.86260		
160	170.43	-0.9861	4.1596	0.84442	170.45	-0.9861	4.1756	0.83814	170.46	-0.9862	4.1917	0.83192		
165	172.87	-0.9923	4.3091	0.82100	172.89	-0.9923	4.3260	0.81485	172.90	-0.9923	4.3430	0.80876		
170	175.27	-0.9966	4.4197	0.80464	175.28	-0.9966	4.4373	0.79859	175.29	-0.9966	4.4550	0.79259		
175	177.64	-0.9992	4.4877	0.79498	177.65	-0.9992	4.5057	0.78898	177.65	-0.9992	4.5238	0.78304		
180	180.00	-1.0000	4.5106	0.79178	180.00	-1.0000	4.5288	0.78581	180.00	-1.0000	4.5470	0.77988		

$x = 0.283$					$x = 0.284$					$x = 0.285$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.4261	8.29313	0.00	1.0000	0.4256	8.27406	0.00	1.0000	0.4250	8.25512	0.00	1.0000
5	7.66	0.9911	0.4274	8.25960	7.66	0.9911	0.4268	8.24055	7.67	0.9911	0.4263	8.22163	7.67	0.9911
10	15.30	0.9646	0.4312	8.15987	15.31	0.9645	0.4307	8.14088	15.32	0.9645	0.4301	8.12201	15.32	0.9645
15	22.91	0.9211	0.4377	7.99646	22.93	0.9210	0.4372	7.97756	22.94	0.9209	0.4366	7.95878	22.94	0.9209
20	30.48	0.8618	0.4470	7.77347	30.50	0.8616	0.4465	7.75470	30.52	0.8614	0.4459	7.73605	30.52	0.8614
25	37.99	0.7881	0.4593	7.49644	38.02	0.7878	0.4588	7.47784	38.04	0.7876	0.4583	7.45935	38.04	0.7876
30	45.43	0.7018	0.4749	7.17215	45.45	0.7015	0.4744	7.15376	45.48	0.7011	0.4739	7.13548	45.48	0.7011
35	52.77	0.6051	0.4943	6.80837	52.80	0.6046	0.4937	6.79023	52.83	0.6042	0.4932	6.77221	52.83	0.6042
40	60.00	0.5001	0.5177	6.41359	60.03	0.4995	0.5172	6.39575	60.07	0.4990	0.5167	6.37802	60.07	0.4990
45	67.10	0.3892	0.5460	5.99672	67.14	0.3885	0.5455	5.97922	67.18	0.3879	0.5450	5.96184	67.18	0.3879
50	74.05	0.2748	0.5797	5.56675	74.09	0.2741	0.5792	5.54964	74.14	0.2733	0.5787	5.53265	74.14	0.2733
55	80.83	0.1593	0.6197	5.13243	80.88	0.1584	0.6192	5.11576	80.93	0.1576	0.6188	5.09920	80.93	0.1576
60	87.43	0.0448	0.6670	4.70197	87.49	0.0439	0.6666	4.68579	87.54	0.0430	0.6663	4.66972	87.54	0.0430
65	93.82	-0.0667	0.7228	4.28277	93.88	-0.0677	0.7225	4.26713	93.94	-0.0686	0.7223	4.25160	93.94	-0.0686
70	99.99	-0.1735	0.7885	3.88117	100.05	-0.1745	0.7883	3.86611	100.11	-0.1755	0.7882	3.85116	100.11	-0.1755
75	105.92	-0.2743	0.8655	3.50230	105.98	-0.2753	0.8655	3.48786	106.04	-0.2763	0.8655	3.47351	106.04	-0.2763
80	111.59	-0.3680	0.9555	3.14995	111.66	-0.3690	0.9557	3.13616	111.72	-0.3700	0.9559	3.12245	111.72	-0.3700
85	117.00	-0.4540	1.0601	2.82663	117.07	-0.4550	1.0606	2.81351	117.13	-0.4560	1.0610	2.80047	117.13	-0.4560
90	122.14	-0.5320	1.1810	2.53357	122.20	-0.5329	1.1818	2.52112	122.27	-0.5339	1.1826	2.50877	122.27	-0.5339
95	127.00	-0.6018	1.3196	2.27089	127.07	-0.6027	1.3208	2.25913	127.13	-0.6036	1.3221	2.24745	127.13	-0.6036
100	131.59	-0.6638	1.4770	2.03780	131.66	-0.6647	1.4789	2.02671	131.72	-0.6655	1.4807	2.01570	131.72	-0.6655
105	135.92	-0.7184	1.6540	1.83279	135.98	-0.7191	1.6565	1.82234	136.04	-0.7198	1.6591	1.81198	136.04	-0.7198
110	139.99	-0.7660	1.8504	1.65387	140.05	-0.7666	1.8538	1.64405	140.11	-0.7673	1.8573	1.63430	140.11	-0.7673
115	143.82	-0.8072	2.0655	1.49879	143.88	-0.8078	2.0699	1.48954	143.94	-0.8084	2.0743	1.48037	143.94	-0.8084
120	147.43	-0.8428	2.2973	1.36516	147.49	-0.8433	2.3028	1.35646	147.54	-0.8437	2.3084	1.34782	147.54	-0.8437
125	150.83	-0.8732	2.5430	1.25067	150.88	-0.8736	2.5497	1.24245	150.93	-0.8740	2.5565	1.23430	150.93	-0.8740
130	154.05	-0.8992	2.7984	1.15309	154.09	-0.8995	2.8065	1.14531	154.14	-0.8999	2.8147	1.13760	154.14	-0.8999
135	157.10	-0.9212	3.05091	1.07041	157.14	-0.9214	3.0682	1.06303	157.18	-0.9217	3.0777	1.05570	157.18	-0.9217
140	160.00	-0.9397	3.3178	1.00084	160.03	-0.9399	3.3287	1.00930	160.07	-0.9401	3.3397	1.00862	160.07	-0.9401
145	162.77	-0.9551	3.5692	0.94280	162.80	-0.9553	3.5816	0.93606	162.83	-0.9554	3.5940	0.92938	162.83	-0.9554
150	165.43	-0.9678	3.8060	0.89498	165.45	-0.9679	3.8197	0.88849	165.48	-0.9681	3.8336	0.88206	165.48	-0.9681
155	167.99	-0.9781	4.0211	0.85627	168.02	-0.9782	4.0361	0.84999	168.04	-0.9783	4.0513	0.84376	168.04	-0.9783
160	170.48	-0.9862	4.2078	0.82575	170.50	-0.9863	4.2240	0.81964	170.52	-0.9863	4.2402	0.81359	170.52	-0.9863
165	172.91	-0.9924	4.3600	0.80273	172.93	-0.9924	4.3771	0.79674	172.94	-0.9924	4.3943	0.79082	172.94	-0.9924
170	175.30	-0.9966	4.4727	0.78665	175.31	-0.9967	4.4905	0.78076	175.32	-0.9967	4.5084	0.77492	175.32	-0.9967
175	177.66	-0.9992	4.5419	0.77715	177.66	-0.9992	4.5602	0.77132	177.67	-0.9992	4.5785	0.76553	177.67	-0.9992
180	180.00	-1.0000	4.5653	0.77401	180.00	-1.0000	4.5836	0.76819	180.00	-1.0000	4.6021	0.76243	180.00	-1.0000

2 x = 0.286					2 x = 0.287					2 x = 0.288				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4245	8.23629	0.00	1.0000	0.4240	8.21759	0.00	1.0000	0.4235	8.19900		
5	7.67	0.9910	0.4258	8.20282	7.68	0.9910	0.4253	8.18413	7.68	0.9910	0.4248	8.16557		
10	15.33	0.9644	0.4296	8.10325	15.34	0.9644	0.4291	8.08462	15.35	0.9643	0.4286	8.06611		
15	22.96	0.9208	0.4361	7.94012	22.97	0.9207	0.4356	7.92157	22.98	0.9206	0.4351	7.90315		
20	30.54	0.8613	0.4454	7.71751	30.56	0.8611	0.4449	7.69910	30.58	0.8610	0.4444	7.68080		
25	38.06	0.7873	0.4577	7.44099	38.09	0.7871	0.4572	7.42274	38.11	0.7868	0.4567	7.40460		
30	45.51	0.7008	0.4734	7.11732	45.54	0.7004	0.4729	7.09928	45.56	0.7001	0.4724	7.08135		
35	52.86	0.6037	0.4927	6.75830	52.90	0.6033	0.4922	6.73650	52.93	0.6028	0.4917	6.71882		
40	60.11	0.4984	0.5162	6.35041	60.14	0.4978	0.5157	6.34290	60.18	0.4973	0.5152	6.32551		
45	67.22	0.3872	0.5445	5.94456	67.26	0.3865	0.5440	5.92740	67.30	0.3859	0.5435	5.91034		
50	74.18	0.2725	0.5783	5.51576	74.23	0.2718	0.5778	5.49898	74.27	0.2710	0.5774	5.48231		
55	80.98	0.1568	0.6184	5.08275	81.03	0.1559	0.6180	5.06641	81.08	0.1551	0.6175	5.05017		
60	87.59	0.0420	0.6659	4.65376	87.64	0.0411	0.6655	4.63790	87.69	0.0402	0.6652	4.62214		
65	93.99	-0.0696	0.7220	4.23616	94.05	-0.0706	0.7217	4.22083	94.10	-0.0715	0.7214	4.20559		
70	100.17	-0.1765	0.7880	3.83629	100.23	-0.1775	0.7878	3.82153	100.28	-0.1785	0.7876	3.80686		
75	106.10	-0.2774	0.8655	3.45926	106.16	-0.2784	0.8654	3.44511	106.22	-0.2794	0.8654	3.43105		
80	111.78	-0.3711	0.9561	3.10885	111.84	-0.3721	0.9563	3.09534	111.90	-0.3731	0.9564	3.08191		
85	117.19	-0.4570	1.0615	2.78753	117.25	-0.4579	1.0620	2.77468	117.32	-0.4589	1.0624	2.76191		
90	122.33	-0.5348	1.1835	2.49650	122.39	-0.5357	1.1843	2.48432	122.46	-0.5367	1.1851	2.47222		
95	127.19	-0.6045	1.3234	2.23586	127.25	-0.6054	1.3247	2.22435	127.32	-0.6062	1.3260	2.21292		
100	131.78	-0.6663	1.4826	2.00477	131.84	-0.6671	1.4845	1.99392	131.90	-0.6679	1.4864	1.98314		
105	136.10	-0.7206	1.6617	1.80169	136.16	-0.7213	1.6643	1.79148	136.22	-0.7220	1.6669	1.78134		
110	140.17	-0.7679	1.8607	1.62462	140.23	-0.7686	1.8641	1.61502	140.28	-0.7692	1.8676	1.60549		
115	143.99	-0.8089	2.0787	1.47127	144.05	-0.8095	2.0832	1.46223	144.10	-0.8101	2.0876	1.45327		
120	147.59	-0.8442	2.3139	1.33924	147.64	-0.8447	2.3195	1.33074	147.69	-0.8452	2.3251	1.32231		
125	150.98	-0.8745	2.5633	1.22621	151.03	-0.8749	2.5701	1.21819	151.08	-0.8753	2.5770	1.21023		
130	154.18	-0.9002	2.8228	1.12995	154.23	-0.9005	2.8310	1.12236	154.27	-0.9009	2.8392	1.11484		
135	157.22	-0.9220	3.0873	1.04844	157.26	-0.9223	3.0969	1.04124	157.30	-0.9225	3.1066	1.03410		
140	160.11	-0.9403	3.3508	0.97989	160.14	-0.9405	3.3619	0.97303	160.18	-0.9408	3.3730	0.96623		
145	162.86	-0.9556	3.6066	0.92275	162.90	-0.9558	3.6191	0.91618	162.93	-0.9559	3.6317	0.90967		
150	165.51	-0.9682	3.8475	0.87568	165.54	-0.9683	3.8614	0.86936	165.56	-0.9684	3.8755	0.86310		
155	168.06	-0.9784	4.0664	0.83759	168.09	-0.9785	4.0817	0.83148	168.11	-0.9785	4.0970	0.82542		
160	170.54	-0.9864	4.2566	0.80758	170.56	-0.9865	4.2729	0.80163	170.58	-0.9865	4.2894	0.79574		
165	172.96	-0.9925	4.4116	0.78494	172.97	-0.9925	4.4289	0.77912	172.98	-0.9925	4.4463	0.77335		
170	175.33	-0.9967	4.5264	0.76914	175.34	-0.9967	4.5444	0.76341	175.35	-0.9967	4.5625	0.75772		
175	177.67	-0.9992	4.5969	0.75980	177.68	-0.9992	4.6153	0.75412	177.68	-0.9992	4.6339	0.74849		
180	180.00	-1.0000	4.6206	0.75672	180.00	-1.0000	4.6392	0.75105	180.00	-1.0000	4.6579	0.74544		

x = 0.289					x = 0.290					x = 0.291				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4230	8.18053	0.00	1.0000	0.4225	8.16218	0.00	1.0000	0.4220	8.14395		
5	7.69	0.9910	0.4242	8.14711	7.69	0.9910	0.4237	8.12878	7.69	0.9910	0.4232	8.11056		
10	15.36	0.9643	0.4281	8.04771	15.37	0.9643	0.4276	8.02943	15.37	0.9642	0.4271	8.01126		
15	23.00	0.9205	0.4346	7.88484	23.01	0.9204	0.4341	7.86664	23.03	0.9203	0.4336	7.84856		
20	30.60	0.8608	0.4439	7.66261	30.61	0.8606	0.4434	7.64454	30.63	0.8605	0.4428	7.62659		
25	38.13	0.7866	0.4562	7.38658	38.16	0.7863	0.4557	7.36868	38.18	0.7861	0.4552	7.35088		
30	45.59	0.6998	0.4718	7.06353	45.62	0.6994	0.4713	7.04583	45.65	0.6991	0.4708	7.02823		
35	52.96	0.6024	0.4912	6.70125	52.99	0.6019	0.4907	6.68379	53.02	0.6015	0.4902	6.66643		
40	60.22	0.4967	0.5147	6.30823	60.25	0.4962	0.5142	6.29106	60.29	0.4956	0.5137	6.27399		
45	67.34	0.3852	0.5431	5.89340	67.38	0.3846	0.5426	5.87655	67.42	0.3839	0.5421	5.85982		
50	74.32	0.2703	0.5769	5.46574	74.36	0.2695	0.5764	5.44928	74.41	0.2688	0.5760	5.43293		
55	81.13	0.1542	0.6171	5.03403	81.18	0.1534	0.6167	5.01800	81.22	0.1526	0.6163	5.00207		
60	87.75	0.0293	0.6648	4.60648	87.80	0.0284	0.6644	4.59092	87.85	0.0275	0.6641	4.57546		
65	94.16	-0.0725	0.7211	4.19046	94.21	-0.0735	0.7208	4.17542	94.27	-0.0744	0.7205	4.16047		
70	100.34	-0.1795	0.7874	3.79229	100.40	-0.1805	0.7873	3.77782	100.46	-0.1815	0.7871	3.76343		
75	106.28	-0.2804	0.8654	3.41708	106.34	-0.2814	0.8654	3.40320	106.40	-0.2824	0.8654	3.38941		
80	111.97	-0.3741	0.9566	3.06858	112.03	-0.3751	0.9568	3.05533	112.09	-0.3761	0.9570	3.04217		
85	117.38	-0.4599	1.0629	2.74923	117.44	-0.4609	1.0634	2.73663	117.51	-0.4618	1.0638	2.72412		
90	122.52	-0.5376	1.1859	2.46021	122.58	-0.5385	1.1868	2.44827	122.65	-0.5394	1.1876	2.43642		
95	127.38	-0.6071	1.3273	2.20157	127.44	-0.6080	1.3286	2.19030	127.51	-0.6088	1.3299	2.17911		
100	131.97	-0.6687	1.4883	1.97245	132.03	-0.6695	1.4901	1.96183	132.09	-0.6703	1.4920	1.95129		
105	136.28	-0.7228	1.6695	1.77128	136.34	-0.7235	1.6721	1.76130	136.40	-0.7242	1.6747	1.75138		
110	140.34	-0.7699	1.8710	1.59503	140.40	-0.7705	1.8745	1.58664	140.46	-0.7712	1.8780	1.57733		
115	144.16	-0.8106	2.0921	1.44438	144.21	-0.8112	2.0965	1.43556	144.27	-0.8118	2.1010	1.42680		
120	147.75	-0.8457	2.3307	1.31394	147.80	-0.8462	2.3363	1.30563	147.85	-0.8467	2.3419	1.29739		
125	151.13	-0.8757	2.5838	1.20234	151.18	-0.8761	2.5907	1.19451	151.22	-0.8765	2.5976	1.18674		
130	154.32	-0.9012	2.8474	1.10737	154.36	-0.9016	2.8557	1.09997	154.41	-0.9019	2.8640	1.09263		
135	157.34	-0.9228	3.1163	1.02702	157.38	-0.9231	3.1260	1.01999	157.42	-0.9234	3.1357	1.01303		
140	160.22	-0.9410	3.3842	0.95948	160.25	-0.9412	3.3954	0.95279	160.29	-0.9414	3.4067	0.94615		
145	162.96	-0.9561	3.6443	0.90321	162.99	-0.9563	3.6570	0.89680	163.02	-0.9564	3.6698	0.89046		
150	165.59	-0.9686	3.8895	0.85688	165.62	-0.9687	3.9036	0.85072	165.65	-0.9688	3.9178	0.84462		
155	168.13	-0.9786	4.1124	0.81941	168.16	-0.9787	4.1278	0.81345	168.18	-0.9788	4.1433	0.80755		
160	170.60	-0.9866	4.3059	0.78989	170.61	-0.9866	4.3225	0.78410	170.63	-0.9867	4.3392	0.77835		
165	173.00	-0.9925	4.4638	0.76763	173.01	-0.9926	4.4814	0.76196	173.03	-0.9926	4.4990	0.75634		
170	175.36	-0.9967	4.5807	0.75209	175.37	-0.9967	4.5989	0.74651	175.37	-0.9967	4.6173	0.74098		
175	177.69	-0.9992	4.6525	0.74292	177.69	-0.9992	4.6712	0.73739	177.69	-0.9992	4.6900	0.73191		
180	180.00	-1.0000	4.6767	0.73988	180.00	-1.0000	4.6956	0.73437	180.00	-1.0000	4.7145	0.72891		

x = 0.292					x = 0.293					x = 0.294				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4215	8.12582	0.00	1.0000	0.4209	8.10781	0.00	1.0000	0.4204	8.08992		
5	7.70	0.9910	0.4227	8.09246	7.70	0.9910	0.4222	8.07446	7.71	0.9910	0.4217	8.06568		
10	15.38	0.9642	0.4266	7.99321	15.39	0.9641	0.4260	7.97526	15.40	0.9641	0.4255	7.95743		
15	23.04	0.9202	0.4330	7.83060	23.05	0.9201	0.4325	7.81274	23.07	0.9200	0.4320	7.79500		
20	30.65	0.8603	0.4423	7.60874	30.67	0.8601	0.4418	7.59101	30.69	0.8600	0.4413	7.57339		
25	38.20	0.7858	0.4547	7.33320	38.22	0.7856	0.4542	7.31562	38.25	0.7853	0.4537	7.29816		
30	45.68	0.6987	0.4703	7.01075	45.70	0.6984	0.4698	6.99338	45.73	0.6980	0.4693	6.97611		
35	53.06	0.6010	0.4897	6.64919	53.09	0.6006	0.4892	6.63206	53.12	0.6001	0.4887	6.61503		
40	60.32	0.4951	0.5133	6.25703	60.36	0.4945	0.5128	6.24018	60.40	0.4940	0.5123	6.22343		
45	67.46	0.3833	0.5416	5.84319	67.50	0.3826	0.5411	5.82667	67.54	0.3820	0.5407	5.81024		
50	74.45	0.2680	0.5755	5.41667	74.50	0.2673	0.5751	5.40052	74.54	0.2665	0.5746	5.38437		
55	81.27	0.1517	0.6159	4.98623	81.32	0.1509	0.6155	4.97050	81.37	0.1501	0.6150	4.95487		
60	87.90	0.0366	0.6637	4.56009	87.95	0.0357	0.6633	4.54483	88.01	0.0348	0.6630	4.52966		
65	94.32	-0.0754	0.7202	4.14563	94.38	-0.0763	0.7200	4.13087	94.43	-0.0773	0.7197	4.11621		
70	100.52	-0.1825	0.7869	3.74914	100.57	-0.1835	0.7868	3.73494	100.63	-0.1845	0.7866	3.72084		
75	106.46	-0.2834	0.8653	3.37572	106.52	-0.2844	0.8653	3.36211	106.58	-0.2854	0.8653	3.34859		
80	112.15	-0.3771	0.9572	3.02910	112.21	-0.3781	0.9574	3.01612	112.27	-0.3790	0.9576	3.00322		
85	117.57	-0.4628	1.0643	2.71170	117.63	-0.4638	1.0648	2.69936	117.69	-0.4648	1.0653	2.68710		
90	122.71	-0.5404	1.1885	2.42466	122.77	-0.5413	1.1893	2.41297	122.83	-0.5422	1.1901	2.40136		
95	127.57	-0.6097	1.3312	2.16800	127.63	-0.6106	1.3325	2.15696	127.69	-0.6114	1.3339	2.14601		
100	132.15	-0.6711	1.4939	1.94082	132.21	-0.6719	1.4958	1.93043	132.27	-0.6727	1.4977	1.92012		
105	136.46	-0.7249	1.6773	1.74154	136.52	-0.7257	1.6800	1.73177	136.58	-0.7264	1.6826	1.72207		
110	140.52	-0.7718	1.8815	1.56808	140.57	-0.7724	1.8850	1.55890	140.63	-0.7731	1.8885	1.54979		
115	144.32	-0.8123	2.1055	1.41811	144.38	-0.8129	2.1100	1.40949	144.43	-0.8134	2.1145	1.40093		
120	147.90	-0.8471	2.3476	1.28922	147.95	-0.8476	2.3532	1.28111	148.01	-0.8481	2.3589	1.27306		
125	151.27	-0.8769	2.6046	1.17904	151.32	-0.8773	2.6115	1.17139	151.37	-0.8777	2.6185	1.16381		
130	154.45	-0.9022	2.8723	1.08535	154.50	-0.9027	2.8877	1.07812	154.55	-0.9029	2.8991	1.07096		
135	157.46	-0.9236	3.1455	1.00612	157.50	-0.9239	3.1554	0.99927	157.54	-0.9242	3.1652	0.99248		
140	160.32	-0.9416	3.4180	0.93958	160.36	-0.9418	3.4293	0.93305	160.40	-0.9420	3.4407	0.92658		
145	163.06	-0.9566	3.6826	0.88416	163.09	-0.9568	3.6954	0.87792	163.12	-0.9569	3.7083	0.87173		
150	165.68	-0.9689	3.9321	0.83856	165.70	-0.9690	3.9464	0.83256	165.73	-0.9691	3.9607	0.82661		
155	168.20	-0.9789	4.1589	0.80169	168.22	-0.9790	4.1745	0.79589	168.25	-0.9790	4.1902	0.79013		
160	170.65	-0.9867	4.3569	0.77266	170.67	-0.9868	4.3728	0.76701	170.69	-0.9868	4.3896	0.761.7		

$\frac{2}{x} = 0.295$
 $\frac{2}{x} = 0.296$
 $\frac{2}{x} = 0.297$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4199	8.07213	0.00	1.0000	0.4194	8.05445	0.00	1.0000	0.4189	8.03688
5	7.71	0.9910	0.4212	8.03881	7.72	0.9909	0.4207	8.02115	7.72	0.9909	0.4202	8.00360
10	15.41	0.9640	0.4250	7.93971	15.42	0.9640	0.4245	7.92210	15.43	0.9640	0.4240	7.90460
15	23.08	0.9200	0.4315	7.77736	23.09	0.9199	0.4310	7.75984	23.11	0.9198	0.4305	7.74242
20	30.71	0.8598	0.4408	7.55588	30.72	0.8596	0.4403	7.53847	30.74	0.8595	0.4398	7.52117
25	38.27	0.7851	0.4532	7.28080	38.29	0.7849	0.4527	7.26356	38.32	0.7846	0.4522	7.24641
30	45.76	0.6977	0.4688	6.95895	45.79	0.6974	0.4683	6.94189	45.81	0.6970	0.4678	6.92494
35	53.15	0.5997	0.4882	6.59810	53.18	0.5993	0.4877	6.58129	53.22	0.5988	0.4872	6.56457
40	60.43	0.4934	0.5118	6.20679	60.47	0.4929	0.5113	6.19025	60.51	0.4923	0.5108	6.17381
45	67.59	0.3813	0.5402	5.79392	67.63	0.3807	0.5397	5.77770	67.67	0.3800	0.5393	5.76158
50	74.59	0.2658	0.5742	5.36851	74.63	0.2650	0.5737	5.35266	74.68	0.2643	0.5733	5.33690
55	81.42	0.1492	0.6146	4.93933	81.47	0.1484	0.6142	4.92389	81.51	0.1476	0.6138	4.90855
60	88.06	0.0339	0.6626	4.51458	88.11	0.0330	0.6623	4.49960	88.16	0.0321	0.6619	4.48472
65	94.49	-0.0783	0.7194	4.10165	94.54	-0.0782	0.7191	4.08717	94.60	-0.0802	0.7188	4.07279
70	100.69	-0.1855	0.7864	3.70682	100.75	-0.1865	0.7862	3.69289	100.80	-0.1875	0.7861	3.67905
75	106.64	-0.2864	0.8653	3.33516	106.70	-0.2874	0.8653	3.32182	106.76	-0.2884	0.8653	3.30856
80	112.34	-0.3800	0.9578	2.99040	112.40	-0.3810	0.9580	2.97767	112.46	-0.3820	0.9582	2.96502
85	117.76	-0.4657	1.0657	2.67492	117.82	-0.4667	1.0662	2.66282	117.88	-0.4676	1.0667	2.65080
90	122.90	-0.5431	1.1910	2.38983	122.96	-0.5441	1.1918	2.37838	123.02	-0.5450	1.1927	2.36700
95	127.76	-0.6123	1.3352	2.13512	127.82	-0.6132	1.3365	2.12432	127.88	-0.6140	1.3378	2.11358
100	132.34	-0.6735	1.4997	1.90987	132.40	-0.6743	1.5016	1.89970	132.46	-0.6751	1.5035	1.88960
105	136.64	-0.7271	1.6852	1.71245	136.70	-0.7278	1.6879	1.70289	136.76	-0.7285	1.6905	1.87940
110	140.69	-0.7737	1.8920	1.54075	140.75	-0.7744	1.8955	1.53177	140.80	-0.7750	1.8930	1.86920
115	144.49	-0.8140	2.1191	1.39244	144.54	-0.8146	2.1236	1.38401	144.60	-0.8151	2.1282	1.85890
120	148.06	-0.8486	2.3646	1.26507	148.11	-0.8491	2.3703	1.25715	148.16	-0.8495	2.3761	1.84860
125	151.42	-0.8781	2.6255	1.15629	151.47	-0.8785	2.6325	1.14882	151.51	-0.8789	2.6396	1.83830
130	154.59	-0.9032	2.8975	1.05385	154.63	-0.9036	2.9059	1.05680	154.68	-0.9039	2.9144	1.82800
135	157.59	-0.9244	3.1751	0.96374	157.63	-0.9247	3.1851	0.97905	157.67	-0.9250	3.1951	1.81770
140	160.43	-0.9423	3.4521	0.88207	160.47	-0.9425	3.4636	0.91381	160.51	-0.9427	3.4751	1.80740
145	163.15	-0.9571	3.7213	0.80659	163.18	-0.9572	3.7343	0.85951	163.22	-0.9574	3.7474	1.79710
150	165.76	-0.9693	3.9751	0.73435	165.79	-0.9694	3.9896	0.81486	165.81	-0.9695	4.0041	1.78680
155	168.27	-0.9791	4.2060	0.66443	168.29	-0.9792	4.2218	0.77878	168.32	-0.9793	4.2377	1.77650
160	170.71	-0.9869	4.4066	0.59587	170.72	-0.9869	4.4236	0.75038	170.74	-0.9870	4.4407	1.76620
165	173.08	-0.9927	4.5703	0.52835	173.09	-0.9927	4.5883	0.72897	173.11	-0.9928	4.6064	1.75590
170	175.41	-0.9968	4.6915	0.46193	175.42	-0.9968	4.7102	0.71404	175.43	-0.9968	4.7290	1.74560
175	177.71	-0.9992	4.7659	0.40046	177.72	-0.9992	4.7851	0.70522	177.72	-0.9992	4.8044	1.73530
180	180.00	-1.0000	4.7911	0.34075	180.00	-1.0000	4.8104	0.70231	180.00	-1.0000	4.8298	1.72500

 $\frac{2}{x} = 0.298$
 $\frac{2}{x} = 0.299$
 $\frac{2}{x} = 0.300$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4184	8.01942	0.00	1.0000	0.4180	8.00207	0.00	1.0000	0.4175	7.98482
5	7.73	0.9909	0.4197	7.98615	7.73	0.9909	0.4192	7.96982	7.74	0.9909	0.4197	7.95158
10	15.44	0.9629	0.4235	7.88721	15.45	0.9639	0.4231	7.86992	15.46	0.9638	0.4226	7.85273
15	23.12	0.9197	0.4300	7.72511	23.14	0.9196	0.4295	7.70790	23.15	0.9195	0.4290	7.69060
20	30.76	0.8593	0.4393	7.50398	30.78	0.8591	0.4388	7.48689	30.80	0.8590	0.4383	7.46990
25	38.34	0.7844	0.4517	7.22937	38.36	0.7841	0.4512	7.21244	38.38	0.7839	0.4507	7.19561
30	45.84	0.6967	0.4673	6.90810	45.87	0.6963	0.4668	6.89136	45.89	0.6960	0.4663	6.87471
35	53.25	0.5984	0.4867	6.54796	53.28	0.5979	0.4862	6.53144	53.31	0.5975	0.4857	6.51503
40	60.54	0.4918	0.5103	6.15747	60.58	0.4912	0.5098	6.14123	60.61	0.4907	0.5094	6.12509
45	67.71	0.3794	0.5388	5.74556	67.75	0.3787	0.5383	5.72963	67.79	0.3781	0.5379	5.71381
50	74.72	0.2635	0.5728	5.32125	74.76	0.2628	0.5724	5.30568	74.81	0.2621	0.5719	5.29022
55	81.56	0.1467	0.6134	4.89330	81.61	0.1459	0.6130	4.87814	81.66	0.1451	0.6126	4.86306
60	88.21	0.0312	0.6615	4.46992	88.27	0.0303	0.6612	4.45522	88.32	0.0294	0.6608	4.44061
65	94.65	-0.0811	0.7186	4.05849	94.71	-0.0821	0.7183	4.04428	94.76	-0.0830	0.7180	4.03017
70	100.86	-0.1884	0.7859	3.66530	100.92	-0.1894	0.7857	3.65163	100.98	-0.1904	0.7856	3.63805
75	106.82	-0.2894	0.8652	3.29538	106.88	-0.2904	0.8652	3.28229	106.94	-0.2914	0.8652	3.26928
80	112.52	-0.3830	0.9584	2.95245	112.58	-0.3840	0.9586	2.93997	112.64	-0.3850	0.9588	2.92756
85	117.94	-0.4686	1.0672	2.63886	118.01	-0.4696	1.0677	2.62700	118.07	-0.4705	1.0681	2.61522
90	123.09	-0.5459	1.1935	2.35570	123.15	-0.5468	1.1944	2.34448	123.21	-0.5477	1.1952	2.33333
95	127.94	-0.6149	1.3391	2.10293	128.01	-0.6157	1.3405	2.09234	128.07	-0.6166	1.3418	2.08183
100	132.52	-0.6759	1.5054	1.87957	132.58	-0.6766	1.5073	1.86961	132.64	-0.6774	1.5093	1.85972
105	136.82	-0.7292	1.6932	1.68397	136.88	-0.7300	1.6959	1.67462	136.94	-0.7307	1.6985	1.85033
110	140.86	-0.7756	1.9026	1.51402	140.92	-0.7763	1.9061	1.50524	140.98	-0.7769	1.9097	1.84094
115	144.65	-0.8157	2.1328	1.36734	144.71	-0.8162	2.1374	1.35910	144.76	-0.8168	2.1420	1.83155
120	148.21	-0.8500	2.3818	1.24148	148.27	-0.8505	2.3876	1.23374	148.32	-0.8510	2.3934	1.82216
125	151.56	-0.8793	2.6467	1.13407	151.61	-0.8797	2.6538	1.12678	151.66	-0.8801	2.6609	1.81277
130	154.72	-0.9042	2.9229	1.04286	154.76	-0.9046	2.9314	1.03598	154.81	-0.9049	2.9400	1.80338
135	157.71	-0.9253	3.2051	0.96585	157.75	-0.9255	3.2151	0.95933	157.79	-0.9258	3.2252	1.79399
140	160.54	-0.9429	3.4867	0.90124	160.58	-0.9431	3.4983	0.89503	160.61	-0.9433	3.5100	1.78460
145	163.25	-0.9576	3.7605	0.84749	163.28	-0.9577	3.7736	0.84156	163.31	-0.9579	3.7868	1.77521
150	165.84	-0.9696	4.0187	0.80331	165.87	-0.9697	4.0334	0.79761	165.89	-0.9698	4.0481	1.76582
155	168.34	-0.9794	4.2537	0.76761	168.36	-0.9794	4.2697	0.79210	168.38	-0.9795	4.2838	1.75643
160	170.76	-0.9870	4.4579	0.73952	170.78	-0.9871	4.4751	0.73416	170.80	-0.9871	4.4924	1.74704
165	173.12	-0.9928	4.6245	0.71835	173.14	-0.9928	4.6428	0.71311	173.15	-0.9929	4.6611	1.73765
170	175.44	-0.9968	4.7479	0.70359	175.45	-0.9968	4.7669	0.69843	175.46	-0.9969	4.7860	1.72826
175	177.73	-0.9992	4.8238	0.69487	177.73	-0.9992	4.8432	0.68976	177.74	-0.9992	4.8628	1.71887
180	180.00	-1.0000	4.8494	0.69199	180.00	-1.0000	4.8690	0.68690	180.00	-1.0000	4.8887	1.70948

x = 0.301					x = 0.302					x = 0.303				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.4170	7.96767	0.00	1.0000	0.4165	7.95063	0.00	1.0000	0.4160	7.93369		
5	7.74	0.9909	0.4182	7.93445	7.75	0.9909	0.4177	7.91743	7.75	0.9909	0.4173	7.90051		
10	15.47	0.9638	0.4221	7.83565	15.48	0.9637	0.4216	7.81868	15.49	0.9637	0.4211	7.80180		
15	23.16	0.9194	0.4285	7.67380	23.18	0.9193	0.4281	7.65691	23.19	0.9192	0.4276	7.64011		
20	30.82	0.8588	0.4378	7.43302	30.83	0.8587	0.4374	7.43624	30.85	0.8585	0.4369	7.41956		
25	38.41	0.7836	0.4502	7.17988	38.43	0.7834	0.4497	7.16225	38.45	0.7831	0.4492	7.14572		
30	45.92	0.6956	0.4658	6.85817	45.95	0.6953	0.4654	6.84173	45.98	0.6950	0.4649	6.82539		
35	53.34	0.5970	0.4852	6.49872	53.37	0.5966	0.4848	6.48250	53.40	0.5962	0.4843	6.46639		
40	60.65	0.4901	0.5089	6.10904	60.69	0.4896	0.5084	6.09310	60.72	0.4891	0.5079	6.07725		
45	67.83	0.3774	0.5374	5.69808	67.87	0.3768	0.5369	5.68244	67.91	0.3761	0.5365	5.66690		
50	74.85	0.2613	0.5715	5.27484	74.90	0.2606	0.5711	5.25956	74.94	0.2598	0.5706	5.24437		
55	81.71	0.1442	0.6122	4.84811	81.75	0.1434	0.6118	4.83323	81.80	0.1426	0.6114	4.81844		
60	88.37	0.0285	0.6605	4.42608	88.42	0.0276	0.6601	4.41165	88.47	0.0267	0.6598	4.39730		
65	94.82	-0.0840	0.7177	4.01614	94.87	-0.0849	0.7174	4.00219	94.93	-0.0859	0.7172	3.98833		
70	101.03	-0.1914	0.7854	3.62455	101.09	-0.1924	0.7852	3.61114	101.15	-0.1934	0.7851	3.59781		
75	107.00	-0.2924	0.8652	3.25635	107.06	-0.2934	0.8652	3.24351	107.12	-0.2944	0.8652	3.23074		
80	112.70	-0.3860	0.9590	2.91323	112.77	-0.3870	0.9592	2.90298	112.83	-0.3879	0.9594	2.89082		
85	118.13	-0.4715	1.0686	2.60352	118.19	-0.4724	1.0691	2.59189	118.25	-0.4734	1.0696	2.58033		
90	123.27	-0.5486	1.1961	2.32226	123.34	-0.5495	1.1969	2.31126	123.40	-0.5505	1.1978	2.30033		
95	128.13	-0.6175	1.3431	2.07138	128.19	-0.6183	1.3445	2.06101	128.25	-0.6192	1.3458	2.05071		
100	132.70	-0.6782	1.5112	1.84990	132.77	-0.6790	1.5132	1.84014	132.83	-0.6798	1.5151	1.83046		
105	137.00	-0.7314	1.7012	1.65611	137.06	-0.7321	1.7039	1.64695	137.12	-0.7328	1.7066	1.63786		
110	141.03	-0.7775	1.9133	1.48788	141.09	-0.7781	1.9169	1.47929	141.15	-0.7788	1.9204	1.47076		
115	144.82	-0.8173	2.1466	1.34280	144.87	-0.8179	2.1512	1.33474	144.93	-0.8184	2.1559	1.32675		
120	148.37	-0.8514	2.3992	1.21843	148.42	-0.8519	2.4051	1.21086	148.47	-0.8524	2.4109	1.20335		
125	151.71	-0.8805	2.6680	1.11237	151.75	-0.8809	2.6752	1.10525	151.80	-0.8813	2.6824	1.09818		
130	154.85	-0.9052	2.9486	1.02238	154.90	-0.9055	2.9572	1.01566	154.94	-0.9059	2.9659	1.00899		
135	157.83	-0.9260	3.2354	0.94644	157.87	-0.9263	3.2455	0.94007	157.91	-0.9266	3.2557	0.93376		
140	160.65	-0.9435	3.5217	0.88277	160.69	-0.9437	3.5334	0.87672	160.72	-0.9439	3.5452	0.87071		
145	163.34	-0.9580	3.8001	0.82984	163.37	-0.9582	3.8134	0.82405	163.40	-0.9583	3.8268	0.81831		
150	165.92	-0.9700	4.0629	0.78634	165.95	-0.9701	4.0777	0.78078	165.98	-0.9702	4.0926	0.77527		
155	168.41	-0.9796	4.3020	0.75122	168.43	-0.9797	4.3182	0.74584	168.45	-0.9798	4.3345	0.74052		
160	170.82	-0.9872	4.5098	0.72358	170.83	-0.9872	4.5273	0.71836	170.85	-0.9873	4.5448	0.71318		
165	173.16	-0.9929	4.6795	0.70277	173.18	-0.9929	4.6980	0.69766	173.19	-0.9929	4.7165	0.69260		
170	175.47	-0.9969	4.8052	0.68825	175.48	-0.9969	4.8244	0.68322	175.49	-0.9969	4.8437	0.67824		
175	177.74	-0.9992	4.8824	0.67968	177.75	-0.9992	4.9021	0.67470	177.75	-0.9992	4.9219	0.66977		
180	180.00	-1.0000	4.9084	0.67685	180.00	-1.0000	4.9283	0.67189	180.00	-1.0000	4.9483	0.66697		

x = 0.304					x = 0.305					x = 0.306				
PSI	θ	cos θ	G	S ²	θ	cos θ	G	S ²	θ	cos θ	G	S ²		
0	0.00	1.0000	0.4155	7.91686	0.00	1.0000	0.4150	7.90012	0.00	1.0000	0.4145	7.88348		
5	7.75	0.9909	0.4168	7.88368	7.76	0.9908	0.4163	7.86696	7.76	0.9908	0.4158	7.85034		
10	15.49	0.9637	0.4206	7.78503	15.50	0.9636	0.4201	7.76836	15.51	0.9636	0.4196	7.75178		
15	23.20	0.9191	0.4271	7.62342	23.22	0.9190	0.4266	7.60683	23.23	0.9189	0.4261	7.59033		
20	30.87	0.8583	0.4364	7.40299	30.89	0.8582	0.4359	7.38651	30.91	0.8580	0.4354	7.37012		
25	38.47	0.7829	0.4487	7.12929	38.50	0.7826	0.4482	7.11296	38.52	0.7824	0.4477	7.09672		
30	46.00	0.6946	0.4644	6.80915	46.03	0.6943	0.4639	6.79300	46.06	0.6939	0.4634	6.77695		
35	53.44	0.5957	0.4838	6.45037	53.47	0.5953	0.4833	6.43444	53.50	0.5948	0.4828	6.41861		
40	60.76	0.4885	0.5075	6.06749	60.79	0.4880	0.5070	6.04583	60.83	0.4874	0.5065	6.03026		
45	67.95	0.3755	0.5360	5.65145	67.99	0.3748	0.5355	5.63610	68.03	0.3742	0.5351	5.62083		
50	74.98	0.2591	0.5702	5.22928	75.03	0.2583	0.5697	5.21427	75.07	0.2576	0.5693	5.19935		
55	81.85	0.1418	0.6110	4.80374	81.90	0.1409	0.6105	4.78912	81.94	0.1401	0.6101	4.77460		
60	88.52	0.0258	0.6594	4.38304	88.57	0.0249	0.6591	4.36887	88.62	0.0240	0.6587	4.35478		
65	94.98	-0.0868	0.7169	3.97456	95.03	-0.0878	0.7166	3.96087	95.09	-0.0887	0.7163	3.94726		
70	101.21	-0.1943	0.7849	3.58456	101.26	-0.1953	0.7847	3.57140	101.32	-0.1963	0.7846	3.55831		
75	107.18	-0.2954	0.8652	3.21806	107.24	-0.2964	0.8652	3.20545	107.30	-0.2973	0.8651	3.19293		
80	112.89	-0.3889	0.9596	2.87872	112.95	-0.3899	0.9598	2.86671	113.01	-0.3909	0.9600	2.85477		
85	118.32	-0.4743	1.0701	2.56885	118.38	-0.4753	1.0706	2.55745	118.44	-0.4762	1.0710	2.54611		
90	123.46	-0.5514	1.1987	2.28947	123.52	-0.5523	1.1995	2.27869	123.58	-0.5532	1.2004	2.26797		
95	128.32	-0.6200	1.3472	2.04048	128.38	-0.6209	1.3485	2.03031	128.44	-0.6217	1.3499	2.02022		
100	132.89	-0.6806	1.5171	1.82084	132.95	-0.6813	1.5190	1.81128	133.01	-0.6821	1.5210	1.80179		
105	137.18	-0.7335	1.7093	1.62883	137.24	-0.7342	1.7120	1.61987	137.30	-0.7349	1.7147	1.61097		
110	141.21	-0.7794	1.9241	1.46229	141.26	-0.7800	1.9277	1.45389	141.32	-0.7806	1.9313	1.44554		
115	144.98	-0.8190	2.1605	1.31881	145.03	-0.8195	2.1652	1.31093	145.09	-0.8200	2.1699	1.30310		
120	148.52	-0.8528	2.4168	1.19590	148.57	-0.8533	2.4227	1.18850	148.62	-0.8538	2.4286	1.18116		
125	151.85	-0.8817	2.6896	1.09117	151.90	-0.8821	2.6969	1.08421	151.94	-0.8825	2.7042	1.07730		
130	154.98	-0.9062	2.9746	1.00273	155.03	-0.9065	2.9933	0.99581	155.07	-0.9068	2.9921	0.98930		
135	157.95	-0.9268	3.2660	0.92749	157.99	-0.9271	3.2763	0.92128	158.03	-0.9274	3.2866	0.91511		
140	160.76	-0.9441	3.5570	0.86475	160.79	-0.9443	3.5689	0.85884	160.83	-0.9445	3.5809	0.85298		
145	163.44	-0.9585	3.8402	0.81262	163.47	-0.9587	3.8537	0.80697	163.50	-0.9588	3.8673	0.80137		
150	166.00	-0.9703	4.1076	0.76980	166.03	-0.9704	4.1226	0.76438	166.06	-0.9705	4.1377	0.75900		
155	168.47	-0.9798	4.3509	0.73523	168.50	-0.9799	4.3673	0.72999	168.52	-0.9800	4.3839	0.72480		
160	170.87	-0.9873	4.5625	0.70805	170.89	-0.9874	4.5802	0.70296	17					

$x = 0.307$					$x = 0.308$					$x = 0.309$				
psi	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.4141	7.86694	0.00	1.0000	0.4136	7.85050	0.00	1.0000	0.4131	7.83416	0.00	1.0000
5	7.77	0.9908	0.4153	7.63382	7.77	0.9908	0.4148	7.61740	7.78	0.9908	0.4144	7.60107	7.78	0.9908
10	15.52	0.9635	0.4191	7.73531	15.53	0.9635	0.4187	7.71893	15.54	0.9634	0.4182	7.70265	15.54	0.9634
15	23.24	0.9188	0.4256	7.57394	23.26	0.9187	0.4231	7.55764	23.27	0.9186	0.4247	7.54143	23.27	0.9186
20	30.92	0.8579	0.4349	7.35384	30.94	0.8577	0.4344	7.33765	30.96	0.8575	0.4340	7.32156	30.96	0.8575
25	38.54	0.7821	0.4472	7.08058	38.56	0.7819	0.4468	7.06454	38.59	0.7817	0.4463	7.04859	38.59	0.7817
30	46.08	0.6936	0.4629	6.76099	46.11	0.6933	0.4624	6.74513	46.14	0.6929	0.4620	6.72936	46.14	0.6929
35	53.53	0.5944	0.4824	6.40288	53.56	0.5940	0.4819	6.38724	53.59	0.5935	0.4814	6.37168	53.59	0.5935
40	60.86	0.4869	0.5060	6.01479	60.90	0.4863	0.5056	5.99940	60.94	0.4858	0.5051	5.98411	60.94	0.4858
45	68.07	0.3735	0.5346	5.60566	68.11	0.3729	0.5342	5.59057	68.15	0.3723	0.5337	5.57558	68.15	0.3723
50	75.12	0.2569	0.5689	5.18452	75.16	0.2561	0.5684	5.16979	75.20	0.2554	0.5680	5.15513	75.20	0.2554
55	81.99	0.1393	0.6097	4.76016	82.04	0.1385	0.6093	4.74581	82.09	0.1377	0.6089	4.73154	82.09	0.1377
60	88.68	0.0231	0.6584	4.34078	88.73	0.0222	0.6580	4.32686	88.78	0.0213	0.6577	4.31303	88.78	0.0213
65	95.14	-0.0896	0.7161	3.93374	95.20	-0.0906	0.7158	3.92030	95.25	-0.0915	0.7155	3.90694	95.25	-0.0915
70	101.38	-0.1973	0.7844	3.54531	101.43	-0.1982	0.7843	3.53238	101.49	-0.1992	0.7841	3.51953	101.49	-0.1992
75	107.36	-0.2983	0.8651	3.18048	107.42	-0.2993	0.8651	3.16810	107.48	-0.3003	0.8651	3.15581	107.48	-0.3003
80	113.07	-0.3918	0.9602	2.84290	113.13	-0.3928	0.9604	2.83111	113.19	-0.3938	0.9606	2.81939	113.19	-0.3938
85	118.50	-0.4772	1.0715	2.53485	118.56	-0.4781	1.0720	2.52366	118.63	-0.4791	1.0725	2.51255	118.63	-0.4791
90	123.65	-0.5541	1.2012	2.25733	123.71	-0.5550	1.2021	2.24675	123.77	-0.5559	1.2030	2.23624	123.77	-0.5559
95	128.50	-0.6225	1.3512	2.01019	128.56	-0.6234	1.3526	2.00022	128.63	-0.6242	1.3539	1.99033	128.63	-0.6242
100	133.07	-0.6829	1.5229	1.79237	133.13	-0.6837	1.5249	1.78301	133.19	-0.6844	1.5269	1.77371	133.19	-0.6844
105	137.36	-0.7356	1.7174	1.60213	137.42	-0.7363	1.7202	1.59335	137.48	-0.7370	1.7229	1.58463	137.48	-0.7370
110	141.38	-0.7813	1.9349	1.43726	141.43	-0.7819	1.9386	1.42903	141.49	-0.7825	1.9422	1.42087	141.49	-0.7825
115	145.14	-0.8206	2.1746	1.29534	145.20	-0.8211	2.1793	1.28763	145.25	-0.8217	2.1841	1.27998	145.25	-0.8217
120	148.68	-0.8542	2.4345	1.17387	148.73	-0.8547	2.4405	1.16664	148.78	-0.8552	2.4464	1.15946	148.78	-0.8552
125	151.99	-0.8829	2.7115	1.07045	152.04	-0.8833	2.7188	1.06365	152.09	-0.8837	2.7261	1.05690	152.09	-0.8837
130	155.12	-0.9072	3.0009	0.98283	155.16	-0.9075	3.0097	0.97642	155.20	-0.9078	3.0185	0.97006	155.20	-0.9078
135	158.07	-0.9276	3.2969	0.90900	158.11	-0.9279	3.3074	0.90293	158.15	-0.9281	3.3178	0.89691	158.15	-0.9281
140	160.86	-0.9447	3.5928	0.84717	160.90	-0.9449	3.6049	0.84140	160.94	-0.9451	3.6169	0.83568	160.94	-0.9451
145	163.53	-0.9590	3.8909	0.79582	163.56	-0.9591	3.8945	0.79031	163.59	-0.9593	3.9082	0.78485	163.59	-0.9593
150	166.08	-0.9706	4.1528	0.75367	166.11	-0.9708	4.1680	0.74838	166.14	-0.9709	4.1833	0.74313	166.14	-0.9709
155	168.54	-0.9801	4.4004	0.71965	168.56	-0.9801	4.4171	0.71454	168.59	-0.9802	4.4338	0.70947	168.59	-0.9802
160	170.92	-0.9875	4.6158	0.69291	170.94	-0.9875	4.6337	0.68794	170.96	-0.9876	4.6517	0.68302	170.96	-0.9876
165	173.24	-0.9931	4.7916	0.67277	173.26	-0.9931	4.8106	0.66792	173.27	-0.9931	4.8296	0.66331	173.27	-0.9931
170	175.52	-0.9969	4.9219	0.65874	175.53	-0.9970	4.9416	0.65396	175.54	-0.9970	4.9615	0.64923	175.54	-0.9970
175	177.77	-0.9992	5.0019	0.65045	177.77	-0.9992	5.0222	0.64573	177.78	-0.9992	5.0425	0.64104	177.78	-0.9992
180	180.00	-1.0000	5.0290	0.64771	180.00	-1.0000	5.0494	0.64300	180.00	-1.0000	5.0698	0.63833	180.00	-1.0000

$x = 0.310$					$x = 0.311$					$x = 0.312$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.4126	7.81791	0.00	1.0000	0.4121	7.80176	0.00	1.0000	0.4117	7.78570		
5	7.78	0.9908	0.4139	7.78484	7.79	0.9908	0.4134	7.76870	7.79	0.9908	0.4129	7.75266		
10	15.55	0.9634	0.4177	7.68646	15.56	0.9634	0.4172	7.67037	15.57	0.9633	0.4168	7.65437		
15	23.29	0.9185	0.4242	7.52532	23.30	0.9185	0.4237	7.50931	23.31	0.9184	0.4232	7.49339		
20	30.98	0.8574	0.4335	7.30556	31.00	0.8572	0.4330	7.28965	31.01	0.8570	0.4325	7.27384		
25	38.61	0.7814	0.4458	7.03274	38.63	0.7812	0.4453	7.01698	38.65	0.7809	0.4449	7.00130		
30	46.16	0.6926	0.4615	6.71368	46.19	0.6923	0.4610	6.69810	46.22	0.6919	0.4605	6.68261		
35	53.62	0.5931	0.4809	6.35623	53.65	0.5926	0.4805	6.34086	53.69	0.5922	0.4800	6.32558		
40	60.97	0.4853	0.5046	5.96890	61.01	0.4847	0.5042	5.95379	61.04	0.4842	0.5037	5.93876		
45	68.18	0.3716	0.5333	5.56067	68.22	0.3710	0.5328	5.54585	68.26	0.3703	0.5324	5.53112		
50	75.25	0.2547	0.5676	5.14057	75.29	0.2539	0.5671	5.12609	75.33	0.2532	0.5667	5.11169		
55	82.13	0.1368	0.6086	4.71736	82.18	0.1360	0.6082	4.70326	82.23	0.1352	0.6078	4.68925		
60	88.83	0.0205	0.6573	4.29927	88.88	0.0196	0.6570	4.28560	88.93	0.0187	0.6566	4.27201		
65	95.31	-0.0925	0.7153	3.89365	95.36	-0.0934	0.7150	3.88045	95.41	-0.0943	0.7147	3.86733		
70	101.55	-0.2002	0.7839	3.50676	101.60	-0.2011	0.7838	3.49407	101.66	-0.2021	0.7836	3.48145		
75	107.53	-0.3013	0.8651	3.14359	107.59	-0.3023	0.8651	3.13144	107.65	-0.3032	0.8651	3.11936		
80	113.25	-0.3948	0.9608	2.80775	113.31	-0.3957	0.9610	2.79617	113.37	-0.3967	0.9612	2.78467		
85	118.69	-0.4800	1.0730	2.50150	118.75	-0.4810	1.0735	2.49052	118.81	-0.4819	1.0740	2.47961		
90	123.83	-0.5568	1.2039	2.22580	123.90	-0.5577	1.2047	2.21543	123.96	-0.5586	1.2056	2.20513		
95	128.69	-0.6251	1.3553	1.98050	128.75	-0.6259	1.3566	1.97073	128.81	-0.6267	1.3580	1.96103		
100	133.25	-0.6852	1.5289	1.76448	133.31	-0.6860	1.5308	1.75531	133.37	-0.6867	1.5328	1.74620		
105	137.53	-0.7377	1.7256	1.57597	137.59	-0.7384	1.7284	1.56738	137.65	-0.7391	1.7312	1.55884		
110	141.55	-0.7831	1.9459	1.41276	141.60	-0.7837	1.9496	1.40471	141.66	-0.7843	1.9532	1.39671		
115	145.31	-0.8222	2.1888	1.27238	145.36	-0.8227	2.1936	1.26484	145.41	-0.8233	2.1983	1.25735		
120	148.83	-0.8556	2.4524	1.15234	148.88	-0.8561	2.4584	1.14526	148.93	-0.8565	2.4645	1.13824		
125	152.13	-0.8840	2.7335	1.05021	152.18	-0.8844	2.7409	1.04356	152.23	-0.8848	2.7483	1.03696		
130	155.25	-0.9081	3.0274	0.96375	155.29	-0.9084	3.0363	0.95748	155.33	-0.9088	3.0453	0.95127		
135	158.18	-0.9284	3.3283	0.89094	158.22	-0.9286	3.3388	0.88501	158.26	-0.9289	3.3494	0.87913		
140	160.97	-0.9454	3.6291	0.83000	161.01	-0.9456	3.6412	0.82437	161.04	-0.9458	3.6535	0.81879		
145	163.62	-0.9594	3.9220	0.77943	163.65	-0.9596	3.9358	0.77405	163.69	-0.9597	3.9497	0.76872		
150	166.16	-0.9710	4.1996	0.73793	166.19	-0.9711	4.2140	0.73277	166.22	-0.9712	4.2295	0.72765		
155	168.61	-0.9803	4.4506	0.70445	168.63	-0.9804	4.4675	0.69947	168.65	-0.9805	4.4844	0.69453		
160	170.98	-0.9876	4.6698	0.67814	171.00	-0.9877	4.6879	0.67330	171.01	-0.9877	4.7052	0.66850		
165	173.29	-0.9931	4.8488	0.65834	173.30	-0.9932	4.8680	0.65361	173.31	-0.9932	4.8873	0.64892		
170	175.55	-0.9970	4.9814	0.64454	175.56	-0.9970	5.0014	0.63988	175.57	-0.9970	5.0215	0.63527		
175	177.78	-0.9993	5.0629	0.63639	177.79	-0.9993	5.0834	0.63179	177.79	-0.9993	5.1040	0.62722		
180	180.00	-1.0000	5.0904	0.63370	180.00	-1.0000	5.1111	0.62911	180.00	-1.0000	5.1319	0.62455		

$x = 0.313$					$x = 0.314$					$x = 0.315$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.4112	7.76974	0.00	1.0000	0.4107	7.75387	0.00	1.0000	0.4103	7.73809		
5	7.79	0.9908	0.4125	7.73671	7.80	0.9907	0.4120	7.72085	7.80	0.9907	0.4115	7.70508		
10	15.58	0.9633	0.4163	7.63847	15.58	0.9632	0.4158	7.62266	15.59	0.9632	0.4153	7.60694		
15	23.33	0.9183	0.4228	7.47756	23.34	0.9182	0.4223	7.46183	23.35	0.9181	0.4218	7.44618		
20	31.03	0.8569	0.4320	7.25812	31.05	0.8567	0.4316	7.24249	31.07	0.8566	0.4311	7.22695		
25	38.68	0.7807	0.4444	6.98573	38.70	0.7804	0.4439	6.97024	38.72	0.7802	0.4434	6.95484		
30	46.24	0.6916	0.4601	6.66720	46.27	0.6913	0.4596	6.65189	46.30	0.6909	0.4591	6.63666		
35	53.72	0.5918	0.4795	6.31039	53.75	0.5913	0.4790	6.29528	53.78	0.5909	0.4786	6.28027		
40	61.08	0.4836	0.5032	5.92382	61.11	0.4831	0.5028	5.90897	61.15	0.4826	0.5023	5.89421		
45	68.30	0.3697	0.5319	5.51648	68.34	0.3691	0.5315	5.50191	68.38	0.3684	0.5310	5.48744		
50	75.38	0.2525	0.5663	5.09738	75.42	0.2517	0.5659	5.08315	75.46	0.2510	0.5654	5.06900		
55	82.28	0.1344	0.6074	4.67532	82.32	0.1336	0.6070	4.66146	82.37	0.1328	0.6066	4.64769		
60	88.98	0.0178	0.6563	4.25850	89.03	0.0169	0.6560	4.24507	89.08	0.0160	0.6556	4.23171		
65	95.47	-0.0953	0.7145	3.85428	95.52	-0.0962	0.7142	3.84131	95.57	-0.0971	0.7139	3.82842		
70	101.72	-0.2031	0.7835	3.46891	101.77	-0.2040	0.7833	3.45645	101.83	-0.2050	0.7831	3.44405		
75	107.71	-0.3042	0.8651	3.10736	107.77	-0.3052	0.8651	3.09544	107.83	-0.3062	0.8651	3.08358		
80	113.43	-0.3977	0.9614	2.77324	113.49	-0.3986	0.9616	2.76188	113.55	-0.3996	0.9618	2.75059		
85	118.87	-0.4828	1.0745	2.46877	118.93	-0.4838	1.0750	2.45800	118.99	-0.4847	1.0755	2.44729		
90	124.02	-0.5595	1.2065	2.19489	124.08	-0.5604	1.2074	2.18471	124.14	-0.5612	1.2082	2.17460		
95	128.87	-0.6276	1.3594	1.95139	128.93	-0.6284	1.3608	1.94181	128.99	-0.6292	1.3621	1.93230		
100	133.43	-0.6875	1.5348	1.73715	133.49	-0.6883	1.5368	1.72816	133.55	-0.6890	1.5388	1.71923		
105	137.71	-0.7398	1.7339	1.55036	137.77	-0.7404	1.7367	1.54194	137.83	-0.7411	1.7395	1.53357		
110	141.72	-0.7850	1.9569	1.38877	141.77	-0.7856	1.9606	1.38089	141.83	-0.7862	1.9644	1.37306		
115	145.47	-0.8238	2.2031	1.24952	145.52	-0.8243	2.2079	1.24253	145.57	-0.8249	2.2128	1.23521		
120	148.98	-0.8570	2.4705	1.13127	149.03	-0.8574	2.4766	1.12436	149.08	-0.8579	2.4827	1.11749		
125	152.28	-0.8852	2.7558	1.03042	152.32	-0.8856	2.7633	1.02392	152.37	-0.8860	2.7708	1.01747		
130	155.38	-0.9091	3.0543	0.94510	155.42	-0.9094	3.0633	0.93898	155.46	-0.9097	3.0724	0.93290		
135	158.30	-0.9292	3.3600	0.87330	158.34	-0.9294	3.3706	0.86751	158.38	-0.9297	3.3813	0.86177		
140	161.08	-0.9460	3.6657	0.81325	161.11	-0.9462	3.6781	0.80775	161.15	-0.9464	3.6904	0.80230		
145	163.72	-0.9599	3.9636	0.76343	163.75	-0.9600	3.9776	0.75818	163.78	-0.9602	3.9916	0.75298		
150	166.24	-0.9713	4.2450	0.72257	166.27	-0.9714	4.2606	0.71754	166.30	-0.9715	4.2763	0.71254		
155	168.68	-0.9805	4.5014	0.68963	168.70	-0.9806	4.5185	0.68476	168.72	-0.9807	4.5357	0.67994		
160	171.03	-0.9878	4.7245	0.66374	171.05	-0.9878	4.7429	0.65902	171.07	-0.9879	4.7614	0.65434		
165	173.33	-0.9932	4.9067	0.64427	173.34	-0.9932	4.9262	0.63965	173.35	-0.9933	4.9457	0.63508		
170	175.58	-0.9970	5.0417	0.63069	175.58	-0.9970	5.0620	0.62616	175.59	-0.9970	5.0824	0.62166		
175	177.79	-0.9993	5.1247	0.62269	177.80	-0.9993	5.1455	0.61819	177.80	-0.9993	5.1664	0.61374		
180	180.00	-1.0000	5.1527	0.62004	180.00	-1.0000	5.1737	0.61556	180.00	-1.0000	5.1947	0.61112		

$x = 0.316$					$x = 0.317$					$x = 0.318$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.4098	7.72240	0.00	1.0000	0.4093	7.70680	0.00	1.0000	0.4089	7.69129		
5	7.81	0.9907	0.4111	7.68941	7.81	0.9907	0.4106	7.67383	7.82	0.9907	0.4101	7.65833		
10	15.60	0.9632	0.4149	7.59131	15.61	0.9631	0.4144	7.57577	15.62	0.9631	0.4139	7.56031		
15	23.37	0.9180	0.4213	7.43052	23.38	0.9179	0.4209	7.41516	23.39	0.9178	0.4204	7.39978		
20	31.08	0.8564	0.4306	7.21150	31.10	0.8562	0.4302	7.19614	31.12	0.8561	0.4297	7.18087		
25	38.74	0.7800	0.4430	6.93953	38.77	0.7797	0.4425	6.92430	38.79	0.7795	0.4420	6.90917		
30	46.32	0.6906	0.4587	6.62153	46.35	0.6902	0.4582	6.60647	46.38	0.6899	0.4577	6.59151		
35	53.81	0.5905	0.4781	6.26534	53.84	0.5900	0.4777	6.25050	53.87	0.5896	0.4772	6.23574		
40	61.18	0.4820	0.5019	5.87952	61.22	0.4815	0.5014	5.86493	61.25	0.4810	0.5010	5.85041		
45	68.42	0.3678	0.5306	5.47304	68.46	0.3671	0.5301	5.45873	68.50	0.3665	0.5297	5.44450		
50	75.51	0.2503	0.5650	5.05494	75.55	0.2495	0.5646	5.04096	75.59	0.2488	0.5642	5.02705		
55	82.42	0.1319	0.6062	4.63400	82.46	0.1311	0.6058	4.62039	82.51	0.1303	0.6054	4.60685		
60	89.13	0.0151	0.6553	4.21844	89.18	0.0143	0.6549	4.20524	89.23	0.0134	0.6545	4.19212		
65	95.63	-0.0981	0.7137	3.81560	95.68	-0.0990	0.7134	3.80286	95.74	-0.0999	0.7131	3.79019		
70	101.89	-0.2060	0.7830	3.43174	101.94	-0.2069	0.7828	3.41949	102.00	-0.2079	0.7827	3.40732		
75	107.89	-0.3071	0.8651	3.07180	107.95	-0.3081	0.8651	3.06008	108.00	-0.3091	0.8651	3.04844		
80	113.61	-0.4006	0.9620	2.73937	113.67	-0.4015	0.9623	2.72821	113.73	-0.4025	0.9625	2.71713		
85	119.06	-0.4857	1.0760	2.43665	119.12	-0.4866	1.0765	2.42608	119.18	-0.4875	1.0770	2.41557		
90	124.20	-0.5621	1.2091	2.16456	124.27	-0.5630	1.2100	2.15457	124.33	-0.5639	1.2109	2.14465		
95	129.06	-0.6301	1.3635	1.92284	129.12	-0.6309	1.3649	1.91345	129.18	-0.6317	1.3663	1.90412		
100	133.61	-0.6898	1.5408	1.71036	133.67	-0.6906	1.5429	1.70155	133.73	-0.6913	1.5449	1.69279		
105	137.89	-0.7418	1.7423	1.52526	137.95	-0.7425	1.7451	1.51701	138.00	-0.7432	1.7479	1.50882		
110	141.89	-0.7868	1.9681	1.36529	141.94	-0.7874	1.9718	1.35757	142.00	-0.7880	1.9756	1.34990		
115	145.63	-0.8254	2.2176	1.22793	145.68	-0.8259	2.2225	1.22071	145.74	-0.8265	2.2273	1.21354		
120	149.13	-0.8584	2.4888	1.11067	149.18	-0.8588	2.4949	1.10390	149.23	-0.8593	2.5011	1.09719		
125	152.42	-0.8863	2.7783	1.01107	152.46	-0.8867	2.7859	1.00472	152.51	-0.8871	2.7935	0.99841		
130	155.51	-0.9100	3.0814	0.92688	155.55	-0.9103	3.0906	0.92089	155.59	-0.9106	3.0997	0.91496		
135	158.42	-0.9299	3.3920	0.85607	158.46	-0.9302	3.4028	0.85041	158.50	-0.9304	3.4136	0.84480		
140	161.18	-0.9465	3.7028	0.79588	161.22	-0.9467	3.7153	0.79152	161.25	-0.9469	3.7278	0.78619		
145	163.81	-0.9603	4.0057	0.74781	163.84	-0.9605	4.0199	0.74269	163.87	-0.9606	4.0341	0.73761		
150	166.32	-0.9716	4.2920	0.70759	166.35	-0.9718	4.3078	0.70267	166.38	-0.9719	4.3237	0.69780		
155	168.74	-0.9808	4.5529	0.67516	168.77	-0.9809	4.5702	0.67042	168.79	-0.9809	4.5876	0.66572		
160	171.08	-0.9879	4.7979	0.64679	171.10									

$x^2 = 0.319$
 $x^2 = 0.320$
 $x^2 = 0.321$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4084	7.67587	0.00	1.0000	0.4079	7.66053	0.00	1.0000	0.4075	7.64529
5	7.82	0.9907	0.4097	7.64292	7.83	0.9907	0.4092	7.62760	7.83	0.9907	0.4087	7.61237
10	15.63	0.9630	0.4135	7.54495	15.64	0.9630	0.4130	7.52967	15.65	0.9629	0.4126	7.51449
15	23.41	0.9177	0.4200	7.38449	23.42	0.9176	0.4195	7.36929	23.43	0.9175	0.4190	7.35417
20	31.14	0.8559	0.4292	7.16568	31.16	0.8558	0.4288	7.15058	31.17	0.8556	0.4283	7.13557
25	38.81	0.7792	0.4416	6.89412	38.83	0.7790	0.4411	6.87915	38.85	0.7788	0.4406	6.86427
30	46.40	0.6896	0.4573	6.57663	46.43	0.6892	0.4568	6.56183	46.46	0.6889	0.4563	6.54712
35	53.90	0.5892	0.4767	6.22156	53.93	0.5887	0.4763	6.20647	53.96	0.5883	0.4758	6.19156
40	61.29	0.4804	0.5005	5.85598	61.32	0.4799	0.5000	5.82163	61.36	0.4793	0.4996	5.80736
45	68.54	0.3659	0.5292	5.43035	68.56	0.3652	0.5288	5.41629	68.62	0.3646	0.5284	5.40230
50	75.64	0.2481	0.5637	5.01323	75.68	0.2473	0.5633	4.99948	75.72	0.2466	0.5629	4.98582
55	82.56	0.1295	0.6050	4.59340	82.61	0.1287	0.6046	4.58002	82.65	0.1279	0.6043	4.56671
60	89.28	0.0125	0.6543	4.17907	89.33	0.0116	0.6539	4.16610	89.38	0.0107	0.6536	4.15320
65	95.79	-0.1009	0.7129	3.77760	95.84	-0.1018	0.7126	3.76508	95.90	-0.1027	0.7124	3.75263
70	102.06	-0.2089	0.7825	3.39521	102.11	-0.2098	0.7824	3.38318	102.17	-0.2108	0.7822	3.37122
75	108.06	-0.3101	0.8651	3.03686	108.12	-0.3110	0.8651	3.02535	108.18	-0.3120	0.8651	3.01392
80	113.79	-0.4035	0.9627	2.76611	113.85	-0.4044	0.9629	2.69515	113.91	-0.4054	0.9631	2.68426
85	119.24	-0.4885	1.0775	2.40512	119.30	-0.4894	1.0780	2.39474	119.36	-0.4903	1.0785	2.38443
90	124.39	-0.5648	1.2118	2.13479	124.45	-0.5657	1.2127	2.12500	124.51	-0.5666	1.2136	2.11526
95	129.24	-0.6326	1.3677	1.89485	129.30	-0.6334	1.3691	1.88564	129.36	-0.6342	1.3705	1.87648
100	133.79	-0.6921	1.5469	1.68410	133.85	-0.6928	1.5489	1.67546	133.91	-0.6936	1.5510	1.66688
105	138.06	-0.7439	1.7507	1.50068	138.12	-0.7446	1.7535	1.49259	138.18	-0.7452	1.7563	1.48456
110	142.06	-0.7886	1.9793	1.34229	142.11	-0.7892	1.9831	1.33472	142.17	-0.7898	1.9869	1.32722
115	145.79	-0.8270	2.2322	1.20641	145.84	-0.8275	2.2371	1.19934	145.90	-0.8280	2.2420	1.19232
120	149.28	-0.8597	2.5072	1.09052	149.33	-0.8602	2.5134	1.08390	149.38	-0.8606	2.5197	1.07732
125	152.56	-0.8875	2.8011	0.99215	152.61	-0.8879	2.8087	0.98594	152.65	-0.8882	2.8164	0.97977
130	155.64	-0.9109	3.1089	0.90906	155.68	-0.9113	3.1181	0.90322	155.72	-0.9116	3.1274	0.89741
135	158.54	-0.9307	3.4245	0.83924	158.58	-0.9309	3.4354	0.83371	158.62	-0.9312	3.4463	0.82823
140	161.29	-0.9471	3.7404	0.78091	161.32	-0.9473	3.7530	0.77566	161.36	-0.9475	3.7657	0.77046
145	163.90	-0.9606	4.0484	0.73267	163.93	-0.9609	4.0628	0.72757	163.96	-0.9611	4.0772	0.72260
150	166.40	-0.9720	4.3396	0.69296	166.43	-0.9721	4.3556	0.68816	166.46	-0.9722	4.3717	0.68341
155	168.81	-0.9810	4.6051	0.66105	168.83	-0.9811	4.6226	0.65642	168.85	-0.9811	4.6402	0.65183
160	171.14	-0.9881	4.8361	0.63600	171.16	-0.9881	4.8550	0.63150	171.17	-0.9882	4.8740	0.62705
165	173.41	-0.9934	5.0249	0.61715	173.42	-0.9934	5.0449	0.61276	173.43	-0.9934	5.0650	0.60801
170	175.63	-0.9971	5.1648	0.60403	175.64	-0.9971	5.1856	0.59971	175.65	-0.9971	5.2066	0.59543
175	177.82	-0.9993	5.2508	0.59628	177.83	-0.9993	5.2722	0.59201	177.83	-0.9993	5.2937	0.58777
180	180.00	-1.0000	5.2799	0.59373	180.00	-1.0000	5.3014	0.58947	180.00	-1.0000	5.3230	0.58524

 $x^2 = 0.322$
 $x^2 = 0.323$
 $x^2 = 0.324$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.4070	7.63013	0.00	1.0000	0.4066	7.61505	0.00	1.0000	0.4061	7.60006
5	7.83	0.9907	0.4083	7.59723	7.84	0.9907	0.4078	7.58217	7.84	0.9906	0.4074	7.56719
10	15.65	0.9629	0.4121	7.49938	15.66	0.9629	0.4116	7.48436	15.67	0.9628	0.4112	7.46943
15	23.45	0.9174	0.4186	7.33914	23.46	0.9173	0.4181	7.32419	23.47	0.9173	0.4177	7.30933
20	31.19	0.8554	0.4278	7.12064	31.21	0.8553	0.4274	7.10580	31.23	0.8551	0.4269	7.09103
25	38.88	0.7785	0.4402	6.84948	38.90	0.7783	0.4397	6.83477	38.92	0.7780	0.4393	6.82014
30	46.48	0.6886	0.4559	6.53249	46.51	0.6882	0.4554	6.51795	46.54	0.6879	0.4550	6.50348
35	53.99	0.5879	0.4753	6.17754	54.03	0.5874	0.4749	6.16319	54.06	0.5870	0.4744	6.14893
40	61.39	0.4788	0.4991	5.79318	61.43	0.4783	0.4987	5.77907	61.46	0.4777	0.4982	5.76504
45	68.66	0.3640	0.5279	5.38839	68.70	0.3633	0.5275	5.37456	68.73	0.3627	0.5270	5.36081
50	75.77	0.2459	0.5625	4.97223	75.81	0.2452	0.5621	4.95872	75.85	0.2444	0.5617	4.94528
55	82.70	0.1271	0.6039	4.55349	82.75	0.1263	0.6035	4.54033	82.79	0.1255	0.6031	4.52726
60	89.43	0.0099	0.6583	4.14038	89.48	0.0090	0.6529	4.12763	89.53	0.0081	0.6526	4.11495
65	95.95	-0.1037	0.7121	3.74025	96.00	-0.1046	0.7118	3.72795	96.06	-0.1055	0.7116	3.71571
70	102.22	-0.2117	0.7821	3.35933	102.28	-0.2127	0.7819	3.34751	102.34	-0.2136	0.7818	3.33575
75	108.24	-0.3130	0.8651	3.00254	108.30	-0.3139	0.8651	2.99124	108.35	-0.3149	0.8651	2.98000
80	113.97	-0.4063	0.9633	2.67344	114.03	-0.4073	0.9635	2.66268	114.09	-0.4082	0.9636	2.65199
85	119.42	-0.4912	1.0790	2.37417	119.48	-0.4922	1.0795	2.36398	119.54	-0.4931	1.0800	2.35385
90	124.57	-0.5675	1.2145	2.10559	124.63	-0.5683	1.2154	2.09597	124.70	-0.5692	1.2163	2.08642
95	129.42	-0.6350	1.3718	1.86739	129.48	-0.6359	1.3732	1.85835	129.54	-0.6367	1.3747	1.84937
100	133.97	-0.6943	1.5530	1.65835	134.03	-0.6951	1.5550	1.64988	134.09	-0.6958	1.5571	1.64146
105	138.24	-0.7459	1.7591	1.47658	138.30	-0.7466	1.7620	1.46866	138.35	-0.7473	1.7648	1.46079
110	142.22	-0.7904	1.9907	1.31976	142.28	-0.7910	1.9945	1.31235	142.34	-0.7916	1.9983	1.30500
115	145.95	-0.8285	2.2469	1.18535	146.00	-0.8291	2.2519	1.17842	146.06	-0.8296	2.2569	1.17155
120	149.43	-0.8610	2.5259	1.07080	149.48	-0.8615	2.5321	1.06432	149.53	-0.8619	2.5384	1.05788
125	152.70	-0.8886	2.8241	0.97365	152.75	-0.8890	2.8318	0.96757	152.79	-0.8894	2.8396	0.96154
130	155.77	-0.9119	3.1367	0.89165	155.81	-0.9122	3.1460	0.88594	155.85	-0.9125	3.1554	0.88026
135	158.66	-0.9314	3.4573	0.82279	158.70	-0.9317	3.4683	0.81739	158.73	-0.9319	3.4794	0.81203
140	161.39	-0.9477	3.7784	0.76530	161.43	-0.9479	3.7912	0.76018	161.46	-0.9481	3.8040	0.75509
145	163.99	-0.9612	4.0916	0.71768	164.03	-0.9614	4.1062	0.71280	164.06	-0.9615	4.1207	0.70795
150	166.48	-0.9723	4.3878	0.67869	166.51	-0.9724	4.4041	0.67400	166.54	-0.9725	4.4203	0.66936
155	168.88	-0.9812	4.6579	0.64728	168.90	-0.9813	4.6757	0.64276	168.92	-0.9814	4.6935	0.63928
160	171.19	-0.9882	4.8930	0.62263	171.21	-0.9883	4.9122	0.61824	171.23	-0.9883	4.9314	0.61389
165	173.45	-0.9935	5.0852	0.60409	173.46	-0.9935	5.1055	0.59981	173.47	-0.9935	5.1258	0.59556
170	175.65	-0.9971	5.2276	0.59118	175.66	-0.9971	5.2487	0.58697	175.67	-0.9971	5.2700	0.58280
175	177.83	-0.9993	5.3152	0.58357	177.84	-0.9993	5.3368	0.57940	177.84	-0.9993	5.3586	0.57527
180	180.00	-1.0000	5.3448	0.58105	180.00	-1.0000	5.3666	0.57690	180.00	-1.0000	5.3885	0.57278

x = 0.325					x = 0.326					x = 0.327				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4057	7.58516	0.00	1.0000	0.4052	7.57033	0.00	1.0000	0.4047	7.55559		
5	7.85	0.9906	0.4069	7.55230	7.85	0.9906	0.4065	7.53749	7.85	0.9906	0.4060	7.52276		
10	15.68	0.9628	0.4107	7.45458	15.69	0.9627	0.4103	7.43981	15.70	0.9627	0.4098	7.42513		
15	23.48	0.9172	0.4172	7.29455	23.50	0.9171	0.4167	7.27985	23.51	0.9170	0.4163	7.26524		
20	31.24	0.8550	0.4265	7.07635	31.26	0.8548	0.4260	7.06176	31.28	0.8547	0.4256	7.04724		
25	38.94	0.7778	0.4388	6.80559	38.96	0.7775	0.4383	6.79112	38.99	0.7773	0.4379	6.77673		
30	46.56	0.6876	0.4545	6.48910	46.59	0.6872	0.4540	6.47479	46.61	0.6869	0.4536	6.46057		
35	54.09	0.5866	0.4740	6.13474	54.12	0.5861	0.4735	6.12063	54.15	0.5857	0.4731	6.10661		
40	61.50	0.4772	0.4978	5.75109	61.53	0.4767	0.4974	5.73722	61.57	0.4761	0.4969	5.72342		
45	68.77	0.3621	0.5266	5.34713	68.81	0.3614	0.5262	5.33353	68.85	0.3608	0.5257	5.32001		
50	75.89	0.2437	0.5612	4.93192	75.94	0.2430	0.5608	4.91863	75.98	0.2423	0.5604	4.90542		
55	82.84	0.1247	0.6027	4.51425	82.89	0.1239	0.6023	4.50132	82.93	0.1230	0.6020	4.48846		
60	89.59	0.0072	0.6523	4.10235	89.63	0.0064	0.6519	4.08981	89.68	0.0055	0.6516	4.07735		
65	96.11	-0.1064	0.7113	3.70355	96.16	-0.1074	0.7111	3.69145	96.22	-0.1083	0.7108	3.67942		
70	102.39	-0.2146	0.7816	3.32406	102.45	-0.2155	0.7815	3.31244	102.50	-0.2165	0.7813	3.30089		
75	108.41	-0.3159	0.8651	2.96883	108.47	-0.3168	0.8651	2.95772	108.53	-0.3178	0.8651	2.94667		
80	114.15	-0.4092	0.9640	2.64136	114.21	-0.4102	0.9642	2.63079	114.27	-0.4111	0.9644	2.62028		
85	119.61	-0.4940	1.0805	2.34378	119.67	-0.4949	1.0811	2.33377	119.73	-0.4959	1.0816	2.32382		
90	124.76	-0.5701	1.2172	2.07692	124.82	-0.5710	1.2181	2.06748	124.88	-0.5718	1.2190	2.05810		
95	129.61	-0.6375	1.3761	1.84045	129.67	-0.6383	1.3775	1.83158	129.73	-0.6391	1.3789	1.82276		
100	134.15	-0.6966	1.5591	1.63310	134.21	-0.6973	1.5612	1.62479	134.27	-0.6981	1.5633	1.61654		
105	138.41	-0.7479	1.7677	1.45297	138.47	-0.7486	1.7706	1.44520	138.53	-0.7493	1.7734	1.43748		
110	142.39	-0.7922	2.0021	1.29769	142.45	-0.7928	2.0060	1.29043	142.50	-0.7934	2.0098	1.28322		
115	146.11	-0.8301	2.2618	1.16472	146.16	-0.8306	2.2668	1.15794	146.22	-0.8311	2.2718	1.15121		
120	149.58	-0.8624	2.5447	1.05150	149.63	-0.8628	2.5510	1.04515	149.68	-0.8633	2.5574	1.03886		
125	152.84	-0.8897	2.8474	0.95555	152.89	-0.8901	2.8552	0.94961	152.93	-0.8905	2.8630	0.94371		
130	155.89	-0.9128	3.1648	0.87463	155.94	-0.9131	3.1742	0.86904	155.98	-0.9134	3.1837	0.86349		
135	158.77	-0.9322	3.4905	0.80671	158.81	-0.9324	3.5017	0.80144	158.85	-0.9326	3.5129	0.79620		
140	161.50	-0.9483	3.8169	0.75005	161.53	-0.9485	3.8299	0.74505	161.57	-0.9487	3.8429	0.74008		
145	164.09	-0.9617	4.1354	0.70314	164.12	-0.9618	4.1501	0.69837	164.15	-0.9620	4.1649	0.69364		
150	166.56	-0.9726	4.4367	0.66475	166.59	-0.9727	4.4531	0.66017	166.61	-0.9728	4.4696	0.65564		
155	168.94	-0.9814	4.7115	0.63383	168.96	-0.9815	4.7295	0.62942	168.99	-0.9816	4.7476	0.62505		
160	171.24	-0.9883	4.9507	0.60958	171.26	-0.9884	4.9701	0.60530	171.28	-0.9884	4.9896	0.60106		
165	173.48	-0.9935	5.1463	0.59135	173.50	-0.9936	5.1668	0.58717	173.51	-0.9936	5.1875	0.58302		
170	175.68	-0.9972	5.2913	0.57865	175.69	-0.9972	5.3127	0.57454	175.70	-0.9972	5.3342	0.57047		
175	177.85	-0.9993	5.3804	0.57117	177.85	-0.9993	5.4024	0.56710	177.86	-0.9993	5.4244	0.56306		
180	180.00	-1.0000	5.4105	0.56869	180.00	-1.0000	5.4327	0.56464	180.00	-1.0000	5.4549	0.56062		

x = 0.328					x = 0.329					x = 0.330				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.4043	7.54093	0.00	1.0000	0.4038	7.52635	0.00	1.0000	0.4034	7.51186		
5	7.86	0.9906	0.4056	7.50811	7.87	0.9906	0.4051	7.49355	7.87	0.9906	0.4047	7.47907		
10	15.71	0.9627	0.4094	7.41052	15.72	0.9626	0.4089	7.39600	15.72	0.9626	0.4085	7.38155		
15	23.52	0.9169	0.4158	7.25070	23.54	0.9168	0.4154	7.23625	23.55	0.9167	0.4149	7.22187		
20	31.30	0.8545	0.4251	7.03280	31.31	0.8543	0.4247	7.01845	31.33	0.8542	0.4242	7.00417		
25	39.01	0.7771	0.4374	6.76243	39.03	0.7768	0.4370	6.74820	39.05	0.7766	0.4365	6.73405		
30	46.64	0.6866	0.4531	6.44642	46.67	0.6862	0.4527	6.43236	46.69	0.6859	0.4522	6.41837		
35	54.18	0.5853	0.4726	6.09266	54.21	0.5849	0.4722	6.07878	54.24	0.5844	0.4717	6.06498		
40	61.64	0.4756	0.4965	5.70970	61.64	0.4751	0.4960	5.69506	61.67	0.4746	0.4956	5.68049		
45	68.89	0.3602	0.5253	5.30656	68.93	0.3595	0.5249	5.29318	68.97	0.3589	0.5245	5.27988		
50	76.02	0.2415	0.5600	4.89228	76.07	0.2408	0.5596	4.87921	76.11	0.2401	0.5592	4.86622		
55	82.98	0.1222	0.6016	4.47567	83.02	0.1214	0.6012	4.46295	83.07	0.1206	0.6008	4.45031		
60	89.73	0.0046	0.6513	4.06495	89.78	0.0038	0.6509	4.05263	89.83	0.0029	0.6506	4.04037		
65	96.27	-0.1092	0.7106	3.66746	96.32	-0.1101	0.7103	3.65556	96.37	-0.1110	0.7100	3.64374		
70	102.56	-0.2175	0.7812	3.28940	102.62	-0.2184	0.7810	3.27796	102.67	-0.2194	0.7809	3.26662		
75	108.59	-0.3187	0.8651	2.93569	108.64	-0.3197	0.8651	2.92478	108.70	-0.3207	0.8652	2.91392		
80	114.33	-0.4121	0.9647	2.60984	114.39	-0.4130	0.9649	2.59945	114.45	-0.4139	0.9651	2.58913		
85	119.79	-0.4968	1.0821	2.31393	119.85	-0.4977	1.0826	2.30410	119.91	-0.4986	1.0831	2.29433		
90	124.94	-0.5727	1.2199	2.04878	125.00	-0.5736	1.2208	2.03951	125.06	-0.5745	1.2217	2.03030		
95	129.79	-0.6399	1.3803	1.81401	129.85	-0.6408	1.3817	1.80530	129.91	-0.6416	1.3831	1.79666		
100	134.33	-0.6988	1.5653	1.60834	134.39	-0.6996	1.5674	1.60019	134.45	-0.7003	1.5695	1.59209		
105	138.59	-0.7500	1.7763	1.42981	138.64	-0.7506	1.7792	1.42220	138.70	-0.7513	1.7821	1.41463		
110	142.56	-0.7940	2.0137	1.27607	142.62	-0.7946	2.0176	1.26895	142.67	-0.7952	2.0215	1.26189		
115	146.27	-0.8317	2.2769	1.14452	146.32	-0.8322	2.2819	1.13788	146.37	-0.8327	2.2870	1.13129		
120	149.73	-0.8637	2.5638	1.03261	149.78	-0.8641	2.5701	1.02640	149.83	-0.8646	2.5766	1.02023		
125	152.98	-0.8908	2.8709	0.93785	153.02	-0.8912	2.8788	0.93203	153.07	-0.8916	2.8867	0.92626		
130	156.02	-0.9137	3.1932	0.85798	156.07	-0.9140	3.2027	0.85252	156.11	-0.9143	3.2123	0.84709		
135	158.89	-0.9329	3.5241	0.79100	158.93	-0.9331	3.5354	0.78584	158.97	-0.9334	3.5468	0.78072		
140	161.60	-0.9489	3.8559	0.73515	161.64	-0.9491	3.8690	0.73026	161.67	-0.9493	3.8822	0.72541		
145	164.18	-0.9621	4.1797	0.68894	164.21	-0.9623	4.1946	0.68428	164.24	-0.9624	4.2096	0.67966		
150	166.64	-0.9729	4.4862	0.65114	166.67	-0.9730	4.5028	0.64667	166.69	-0.9731	4.5195	0.64224		
155	169.01	-0.9817	4.7657	0.62071	169.03	-0.9817	4.7840	0.61640	169.05	-0.9818	4.8023	0.61213		
160	171.30	-0.9892	5.0092	0.59685	171.31	-0.9893	5.02.0							

$\frac{2}{x} = 0.331$
 $\frac{2}{x} = 0.332$
 $\frac{2}{x} = 0.333$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4030	7.49744	0.00	1.0000	0.4025	7.48310	0.00	1.0000	0.4021	7.46884
5	7.87	0.9906	0.4042	7.48466	7.88	0.9906	0.4038	7.45034	7.88	0.9906	0.4033	7.43609
10	15.73	0.9625	0.4080	7.36719	15.74	0.9625	0.4076	7.35290	15.75	0.9625	0.4071	7.33870
15	23.56	0.9166	0.4145	7.20755	23.58	0.9165	0.4140	7.19336	23.59	0.9164	0.4136	7.17922
20	31.35	0.8540	0.4238	6.98997	31.37	0.8539	0.4233	6.97585	31.38	0.8537	0.4229	6.96180
25	39.07	0.7764	0.4361	6.71998	39.09	0.7761	0.4356	6.70598	39.12	0.7759	0.4352	6.69206
30	46.72	0.6856	0.4518	6.40445	46.74	0.6853	0.4513	6.39061	46.77	0.6849	0.4509	6.37685
35	54.27	0.5840	0.4713	6.05126	54.30	0.5836	0.4708	6.03762	54.33	0.5831	0.4704	6.02404
40	61.70	0.4740	0.4951	5.68900	61.74	0.4735	0.4947	5.65558	61.77	0.4730	0.4943	5.64223
45	69.01	0.3583	0.5240	5.26665	69.04	0.3577	0.5236	5.25350	69.08	0.3570	0.5232	5.24041
50	76.15	0.2394	0.5588	4.85329	76.19	0.2387	0.5584	4.84044	76.24	0.2379	0.5580	4.82756
55	83.12	0.1198	0.6004	4.43773	83.16	0.1190	0.6001	4.42522	83.21	0.1182	0.5997	4.41278
60	89.88	0.0070	0.6503	4.02818	89.93	0.0012	0.6500	4.01606	89.98	0.0003	0.6496	4.00400
65	96.43	-0.1119	0.7098	3.63198	96.48	-0.1129	0.7095	3.62028	96.53	-0.1138	0.7093	3.60865
70	102.73	-0.2203	0.7807	3.25523	102.78	-0.2212	0.7806	3.24410	102.84	-0.2222	0.7805	3.23293
75	108.76	-0.3216	0.8652	2.90513	108.82	-0.3226	0.8652	2.89240	108.88	-0.3235	0.8652	2.88173
80	114.51	-0.4149	0.9653	2.57885	114.57	-0.4158	0.9655	2.56856	114.63	-0.4168	0.9658	2.55851
85	119.97	-0.4995	1.0836	2.28462	120.03	-0.5004	1.0842	2.27496	120.09	-0.5014	1.0847	2.26536
90	125.12	-0.5753	1.2276	2.02115	125.18	-0.5762	1.2235	2.01205	125.24	-0.5771	1.2244	2.00300
95	129.97	-0.6424	1.3846	1.78806	130.03	-0.6432	1.3860	1.77952	130.09	-0.6440	1.3874	1.77103
100	134.51	-0.7011	1.5716	1.58404	134.57	-0.7018	1.5737	1.57605	134.63	-0.7025	1.5758	1.56810
105	138.76	-0.7520	1.7850	1.40711	138.82	-0.7526	1.7879	1.39965	138.88	-0.7533	1.7908	1.39223
110	142.73	-0.7958	2.0254	1.25488	142.78	-0.7963	2.0293	1.24791	142.84	-0.7969	2.0332	1.24098
115	146.43	-0.8332	2.2920	1.12474	146.48	-0.8337	2.2971	1.11824	146.53	-0.8342	2.3022	1.11178
120	149.88	-0.8650	2.5830	1.01411	149.93	-0.8654	2.5894	1.00804	149.98	-0.8659	2.5959	1.00200
125	153.12	-0.8919	2.8947	0.92052	153.16	-0.8923	2.9026	0.91483	153.21	-0.8927	2.9107	0.90918
130	156.15	-0.9146	3.2219	0.84170	156.19	-0.9149	3.2316	0.83636	156.24	-0.9152	3.2413	0.83105
135	159.01	-0.9336	3.5581	0.77564	159.04	-0.9339	3.5696	0.77060	159.08	-0.9341	3.5811	0.76559
140	161.70	-0.9494	3.8954	0.72059	161.74	-0.9496	3.9086	0.71581	161.77	-0.9498	3.9219	0.71107
145	164.27	-0.9625	4.2246	0.67507	164.30	-0.9627	4.2397	0.67052	164.33	-0.9628	4.2549	0.66600
150	166.72	-0.9733	4.5363	0.63784	166.74	-0.9734	4.5532	0.63348	166.77	-0.9735	4.5701	0.62915
155	169.07	-0.9819	4.8207	0.60789	169.09	-0.9819	4.8392	0.60369	169.12	-0.9820	4.8578	0.59952
160	171.35	-0.9886	5.0865	0.58441	171.37	-0.9887	5.0984	0.58034	171.38	-0.9887	5.1084	0.57629
165	173.56	-0.9937	5.2710	0.56677	173.58	-0.9937	5.2922	0.56279	173.59	-0.9937	5.3134	0.55584
170	175.73	-0.9972	5.4212	0.55445	175.74	-0.9972	5.4433	0.55050	175.75	-0.9973	5.4654	0.54565
175	177.87	-0.9993	5.5136	0.54725	177.88	-0.9993	5.5362	0.54338	177.88	-0.9993	5.5589	0.53953
180	180.00	-1.0000	5.5448	0.54486	180.00	-1.0000	5.5676	0.54106	180.00	-1.0000	5.5904	0.53727

 $\frac{2}{x} = 0.334$
 $\frac{2}{x} = 0.335$
 $\frac{2}{x} = 0.336$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.4016	7.45465	0.00	1.0000	0.4012	7.44055	0.00	1.0000	0.4008	7.42652
5	7.89	0.9905	0.4029	7.44212	7.89	0.9905	0.4024	7.42782	7.90	0.9905	0.4020	7.41381
10	15.76	0.9624	0.4067	7.32457	15.77	0.9624	0.4063	7.31051	15.78	0.9623	0.4058	7.29654
15	23.60	0.9163	0.4132	7.16516	23.62	0.9163	0.4127	7.15117	23.63	0.9162	0.4123	7.13726
20	31.40	0.8535	0.4224	6.94784	31.42	0.8534	0.4220	6.93394	31.43	0.8532	0.4215	6.92013
25	39.14	0.7756	0.4347	6.67822	39.16	0.7754	0.4343	6.66445	39.18	0.7752	0.4339	6.65075
30	46.80	0.6846	0.4505	6.33516	46.82	0.6843	0.4500	6.32139	46.85	0.6839	0.4496	6.30801
35	54.36	0.5827	0.4700	6.01055	54.39	0.5823	0.4695	5.99712	54.42	0.5819	0.4691	5.98377
40	61.81	0.4724	0.4938	5.62896	61.84	0.4719	0.4934	5.61575	61.88	0.4714	0.4930	5.60262
45	69.12	0.3564	0.5227	5.22740	69.16	0.3558	0.5223	5.21448	69.20	0.3552	0.5219	5.20153
50	76.28	0.2372	0.5576	4.81495	76.32	0.2365	0.5572	4.80236	76.36	0.2358	0.5568	4.78973
55	83.26	0.1174	0.5993	4.40041	83.30	0.1166	0.5989	4.38811	83.35	0.1158	0.5986	4.37587
60	89.93	0.0006	0.6493	3.99201	90.08	-0.0014	0.6490	3.98008	90.13	-0.0023	0.6487	3.96823
65	96.59	-0.1147	0.7090	3.58708	96.64	-0.1156	0.7088	3.57528	96.69	-0.1165	0.7085	3.56414
70	102.89	-0.2231	0.7803	3.22182	102.95	-0.2241	0.7802	3.21073	103.00	-0.2250	0.7800	3.19980
75	108.93	-0.3245	0.8652	2.87112	108.99	-0.3254	0.8652	2.86050	109.05	-0.3264	0.8652	2.85007
80	114.69	-0.4177	0.9660	2.54843	114.75	-0.4187	0.9662	2.53830	114.81	-0.4196	0.9665	2.52843
85	120.15	-0.5023	1.0852	2.25582	120.21	-0.5032	1.0857	2.24633	120.27	-0.5041	1.0863	2.23689
90	125.30	-0.5779	1.2254	1.99401	125.37	-0.5788	1.2263	1.98567	125.43	-0.5797	1.2272	1.97689
95	130.15	-0.6448	1.3889	1.76259	130.21	-0.6456	1.3903	1.75420	130.27	-0.6464	1.3918	1.74587
100	134.69	-0.7033	1.5779	1.56021	134.75	-0.7040	1.5800	1.55236	134.81	-0.7048	1.5821	1.54457
105	138.93	-0.7540	1.7937	1.38485	138.99	-0.7546	1.7967	1.37775	139.05	-0.7553	1.7996	1.37025
110	142.89	-0.7975	2.0371	1.23411	142.95	-0.7981	2.0411	1.22728	143.00	-0.7987	2.0450	1.22049
115	146.59	-0.8347	2.3074	1.10536	146.64	-0.8352	2.3125	1.09859	146.69	-0.8357	2.3177	1.09266
120	150.03	-0.8663	2.6024	0.99601	150.08	-0.8667	2.6089	0.99006	150.13	-0.8672	2.6155	0.98415
125	153.26	-0.8930	2.9187	0.90357	153.30	-0.8934	2.9268	0.89800	153.35	-0.8937	2.9349	0.89247
130	156.28	-0.9155	3.2510	0.82578	156.32	-0.9158	3.2608	0.82055	156.36	-0.9161	3.2706	0.81535
135	159.12	-0.9348	3.5926	0.76062	159.16	-0.9346	3.6041	0.75569	159.20	-0.9348	3.6158	0.75080
140	161.81	-0.9500	3.9353	0.70836	161.84	-0.9502	3.9487	0.70169	161.88	-0.9504	3.9622	0.69705
145	164.36	-0.9630	4.2701	0.66152	164.39	-0.9631	4.2854	0.65707	164.42	-0.9633	4.3007	0.65265
150	166.80	-0.9736	4.5871	0.62486	166.82	-0.9737	4.6042	0.62060	166.85	-0.9738	4.6213	0.61637
155	169.14	-0.9821	4.8764	0.59538	169.16	-0.9822	4.8952	0.58727	169.18	-0.9822	4.9140	0.58270
160	171.40	-0.9888	5.1285	0.57228	171.42	-0.9888	5.1487	0.56829	171.43	-0.9888	5.1690	0.56854
165	173.60	-0.9938	5.3347	0.55492	173.62	-0.9938	5.3561	0.55103	173.63	-0.9938	5.3776	0.54717
170	175.76	-0.9973	5.4876	0.54264	175.77	-0.9973	5.5099	0.53902	175.78	-0.9973	5.5323	0.53523
175	177.89	-0.9993	5.5816	0.53572	177.89	-0.9993	5.6045	0.53194	177.90	-0.9993	5.6275	0.52819
180	180.00	-1.0000	5.6134	0.53337	180.00	-1.0000	5.6365	0.52960	180.00	-1.0000	5.6596	0.52586

2 x = 0.337					2 x = 0.338					2 x = 0.339				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.4003	7.41256	0.00	1.0000	0.3999	7.39868	0.00	1.0000	0.3994	7.38488	0.00	1.0000
5	7.90	0.9905	0.4016	7.37987	7.90	0.9905	0.4011	7.36600	7.91	0.9905	0.4007	7.35221	7.91	0.9905
10	15.79	0.9623	0.4054	7.28263	15.79	0.9622	0.4049	7.26881	15.80	0.9622	0.4045	7.25505	15.80	0.9622
15	23.64	0.9161	0.4118	7.12342	23.65	0.9160	0.4114	7.10966	23.67	0.9159	0.4110	7.09597	23.67	0.9159
20	31.45	0.8531	0.4211	6.90638	31.47	0.8529	0.4207	6.89271	31.49	0.8528	0.4202	6.87912	31.49	0.8528
25	39.20	0.7743	0.4334	6.63713	39.22	0.7747	0.4330	6.62359	39.24	0.7745	0.4325	6.61011	39.24	0.7745
30	46.87	0.6836	0.4491	6.32254	46.90	0.6833	0.4487	6.30915	46.92	0.6830	0.4482	6.29582	46.92	0.6830
35	54.45	0.5814	0.4686	5.97048	54.48	0.5810	0.4682	5.95727	54.51	0.5806	0.4678	5.94413	54.51	0.5806
40	61.91	0.4709	0.4925	5.58955	61.94	0.4703	0.4921	5.57657	61.98	0.4698	0.4917	5.56365	61.98	0.4698
45	69.24	0.3545	0.5215	5.18878	69.27	0.3539	0.5211	5.17605	69.31	0.3533	0.5206	5.16338	69.31	0.3533
50	76.40	0.2351	0.5563	4.77722	76.45	0.2344	0.5559	4.76478	76.49	0.2336	0.5555	4.75241	76.49	0.2336
55	83.39	0.1150	0.5982	4.36370	83.44	0.1142	0.5978	4.35159	83.49	0.1134	0.5975	4.33955	83.49	0.1134
60	90.18	-0.0032	0.6483	3.95644	90.23	-0.0040	0.6480	3.94471	90.28	-0.0049	0.6477	3.93304	90.28	-0.0049
65	96.74	-0.1174	0.7083	3.56277	96.80	-0.1183	0.7080	3.55145	96.85	-0.1193	0.7078	3.54020	96.85	-0.1193
70	103.06	-0.2260	0.7799	3.18888	103.11	-0.2269	0.7797	3.17802	103.17	-0.2278	0.7796	3.16721	103.17	-0.2278
75	109.11	-0.3273	0.8652	2.83964	109.16	-0.3283	0.8652	2.82927	109.22	-0.3292	0.8653	2.81895	109.22	-0.3292
80	114.87	-0.4205	0.9667	2.51851	114.93	-0.4215	0.9669	2.50865	114.99	-0.4224	0.9671	2.49885	114.99	-0.4224
85	120.33	-0.5050	1.0868	2.22751	120.39	-0.5059	1.0873	2.21819	120.45	-0.5068	1.0878	2.20892	120.45	-0.5068
90	125.49	-0.5805	1.2281	1.96736	125.55	-0.5814	1.2291	1.95858	125.61	-0.5822	1.2300	1.94985	125.61	-0.5822
95	130.33	-0.6472	1.3932	1.73758	130.39	-0.6480	1.3947	1.72935	130.45	-0.6488	1.3961	1.72117	130.45	-0.6488
100	134.87	-0.7055	1.5842	1.53682	134.93	-0.7062	1.5863	1.52912	134.99	-0.7069	1.5884	1.52147	134.99	-0.7069
105	139.11	-0.7559	1.8026	1.36302	139.16	-0.7566	1.8055	1.35584	139.22	-0.7572	1.8085	1.34870	139.22	-0.7572
110	143.06	-0.7993	2.0490	1.21375	143.11	-0.7998	2.0530	1.20705	143.17	-0.8004	2.0570	1.20040	143.17	-0.8004
115	146.74	-0.8362	2.3228	1.08637	146.80	-0.8367	2.3280	1.08013	146.85	-0.8372	2.3322	1.07393	146.85	-0.8372
120	150.18	-0.8676	2.6220	0.97828	150.23	-0.8680	2.6286	0.97245	150.28	-0.8685	2.6353	0.96666	150.28	-0.8685
125	153.39	-0.8941	2.9430	0.88698	153.44	-0.8945	2.9512	0.88152	153.49	-0.8948	2.9594	0.87611	153.49	-0.8948
130	156.40	-0.9164	3.2804	0.81020	156.45	-0.9167	3.2903	0.80508	156.49	-0.9170	3.3002	0.80000	156.49	-0.9170
135	159.24	-0.9350	3.6274	0.74594	159.27	-0.9353	3.6391	0.74111	159.31	-0.9355	3.6509	0.73632	159.31	-0.9355
140	161.91	-0.9506	3.9758	0.69245	161.94	-0.9508	3.9894	0.68788	161.98	-0.9509	4.0030	0.68335	161.98	-0.9509
145	164.45	-0.9634	4.3161	0.64827	164.48	-0.9635	4.3316	0.64392	164.51	-0.9637	4.3472	0.63961	164.51	-0.9637
150	166.87	-0.9739	4.6386	0.61217	166.90	-0.9740	4.6559	0.60801	166.92	-0.9741	4.6733	0.60388	166.92	-0.9741
155	169.20	-0.9823	4.9329	0.58316	169.22	-0.9824	4.9519	0.57915	169.24	-0.9824	4.9710	0.57517	169.24	-0.9824
160	171.45	-0.9889	5.1894	0.56042	171.47	-0.9889	5.2099	0.56553	171.49	-0.9890	5.2305	0.56268	171.49	-0.9890
165	173.64	-0.9938	5.3992	0.54335	173.65	-0.9939	5.4210	0.53955	173.67	-0.9939	5.4428	0.53579	173.67	-0.9939
170	175.79	-0.9973	5.5549	0.53147	175.79	-0.9973	5.5775	0.52774	175.80	-0.9973	5.6002	0.52404	175.80	-0.9973
175	177.90	-0.9993	5.6506	0.52447	177.90	-0.9993	5.6738	0.52078	177.91	-0.9993	5.6971	0.51711	177.91	-0.9993
180	180.00	-1.0000	5.6829	0.52215	180.00	-1.0000	5.7063	0.51848	180.00	-1.0000	5.7298	0.51483	180.00	-1.0000

2 x = 0.340					2 x = 0.341					2 x = 0.342				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.3990	7.37115	0.00	1.0000	0.3986	7.35749	0.00	1.0000	0.3982	7.34390	0.00	1.0000
5	7.91	0.9905	0.4003	7.33849	7.92	0.9905	0.3998	7.32484	7.92	0.9905	0.3994	7.31127	7.92	0.9905
10	15.81	0.9622	0.4041	7.24137	15.82	0.9621	0.4036	7.22776	15.83	0.9621	0.4032	7.21423	15.83	0.9621
15	23.68	0.9158	0.4105	7.08235	23.69	0.9157	0.4101	7.06881	23.71	0.9156	0.4097	7.05534	23.71	0.9156
20	31.50	0.8526	0.4198	6.86559	31.52	0.8525	0.4194	6.85214	31.54	0.8523	0.4189	6.83876	31.54	0.8523
25	39.27	0.7742	0.4321	6.59671	39.29	0.7740	0.4317	6.58338	39.31	0.7737	0.4312	6.57012	39.31	0.7737
30	46.95	0.6826	0.4478	6.28257	46.98	0.6823	0.4474	6.26939	47.00	0.6820	0.4469	6.25628	47.00	0.6820
35	54.54	0.5801	0.4673	5.93107	54.57	0.5797	0.4669	5.91807	54.60	0.5793	0.4665	5.90513	54.60	0.5793
40	62.01	0.4693	0.4912	5.55080	62.05	0.4688	0.4908	5.53801	62.08	0.4682	0.4904	5.52530	62.08	0.4682
45	69.35	0.3527	0.5202	5.15078	69.39	0.3520	0.5198	5.13825	69.43	0.3514	0.5194	5.12578	69.43	0.3514
50	76.53	0.2329	0.5551	4.74010	76.57	0.2322	0.5547	4.72786	76.61	0.2315	0.5544	4.71568	76.61	0.2315
55	83.53	0.1127	0.5971	4.32758	83.58	0.1119	0.5967	4.31567	83.62	0.1111	0.5964	4.30382	83.62	0.1111
60	90.33	-0.0058	0.6474	3.92144	90.38	-0.0066	0.6471	3.90990	90.43	-0.0075	0.6467	3.89842	90.43	-0.0075
65	96.90	-0.1202	0.7075	3.52901	96.95	-0.1211	0.7073	3.51788	97.01	-0.1220	0.7071	3.50680	97.01	-0.1220
70	103.23	-0.2288	0.7795	3.15647	103.26	-0.2297	0.7793	3.14579	103.34	-0.2307	0.7792	3.13516	103.34	-0.2307
75	109.28	-0.3302	0.8653	2.80869	109.34	-0.3311	0.8653	2.79849	109.39	-0.3321	0.8653	2.78834	109.39	-0.3321
80	115.05	-0.4233	0.9674	2.48910	115.11	-0.4243	0.9676	2.47941	115.16	-0.4252	0.9678	2.46977	115.16	-0.4252
85	120.51	-0.5077	1.0884	2.19970	120.57	-0.5086	1.0889	2.19054	120.63	-0.5095	1.0894	2.18143	120.63	-0.5095
90	125.67	-0.5831	1.2309	1.94117	125.73	-0.5840	1.2318	1.93255	125.79	-0.5848	1.2328	1.92397	125.79	-0.5848
95	130.51	-0.6496	1.3976	1.71303	130.57	-0.6504	1.3990	1.70494	130.63	-0.6512	1.4005	1.69691	130.63	-0.6512
100	135.05	-0.7077	1.5906	1.51386	135.11	-0.7084	1.5927	1.50631	135.16	-0.7091	1.5949	1.49880	135.16	-0.7091
105	139.28	-0.7579	1.8115	1.34161	139.34	-0.7586	1.8145	1.33456	139.39	-0.7592	1.8175	1.32755	139.39	-0.7592
110	143.23	-0.8010	2.0610	1.19379	143.28	-0.8016	2.0650	1.18722	143.34	-0.8021	2.0690	1.18070	143.34	-0.8021
115	146.90	-0.8377	2.3385	1.06777										

$$x = 0.343$$

$$x = 0.344$$

$$x = 0.345$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3977	7.30309	0.00	1.0000	0.3973	7.31695	0.00	1.0000	0.3969	7.30358
5	7.93	0.9904	0.3990	7.29777	7.93	0.9904	0.3986	7.28434	7.93	0.9904	0.3981	7.27098
10	15.84	0.9620	0.4028	7.20077	15.85	0.9620	0.4024	7.18737	15.85	0.9620	0.4019	7.17405
15	23.72	0.9155	0.4092	7.04194	23.73	0.9154	0.4088	7.02861	23.74	0.9154	0.4084	7.01535
20	31.55	0.8521	0.4185	6.82545	31.57	0.8520	0.4181	6.81221	31.59	0.8518	0.4176	6.79904
25	39.33	0.7735	0.4308	6.55692	39.35	0.7733	0.4304	6.54380	39.37	0.7730	0.4299	6.53075
30	47.03	0.6816	0.4465	6.24323	47.05	0.6813	0.4461	6.23026	47.08	0.6810	0.4456	6.21755
35	54.63	0.5789	0.4660	5.89227	54.66	0.5785	0.4656	5.87947	54.69	0.5780	0.4652	5.86675
40	62.11	0.4677	0.4900	5.51265	62.15	0.4672	0.4895	5.50006	62.18	0.4667	0.4891	5.48755
45	69.46	0.3508	0.5190	5.11338	69.50	0.3502	0.5186	5.10105	69.54	0.3496	0.5181	5.08878
50	76.66	0.2306	0.5540	4.70357	76.70	0.2301	0.5536	4.69152	76.74	0.2294	0.5532	4.67954
55	83.67	0.1103	0.5960	4.29203	83.71	0.1095	0.5956	4.28031	83.76	0.1087	0.5953	4.26865
60	90.48	-0.0083	0.6464	3.88760	90.53	-0.0092	0.6461	3.87564	90.58	-0.0100	0.6458	3.86434
65	97.06	-0.1229	0.7068	3.49579	97.11	-0.1238	0.7066	3.48484	97.16	-0.1247	0.7063	3.47395
70	103.39	-0.2316	0.7791	3.12480	103.45	-0.2325	0.7789	3.11409	103.50	-0.2335	0.7789	3.10363
75	109.45	-0.3330	0.8653	2.77825	109.51	-0.3339	0.8653	2.76822	109.57	-0.3349	0.8654	2.75824
80	115.22	-0.4261	0.9681	2.46018	115.28	-0.4271	0.9683	2.45065	115.34	-0.4287	0.9686	2.44117
85	120.69	-0.5104	1.0900	2.17237	120.75	-0.5113	1.0905	2.16336	120.81	-0.5122	1.0910	2.15440
90	125.85	-0.5857	1.2397	1.91585	125.91	-0.5865	1.2347	1.90697	125.97	-0.5874	1.2356	1.89855
95	130.69	-0.6520	1.4020	1.68892	130.75	-0.6528	1.4034	1.68098	130.81	-0.6536	1.4049	1.67308
100	135.22	-0.7099	1.5970	1.49133	135.28	-0.7106	1.5992	1.48391	135.34	-0.7113	1.6013	1.47654
105	139.45	-0.7599	1.8205	1.32060	139.51	-0.7605	1.8235	1.31368	139.57	-0.7612	1.8265	1.30681
110	143.39	-0.8027	2.0731	1.17422	143.45	-0.8033	2.0771	1.16778	143.50	-0.8039	2.0817	1.16158
115	147.06	-0.8392	2.3542	1.04953	147.11	-0.8397	2.3595	1.04354	147.16	-0.8402	2.3649	1.03758
120	150.48	-0.8702	2.6619	0.94390	150.53	-0.8706	2.6687	0.93831	150.58	-0.8710	2.6754	0.93276
125	153.67	-0.8962	2.9925	0.85483	153.71	-0.8966	3.0008	0.84960	153.76	-0.8970	3.0092	0.84441
130	156.66	-0.9181	3.3403	0.78004	156.70	-0.9184	3.3504	0.77513	156.74	-0.9187	3.3606	0.77027
135	159.46	-0.9365	3.6984	0.71752	159.50	-0.9367	3.7104	0.71290	159.54	-0.9369	3.7225	0.70832
140	162.11	-0.9517	4.0582	0.66555	162.15	-0.9519	4.0722	0.66118	162.18	-0.9520	4.0862	0.65685
145	164.63	-0.9642	4.4101	0.62267	164.66	-0.9644	4.4260	0.61852	164.69	-0.9645	4.4419	0.61459
150	167.03	-0.9745	4.7436	0.58767	167.05	-0.9746	4.7613	0.58369	167.08	-0.9747	4.7792	0.57975
155	169.33	-0.9827	5.0482	0.55955	169.35	-0.9828	5.0677	0.55573	169.37	-0.9828	5.0873	0.55193
160	171.55	-0.9892	5.3138	0.53754	171.57	-0.9892	5.3348	0.53383	171.59	-0.9892	5.3560	0.53015
165	173.72	-0.9940	5.5311	0.52101	173.73	-0.9940	5.5534	0.51739	173.74	-0.9940	5.5758	0.51380
170	175.84	-0.9974	5.6923	0.50952	175.85	-0.9974	5.7155	0.50597	175.85	-0.9974	5.7389	0.50243
175	177.93	-0.9993	5.7914	0.50275	177.93	-0.9993	5.8153	0.49923	177.93	-0.9994	5.8393	0.49574
180	180.00	-1.0000	5.8249	0.50051	180.00	-1.0000	5.8490	0.49701	180.00	-1.0000	5.8732	0.49352

$$x = 0.346$$

$$x = 0.347$$

$$x = 0.348$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3964	7.29028	0.00	1.0000	0.3960	7.27704	0.00	1.0000	0.3956	7.26388
5	7.94	0.9904	0.3977	7.25769	7.94	0.9904	0.3973	7.24447	7.95	0.9904	0.3969	7.23132
10	15.86	0.9619	0.4015	7.16080	15.87	0.9619	0.4011	7.14762	15.88	0.9618	0.4007	7.13450
15	23.76	0.9153	0.4079	7.00216	23.77	0.9152	0.4075	6.98904	23.78	0.9151	0.4071	6.97593
20	31.61	0.8517	0.4172	6.78594	31.62	0.8515	0.4168	6.77291	31.64	0.8514	0.4163	6.75994
25	39.39	0.7728	0.4295	6.51777	39.42	0.7726	0.4291	6.50485	39.44	0.7723	0.4287	6.49200
30	47.10	0.6807	0.4452	6.20451	47.13	0.6803	0.4448	6.19174	47.15	0.6800	0.4444	6.17904
35	54.72	0.5776	0.4648	5.85408	54.75	0.5772	0.4643	5.84149	54.78	0.5768	0.4639	5.82896
40	62.22	0.4661	0.4887	5.47510	62.25	0.4656	0.4883	5.46271	62.28	0.4651	0.4878	5.45039
45	69.58	0.3489	0.5177	5.07657	69.62	0.3483	0.5173	5.06443	69.65	0.3477	0.5169	5.05235
50	76.78	0.2287	0.5528	4.66761	76.82	0.2279	0.5524	4.65575	76.87	0.2272	0.5520	4.64396
55	83.81	0.1079	0.5949	4.25705	83.85	0.1071	0.5945	4.24551	83.90	0.1063	0.5942	4.23403
60	90.62	-0.0109	0.6455	3.85310	90.67	-0.0118	0.6452	3.84193	90.72	-0.0126	0.6448	3.83081
65	97.22	-0.1256	0.7061	3.46311	97.27	-0.1265	0.7058	3.45233	97.32	-0.1274	0.7056	3.44161
70	103.56	-0.2344	0.7786	3.09323	103.61	-0.2353	0.7785	3.08289	103.67	-0.2362	0.7784	3.07261
75	109.62	-0.3358	0.8654	2.74831	109.68	-0.3368	0.8654	2.73844	109.74	-0.3377	0.8654	2.72862
80	115.40	-0.4289	0.9688	2.43175	115.46	-0.4299	0.9690	2.42237	115.52	-0.4308	0.9693	2.41305
85	120.87	-0.5131	1.0916	2.14549	120.93	-0.5140	1.0921	2.13664	120.99	-0.5149	1.0927	2.12783
90	126.03	-0.5882	1.2365	1.89017	126.09	-0.5891	1.2375	1.88184	126.15	-0.5899	1.2384	1.87356
95	130.87	-0.6544	1.4064	1.66523	130.93	-0.6552	1.4079	1.65743	130.99	-0.6560	1.4094	1.64968
100	135.40	-0.7120	1.6035	1.46921	135.46	-0.7127	1.6057	1.46193	135.52	-0.7135	1.6078	1.45469
105	139.62	-0.7618	1.8295	1.29998	139.68	-0.7624	1.8326	1.29319	139.74	-0.7631	1.8356	1.28645
110	143.56	-0.8044	2.0853	1.15502	143.61	-0.8050	2.0894	1.14870	143.67	-0.8056	2.0935	1.14243
115	147.22	-0.8407	2.3702	1.03166	147.27	-0.8412	2.3755	1.02578	147.32	-0.8417	2.3809	1.01994
120	150.62	-0.8714	2.6822	0.92724	150.67	-0.8718	2.6890	0.92176	150.72	-0.8723	2.6959	0.91632
125	153.81	-0.8973	3.0176	0.83926	153.85	-0.8977	3.0260	0.83414	153.90	-0.8980	3.0345	0.82905
130	156.78	-0.9190	3.3703	0.76513	156.82	-0.9193	3.3810	0.76064	156.87	-0.9196	3.3913	0.75587
135	159.58	-0.9371	3.7346	0.70377	159.62	-0.9374	3.7468	0.69926	159.65	-0.9376	3.7590	0.69477
140	162.22	-0.9522	4.1003	0.65255	162.25	-0.9524	4.1144	0.64827	162.28	-0.9526	4.1286	0.64403
145	164.72	-0.9646	4.4580	0.61030	164.75	-0.9648	4.4741	0.60624	164.78	-0.9649	4.4903	0.60221
150	167.10	-0.9748	4.7971	0.57583	167.13	-0.9749	4.8152	0.57194	167.15	-0.9750	4.8333	0.56809
155	169.39	-0.9829	5.1070	0.54816	169.42	-0.9830	5.1268	0.54441	169.44	-0.9831	5.1467	0.54470
160	171.61	-0.9893	5.3772	0.52649	171.62	-0.9893	5.3986	0.52287	171.64	-0.9894	5.4200	0.51927
165	173.76	-0.9941	5.5984	0.51024	173.77	-0.9941	5.6210	0.50670	173.78	-0.9941	5.6438	0.50319
170	175.86	-0.9974	5.7624	0.49693	175.87	-0.9974	5.7860	0.49346	175.88	-0.9974	5.8097	0.48920
175	177.94	-0.9994	5.8634	0.49227	177.94	-0.9994	5.8876	0.48883	177.95	-0.9994	5.9119	0.48842
180	180.00	-1.0000	5.8975	0.49007	180.00	-1.0000	5.9219	0.48665	180.00	-1.0000	5.9464	0.48325

$x = 0.349$					$x = 0.350$					$x = 0.351$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.3952	7.25079	0.00	1.0000	0.3948	7.23776	0.00	1.0000	0.3943	7.22480		
5	7.95	0.9904	0.3964	7.21824	7.96	0.9904	0.3960	7.20522	7.96	0.9904	0.3956	7.19228		
10	15.89	0.9618	0.4002	7.12146	15.90	0.9618	0.3998	7.10848	15.90	0.9617	0.3994	7.09557		
15	23.80	0.9150	0.4067	6.96300	23.81	0.9149	0.4062	6.95009	23.82	0.9148	0.4058	6.93724		
20	31.66	0.8512	0.4159	6.74705	31.67	0.8511	0.4155	6.73422	31.69	0.8509	0.4151	6.72145		
25	39.46	0.7721	0.4282	6.47922	39.48	0.7719	0.4278	6.46650	39.50	0.7716	0.4274	6.45385		
30	47.18	0.6797	0.4439	6.16640	47.21	0.6794	0.4435	6.15382	47.23	0.6790	0.4431	6.14131		
35	54.81	0.5763	0.4635	5.81699	54.84	0.5759	0.4631	5.80409	54.87	0.5755	0.4626	5.79176		
40	62.32	0.4646	0.4874	5.43813	62.35	0.4641	0.4870	5.42593	62.38	0.4635	0.4866	5.41380		
45	69.69	0.3471	0.5165	5.04034	69.73	0.3465	0.5161	5.02838	69.77	0.3458	0.5157	5.01649		
50	76.91	0.2265	0.5516	4.63222	76.95	0.2258	0.5512	4.62054	76.99	0.2251	0.5508	4.60893		
55	83.94	0.1055	0.5938	4.22261	83.99	0.1047	0.5935	4.21125	84.03	0.1040	0.5931	4.19995		
60	90.77	-0.0135	0.6445	3.81974	90.82	-0.0143	0.6442	3.80874	90.87	-0.0152	0.6439	3.79779		
65	97.37	-0.1283	0.7054	3.43094	97.42	-0.1292	0.7051	3.42033	97.48	-0.1301	0.7049	3.40978		
70	103.72	-0.2372	0.7782	3.06237	103.77	-0.2381	0.7781	3.05220	103.83	-0.2390	0.7780	3.04207		
75	109.79	-0.3386	0.8654	2.71886	109.85	-0.3396	0.8655	2.70915	109.91	-0.3405	0.8655	2.69949		
80	115.58	-0.4317	0.9695	2.40378	115.64	-0.4326	0.9698	2.39456	115.69	-0.4336	0.9700	2.38539		
85	121.05	-0.5158	1.0932	2.11907	121.11	-0.5167	1.0937	2.11037	121.17	-0.5176	1.0943	2.10170		
90	126.21	-0.5908	1.2394	1.86533	126.27	-0.5916	1.2403	1.85714	126.33	-0.5925	1.2413	1.84900		
95	131.05	-0.6567	1.4109	1.64197	131.11	-0.6575	1.4123	1.63430	131.17	-0.6583	1.4138	1.62668		
100	135.58	-0.7142	1.6100	1.44749	135.64	-0.7149	1.6122	1.44034	135.69	-0.7156	1.6144	1.43323		
105	139.79	-0.7637	1.8387	1.27975	139.85	-0.7644	1.8417	1.27308	139.91	-0.7650	1.8448	1.26647		
110	143.72	-0.8061	2.0976	1.13619	143.77	-0.8067	2.1017	1.13000	143.83	-0.8073	2.1059	1.12384		
115	147.37	-0.8422	2.3863	1.01414	147.42	-0.8427	2.3917	1.00837	147.48	-0.8432	2.3971	1.00265		
120	150.77	-0.8727	2.7027	0.91091	150.82	-0.8731	2.7096	0.90554	150.87	-0.8735	2.7165	0.90021		
125	153.94	-0.8983	3.0430	0.82400	153.99	-0.8987	3.0516	0.81899	154.03	-0.8990	3.0602	0.81401		
130	156.91	-0.9199	3.4017	0.75114	156.95	-0.9202	3.4120	0.74644	156.99	-0.9204	3.4224	0.74178		
135	159.69	-0.9378	3.7712	0.68932	159.73	-0.9381	3.7835	0.68590	159.77	-0.9383	3.7959	0.68151		
140	162.32	-0.9528	4.1429	0.63982	162.35	-0.9529	4.1572	0.63565	162.38	-0.9531	4.1715	0.63150		
145	164.81	-0.9650	4.5065	0.59820	164.84	-0.9652	4.5228	0.59423	164.87	-0.9653	4.5392	0.59029		
150	167.18	-0.9751	4.8514	0.56426	167.21	-0.9752	4.8697	0.56046	167.23	-0.9753	4.8881	0.55669		
155	169.46	-0.9831	5.1667	0.53702	169.48	-0.9832	5.1867	0.53336	169.50	-0.9833	5.2069	0.52973		
160	171.66	-0.9894	5.4416	0.51570	171.67	-0.9895	5.4632	0.51216	171.69	-0.9895	5.4850	0.50864		
165	173.80	-0.9941	5.6666	0.49971	173.81	-0.9942	5.6896	0.49625	173.82	-0.9942	5.7126	0.49282		
170	175.89	-0.9974	5.8336	0.48639	175.90	-0.9974	5.8575	0.48519	175.90	-0.9974	5.8816	0.48182		
175	177.95	-0.9994	5.9363	0.48204	177.96	-0.9994	5.9609	0.47868	177.96	-0.9994	5.9856	0.47534		
180	180.00	-1.0000	5.9710	0.47987	180.00	-1.0000	5.9958	0.47653	180.00	-1.0000	6.0207	0.47320		

$x = 0.352$					$x = 0.353$					$x = 0.354$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.3939	7.21191	0.00	1.0000	0.3935	7.19908	0.00	1.0000	0.3931	7.18632		
5	7.96	0.9904	0.3952	7.17940	7.97	0.9903	0.3948	7.16658	7.97	0.9903	0.3943	7.15383		
10	15.91	0.9617	0.3990	7.08272	15.92	0.9616	0.3986	7.06994	15.93	0.9616	0.3981	7.05723		
15	23.83	0.9147	0.4054	6.92445	23.85	0.9146	0.4050	6.91173	23.86	0.9145	0.4046	6.89908		
20	31.71	0.8507	0.4147	6.70875	31.72	0.8506	0.4142	6.69612	31.74	0.8504	0.4138	6.68355		
25	39.52	0.7714	0.4270	6.44126	39.54	0.7712	0.4265	6.42874	39.56	0.7709	0.4261	6.41628		
30	47.26	0.6787	0.4427	6.12887	47.28	0.6784	0.4422	6.11649	47.31	0.6781	0.4418	6.10417		
35	54.90	0.5751	0.4622	5.77948	54.92	0.5747	0.4618	5.76727	54.95	0.5742	0.4614	5.75512		
40	62.42	0.4630	0.4862	5.40173	62.45	0.4625	0.4858	5.38972	62.49	0.4620	0.4854	5.37778		
45	69.80	0.3452	0.5153	5.00466	69.84	0.3446	0.5149	4.99289	69.88	0.3440	0.5145	4.98118		
50	77.03	0.2244	0.5504	4.59737	77.07	0.2237	0.5500	4.58588	77.12	0.2230	0.5497	4.57444		
55	84.08	0.1032	0.5927	4.18871	84.12	0.1024	0.5924	4.17753	84.17	0.1016	0.5920	4.16640		
60	90.92	-0.0160	0.6436	3.78690	90.97	-0.0169	0.6433	3.77607	91.02	-0.0177	0.6430	3.76529		
65	97.53	-0.1310	0.7046	3.39928	97.58	-0.1319	0.7044	3.38884	97.63	-0.1328	0.7042	3.37845		
70	103.88	-0.2400	0.7778	3.03200	103.94	-0.2409	0.7777	3.02199	103.99	-0.2418	0.7776	3.01202		
75	109.97	-0.3415	0.8655	2.68988	110.02	-0.3424	0.8655	2.68032	110.08	-0.3433	0.8656	2.67081		
80	115.75	-0.4345	0.9702	2.37627	115.81	-0.4354	0.9705	2.36720	115.87	-0.4363	0.9707	2.35818		
85	121.23	-0.5185	1.0948	2.09309	121.29	-0.5194	1.0954	2.08453	121.35	-0.5203	1.0959	2.07601		
90	126.39	-0.5933	1.2423	1.84091	126.45	-0.5941	1.2432	1.83286	126.51	-0.5950	1.2442	1.82486		
95	131.23	-0.6591	1.4153	1.61911	131.29	-0.6599	1.4169	1.61157	131.35	-0.6607	1.4184	1.60409		
100	135.75	-0.7163	1.6166	1.42616	135.81	-0.7170	1.6188	1.41913	135.87	-0.7178	1.6210	1.41215		
105	139.97	-0.7657	1.8479	1.25989	140.02	-0.7663	1.8510	1.25335	140.08	-0.7669	1.8541	1.24685		
110	143.88	-0.8078	2.1100	1.11772	143.94	-0.8084	2.1142	1.11164	143.99	-0.8089	2.1184	1.10560		
115	147.53	-0.8437	2.4026	0.99696	147.58	-0.8441	2.4080	0.99131	147.63	-0.8446	2.4135	0.98569		
120	150.92	-0.8739	2.7234	0.89491	150.97	-0.8743	2.7304	0.88965	151.02	-0.8747	2.7374	0.88442		
125	154.08	-0.8994	3.0688	0.80907	154.12	-0.8997	3.0774	0.80415	154.17	-0.9001	3.0861	0.79928		
130	157.03	-0.9207	3.4329	0.73715	157.07	-0.9210	3.4434	0.73255	157.12	-0.9213	3.4539	0.72798		
135	159.80	-0.9385	3.8083	0.67716	159.84	-0.9387	3.8208	0.67283	159.88	-0.9390	3.8333	0.66854		
140	162.42	-0.9533	4.1860	0.62738	162.45	-0.9535	4.2005	0.62329	162.49	-0.9536	4.2151	0.61923		
145	164.90	-0.9655	4.5557	0.58637	164.92	-0.9656	4.5722	0.58249	164.95	-0.9657	4.5889	0.57863		
150	167.26	-0.9754	4.9065	0.55295	167.28	-0.9755	4.9250	0.54923	167.31	-0.9756	4.9436	0.54555		
155	169.52	-0.9833	5.2271	0.52613	169.54	-0.9834	5.2475	0.52256	169.56	-0.9835	5.2679	0.51901		
160	171.71	-0.98955												

$\frac{2}{x} = 0.355$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3927	7.17363
5	7.98	0.9903	0.3939	7.14115
10	15.94	0.9616	0.3977	7.04458
15	23.87	0.9145	0.4042	6.88649
20	31.76	0.8503	0.4134	6.67105
25	39.58	0.7707	0.4267	6.40389
30	47.33	0.6777	0.4414	6.09191
35	54.98	0.5738	0.4610	5.74304
40	62.52	0.4615	0.4849	5.36589
45	69.92	0.3434	0.5141	4.96953
50	77.16	0.2223	0.5493	4.56306
55	84.21	0.1008	0.5917	4.15533
60	91.06	-0.0186	0.6437	3.75457
65	97.68	-0.1337	0.7039	3.36811
70	104.05	-0.2427	0.7775	3.00211
75	110.14	-0.3442	0.8656	2.66136
80	115.93	-0.4372	0.9710	2.34920
85	121.41	-0.5212	1.0965	2.06754
90	126.57	-0.5958	1.2451	1.81690
95	131.41	-0.6614	1.4199	1.59666
100	135.93	-0.7185	1.6232	1.40521
105	140.14	-0.7676	1.8572	1.24039
110	144.05	-0.8095	2.1226	1.09960
115	147.68	-0.8451	2.4190	0.98011
120	151.06	-0.8752	2.7444	0.87923
125	154.21	-0.9004	3.0948	0.79443
130	157.16	-0.9216	3.4645	0.72345
135	159.92	-0.9392	3.8458	0.66427
140	162.52	-0.9536	4.2297	0.61521
145	164.98	-0.9659	4.6056	0.57481
150	167.33	-0.9757	4.9623	0.54189
155	169.58	-0.9835	5.2885	0.51549
160	171.76	-0.9897	5.5730	0.49484
165	173.87	-0.9943	5.8060	0.47936
170	175.94	-0.9975	5.9790	0.46861
175	177.98	-0.9994	6.0854	0.46227
180	180.00	-1.0000	6.1214	0.46018

 $\frac{2}{x} = 0.356$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3923	7.16100
7.98	0.9903	0.3935	7.12853
15.95	0.9615	0.3973	7.03200
23.88	0.9144	0.4037	6.87397
31.77	0.8501	0.4130	6.65861
39.61	0.7705	0.4253	6.39155
47.36	0.6774	0.4410	6.07972
55.01	0.5734	0.4605	5.72101
62.55	0.4609	0.4845	5.35407
69.95	0.3428	0.5137	4.95794
77.20	0.2216	0.5489	4.55174
84.26	0.1000	0.5913	4.14431
91.11	-0.0194	0.6424	3.74390
97.74	-0.1346	0.7037	3.35783
104.10	-0.2437	0.7773	2.99225
110.19	-0.3452	0.8656	2.65195
115.99	-0.4382	0.9712	2.34028
121.47	-0.5220	1.0970	2.05912
126.63	-0.5967	1.2461	1.80899
131.47	-0.6622	1.4214	1.58924
135.99	-0.7192	1.6255	1.39831
140.19	-0.7692	1.8603	1.23397
144.10	-0.8101	2.1268	1.09354
147.74	-0.8456	2.4245	0.97457
151.11	-0.8756	2.7514	0.87407
154.26	-0.9008	3.1035	0.78962
157.20	-0.9218	3.4751	0.71894
159.95	-0.9394	3.8585	0.66004
162.55	-0.9540	4.2444	0.61121
165.01	-0.9660	4.6223	0.57101
167.36	-0.9758	4.9811	0.53825
169.61	-0.9836	5.3091	0.51199
171.77	-0.9897	5.5953	0.49146
173.88	-0.9943	5.8297	0.47606
175.95	-0.9975	6.0036	0.46536
177.98	-0.9994	6.1107	0.45906
180.00	-1.0000	6.1468	0.45698

 $\frac{2}{x} = 0.357$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3919	7.14843
7.99	0.9903	0.3931	7.11598
15.96	0.9615	0.3969	7.01948
23.90	0.9143	0.4033	6.86150
31.79	0.8500	0.4126	6.64623
39.63	0.7702	0.4249	6.37929
47.38	0.6771	0.4406	6.06759
55.04	0.5730	0.4601	5.71905
62.59	0.4604	0.4841	5.34230
69.99	0.3422	0.5133	4.94640
77.24	0.2209	0.5485	4.54047
84.30	0.0993	0.5910	4.13336
91.16	-0.0203	0.6421	3.73329
97.79	-0.1355	0.7035	3.34760
104.16	-0.2446	0.7772	2.98244
110.25	-0.3461	0.8656	2.64259
116.04	-0.4391	0.9715	2.33140
121.53	-0.5229	1.0976	2.05074
126.69	-0.5975	1.2471	1.80112
131.53	-0.6630	1.4229	1.58186
136.04	-0.7199	1.6277	1.39145
140.25	-0.7688	1.8634	1.22759
144.16	-0.8106	2.1310	1.08771
147.79	-0.8461	2.4301	0.96906
151.16	-0.8760	2.7585	0.86895
154.30	-0.9011	3.1123	0.78484
157.24	-0.9221	3.4858	0.71447
159.99	-0.9396	3.8711	0.65584
162.59	-0.9542	4.2591	0.60723
165.04	-0.9661	4.6392	0.56723
167.38	-0.9758	4.9999	0.53465
169.63	-0.9837	5.3298	0.50853
171.79	-0.9898	5.6177	0.48810
173.90	-0.9943	5.8534	0.47279
175.96	-0.9975	6.0284	0.46215
177.99	-0.9994	6.1361	0.45588
180.00	-1.0000	6.1724	0.45381

 $\frac{2}{x} = 0.358$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3914	7.13593
5	7.99	0.9903	0.3927	7.10348
10	15.96	0.9614	0.3965	7.00702
15	23.91	0.9142	0.4029	6.84911
20	31.81	0.8498	0.4122	6.63391
25	39.65	0.7700	0.4245	6.36708
30	47.41	0.6768	0.4402	6.05552
35	55.07	0.5726	0.4597	5.70714
40	62.62	0.4599	0.4837	5.33059
45	70.03	0.3415	0.5129	4.93493
50	77.28	0.2202	0.5481	4.52927
55	84.35	0.0985	0.5906	4.12245
60	91.21	-0.0211	0.6417	3.72273
65	97.84	-0.1364	0.7032	3.33743
70	104.21	-0.2455	0.7771	2.97268
75	110.31	-0.3470	0.8657	2.63329
80	116.10	-0.4400	0.9717	2.32257
85	121.59	-0.5238	1.0981	2.04241
90	126.75	-0.5983	1.2481	1.79329
95	131.59	-0.6638	1.4244	1.57457
100	136.10	-0.7206	1.6299	1.38463
105	140.31	-0.7695	1.8666	1.22125
110	144.21	-0.8112	2.1353	1.08182
115	147.84	-0.8466	2.4356	0.96359
120	151.21	-0.8764	2.7656	0.86386
125	154.35	-0.9014	3.1211	0.78010
130	157.28	-0.9224	3.4965	0.71003
135	160.03	-0.9399	3.8839	0.65166
140	162.62	-0.9543	4.2740	0.60329
145	165.07	-0.9662	4.6561	0.56349
150	167.41	-0.9759	5.0189	0.53107
155	169.65	-0.9837	5.3506	0.50508
160	171.81	-0.9898	5.6402	0.48477
165	173.91	-0.9944	5.8773	0.46954
170	175.96	-0.9975	6.0533	0.45896
175	177.99	-0.9994	6.1616	0.45272
180	180.00	-1.0000	6.1982	0.45056

 $\frac{2}{x} = 0.359$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3910	7.12349
7.99	0.9903	0.3923	7.09106
15.97	0.9614	0.3961	6.99463
23.92	0.9141	0.4025	6.83677
31.83	0.8497	0.4117	6.62166
39.67	0.7698	0.4240	6.35494
47.43	0.6765	0.4397	6.04351
55.10	0.5721	0.4593	5.69530
62.65	0.4594	0.4833	5.31895
70.07	0.3409	0.5125	4.92351
77.32	0.2195	0.5477	4.51811
84.39	0.0977	0.5903	4.11161
91.26	-0.0220	0.6414	3.71223
97.89	-0.1373	0.7030	3.32730
104.27	-0.2464	0.7769	2.96297
110.36	-0.3480	0.8657	2.62403
116.16	-0.4409	0.9720	2.31379
121.65	-0.5247	1.0987	2.03412
126.81	-0.5992	1.2490	1.78551
131.65	-0.6645	1.4260	1.56729
136.16	-0.7213	1.6322	1.37785
140.36	-0.7701	1.8697	1.21495
144.27	-0.8117	2.1395	1.07597
147.89	-0.8470	2.4412	0.95815
151.26	-0.8768	2.7727	0.85880
154.39	-0.9018	3.1300	0.77538
157.32	-0.9227	3.5072	0.70562
160.07	-0.9401	3.8967	0.64752
162.65	-0.9545	4.2888	0.59938
165.10	-0.9664	4.6731	0.55977
167.43	-0.9760	5.0379	0.52752
169.67	-0.9838	5.3716	0.50167
171.83	-0.9898	5.6628	0.48146
173.92	-0.9944	5.9012	0.46631
175.97	-0.9975	6.0783	0.45579
177.99	-0.9994	6.1872	0.44959
180.00	-1.0000	6.2240	0.44754

 $\frac{2}{x} = 0.360$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3906	7.11111
8.00	0.9903	0.3919	7.07869
15.98	0.9614	0.3957	6.98230
23.93	0.9140	0.4021	6.82450
31.84	0.8495	0.4113	6.60947
39.69	0.7695	0.4236	6.34285
47.46	0.6761	0.4393	6.03156
55.13	0.5717	0.4589	5.68351
62.69	0.4589	0.4829	5.30736
70.10	0.3403	0.5121	4.91215
77.36	0.2188	0.5474	4.50702
84.44	0.0969	0.5899	4.10081
91.31	-0.0228	0.6411	3.70178
97.94	-0.1382	0.7027	3.31723
104.32	-0.2473	0.7768	2.95331
110.42	-0.3489	0.8657	2.61482
116.22	-0.4418	0.9722	2.30506
121.71	-0.5256	1.0993	2.02588
126.87	-0.6000	1.2500	1.77778
131.71	-0.6653	1.4275	1.56006
136.22	-0.7220	1.6344	1.37111
140.42	-0.7707	1.8729	1.20868
144.32	-0.8123	2.1438	1.07015
147.94	-0.8475	2.4468	0.95275
151.31	-0.8772	2.7798	0.85378
154.44	-0.9021	3.1389	0.77070
157.36	-0.9230	3.5160	0.70124
160.10	-0.9403	3.9095	0.64340
162.69	-0.9547	4.3038	0.59549
165.13	-0.9665	4.6901	0.55608
167.46	-0.9761	5.0570	0.52399
169.69	-0.9839	5.3926	0.49828
171.84	-0.9899	5.6855	0.47818
173.93	-0.9944	5.9253	0.46311
175.98	-0.9975	6.1034	0.45264
178.00	-0.9994	6.2130	0.44648
180.00	-1.0000	6.2500	0.44044

2 x = 0.361					2 x = 0.362					2 x = 0.363				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3902	7.09880	0.00	1.0000	0.3898	7.08654	0.00	1.0000	0.3894	7.07435		
5	8.00	0.9903	0.3915	7.06639	8.01	0.9903	0.3911	7.05415	8.01	0.9902	0.3907	7.04197		
10	15.99	0.9613	0.3953	6.97003	16.00	0.9613	0.3949	6.95782	16.01	0.9612	0.3944	6.94567		
15	23.95	0.9139	0.4017	6.81228	23.96	0.9138	0.4013	6.80013	23.97	0.9138	0.4009	6.78804		
20	31.86	0.8494	0.4109	6.59734	31.88	0.8492	0.4105	6.58527	31.89	0.8490	0.4101	6.57326		
25	39.71	0.7693	0.4232	6.33083	39.73	0.7691	0.4228	6.31887	39.75	0.7688	0.4224	6.30696		
30	47.48	0.6758	0.4389	6.01967	47.51	0.6755	0.4385	6.00784	47.53	0.6752	0.4381	5.99607		
35	55.16	0.5713	0.4585	5.67179	55.19	0.5709	0.4581	5.66012	55.22	0.5705	0.4577	5.64851		
40	62.72	0.4584	0.4825	5.29583	62.75	0.4578	0.4821	5.28435	62.79	0.4573	0.4817	5.27294		
45	70.14	0.3397	0.5117	4.90085	70.18	0.3391	0.5113	4.88960	70.22	0.3385	0.5109	4.87841		
50	77.40	0.2181	0.5470	4.49598	77.45	0.2174	0.5466	4.48500	77.49	0.2167	0.5462	4.47407		
55	84.48	0.0961	0.5896	4.09008	84.53	0.0954	0.5892	4.07939	84.57	0.0946	0.5889	4.06876		
60	91.35	-0.0236	0.6408	3.69138	91.40	-0.0245	0.6405	3.68103	91.45	-0.0253	0.6402	3.67074		
65	97.99	-0.1391	0.7025	3.30721	98.04	-0.1399	0.7023	3.29723	98.10	-0.1408	0.7021	3.28731		
70	104.37	-0.2483	0.7767	2.94371	104.43	-0.2492	0.7766	2.93415	104.48	-0.2501	0.7764	2.92464		
75	110.48	-0.3498	0.8657	2.60565	110.53	-0.3507	0.8658	2.59654	110.59	-0.3517	0.8658	2.58747		
80	116.28	-0.4427	0.9725	2.29637	116.34	-0.4436	0.9727	2.28772	116.39	-0.4445	0.9730	2.27912		
85	121.77	-0.5264	1.0998	2.01768	121.83	-0.5273	1.1004	2.00953	121.88	-0.5282	1.1009	2.00142		
90	126.93	-0.6008	1.2510	1.77008	126.99	-0.6017	1.2520	1.76243	127.05	-0.6025	1.2529	1.75482		
95	131.77	-0.6661	1.4299	1.55286	131.83	-0.6669	1.4306	1.54571	131.88	-0.6676	1.4321	1.53860		
100	136.28	-0.7227	1.6367	1.36441	136.34	-0.7234	1.6389	1.35775	136.39	-0.7241	1.6412	1.35113		
105	140.48	-0.7714	1.8760	1.20246	140.53	-0.7720	1.8792	1.19627	140.59	-0.7726	1.8824	1.19012		
110	144.37	-0.8128	2.1481	1.06437	144.43	-0.8134	2.1524	1.05862	144.48	-0.8139	2.1567	1.05291		
115	147.99	-0.8480	2.4524	0.94738	148.04	-0.8485	2.4580	0.94205	148.10	-0.8489	2.4637	0.93675		
120	151.35	-0.8776	2.7870	0.84079	151.40	-0.8780	2.7942	0.84383	151.45	-0.8784	2.8014	0.83890		
125	154.48	-0.9025	3.1478	0.76605	154.53	-0.9028	3.1567	0.76143	154.57	-0.9031	3.1657	0.75684		
130	157.40	-0.9232	3.5289	0.69689	157.45	-0.9235	3.5398	0.69257	157.49	-0.9238	3.5507	0.68828		
135	160.14	-0.9405	3.9224	0.63932	160.18	-0.9408	3.9353	0.63526	160.22	-0.9410	3.9483	0.63123		
140	162.72	-0.9549	4.3188	0.59163	162.75	-0.9550	4.3339	0.58780	162.79	-0.9552	4.3490	0.58400		
145	165.16	-0.9666	4.7073	0.55242	165.19	-0.9668	4.7245	0.54878	165.22	-0.9669	4.7418	0.54517		
150	167.48	-0.9762	5.0762	0.52049	167.51	-0.9763	5.0955	0.51702	167.53	-0.9764	5.1149	0.51357		
155	169.71	-0.9839	5.4137	0.48491	169.73	-0.9840	5.4349	0.49157	169.75	-0.9840	5.4547	0.48825		
160	171.86	-0.9899	5.7083	0.44742	171.88	-0.9900	5.7312	0.47168	171.89	-0.9900	5.7542	0.46847		
165	173.95	-0.9944	5.9495	0.40593	173.96	-0.9944	5.9738	0.45678	173.97	-0.9945	5.9983	0.45365		
170	175.99	-0.9976	6.1286	0.44952	176.00	-0.9976	6.1540	0.44643	176.01	-0.9976	6.1795	0.44335		
175	178.00	-0.9994	6.2389	0.44339	178.01	-0.9994	6.2649	0.44033	178.01	-0.9994	6.2910	0.43729		
180	180.00	-1.0000	6.2761	0.44137	180.00	-1.0000	6.3023	0.43832	180.00	-1.0000	6.3287	0.43529		

2 x = 0.364					2 x = 0.365					2 x = 0.366				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3890	7.06222	0.00	1.0000	0.3886	7.05015	0.00	1.0000	0.3882	7.03814		
5	8.01	0.9902	0.3903	7.02985	8.02	0.9902	0.3899	7.01779	8.02	0.9902	0.3895	7.00579		
10	16.01	0.9612	0.3940	6.93359	16.02	0.9612	0.3936	6.92156	16.03	0.9611	0.3932	6.90959		
15	23.98	0.9137	0.4005	6.77601	24.00	0.9136	0.4001	6.76404	24.01	0.9135	0.3997	6.75213		
20	31.91	0.8489	0.4097	6.56131	31.93	0.8487	0.4093	6.54942	31.94	0.8486	0.4089	6.53758		
25	39.77	0.7686	0.4220	6.29512	39.79	0.7684	0.4216	6.28333	39.81	0.7681	0.4212	6.27160		
30	47.56	0.6749	0.4377	5.98436	47.58	0.6745	0.4373	5.97270	47.61	0.6742	0.4369	5.96111		
35	55.25	0.5701	0.4573	5.63696	55.28	0.5696	0.4568	5.62547	55.30	0.5692	0.4564	5.61403		
40	62.82	0.4568	0.4813	5.26158	62.85	0.4563	0.4809	5.25027	62.88	0.4558	0.4805	5.23903		
45	70.25	0.3379	0.5105	4.86728	70.29	0.3373	0.5101	4.85620	70.33	0.3367	0.5097	4.84517		
50	77.53	0.2160	0.5459	4.46319	77.57	0.2153	0.5455	4.45237	77.61	0.2146	0.5451	4.44160		
55	84.62	0.0938	0.5885	4.05818	84.66	0.0930	0.5882	4.04766	84.71	0.0922	0.5878	4.03718		
60	91.50	-0.0262	0.6399	3.66049	91.55	-0.0270	0.6396	3.65030	91.60	-0.0279	0.6393	3.64016		
65	98.15	-0.1417	0.7018	3.27744	98.20	-0.1426	0.7016	3.26762	98.25	-0.1435	0.7014	3.25785		
70	104.54	-0.2510	0.7763	2.91517	104.59	-0.2519	0.7762	2.90576	104.65	-0.2528	0.7761	2.89639		
75	110.65	-0.3526	0.8658	2.57845	110.70	-0.3535	0.8659	2.56948	110.76	-0.3544	0.8659	2.56055		
80	116.45	-0.4455	0.9732	2.27057	116.51	-0.4464	0.9735	2.26206	116.57	-0.4473	0.9737	2.25360		
85	121.94	-0.5291	1.1015	1.99355	122.00	-0.5300	1.1021	1.98533	122.06	-0.5308	1.1026	1.97735		
90	127.11	-0.6033	1.2539	1.74725	127.17	-0.6042	1.2549	1.73972	127.23	-0.6050	1.2559	1.73224		
95	131.94	-0.6684	1.4336	1.53133	132.00	-0.6692	1.4352	1.52450	132.06	-0.6699	1.4368	1.51751		
100	136.45	-0.7248	1.6435	1.34455	136.51	-0.7255	1.6458	1.33800	136.57	-0.7262	1.6481	1.33149		
105	140.65	-0.7732	1.8856	1.18400	140.70	-0.7739	1.8888	1.17792	140.76	-0.7745	1.8920	1.17188		
110	144.54	-0.8145	2.1610	1.04724	144.59	-0.8150	2.1653	1.04160	144.65	-0.8156	2.1697	1.03600		
115	148.15	-0.8494	2.4694	0.93148	148.20	-0.8499	2.4751	0.92625	148.25	-0.8504	2.4808	0.92105		
120	151.50	-0.8788	2.8086	0.83401	151.55	-0.8792	2.8159	0.82915	151.60	-0.8796	2.8232	0.82432		
125	154.62	-0.9035	3.1747	0.75228	154.66	-0.9038	3.1838	0.74775	154.71	-0.9041	3.1929	0.74325		
130	157.53	-0.9241	3.5617	0.68401	157.57	-0.9243	3.5727	0.67978	157.61	-0.9246	3.5838	0.67558		
135	160.25	-0.9412	3.9614	0.62723	160.29	-0.9414	3.9745	0.62325	160.33	-0.9416	3.9877	0.61931		
140	162.82	-0.9554	4.3643	0.58022	162.85	-0.9555	4.3796	0.57647	162.88	-0.9557	4.3949	0.57275		
145	165.25	-0.9670	4.7592	0.54158	165.28	-0.9672	4.7767	0.53803	165.30	-0.9673	4.7942	0.53449		
150	167.56	-0.9765	5.1344	0.51014	167.58	-0.9766	5.1539	0.50675	167.61	-0.9767	5.1736	0.50337		
155	169.77	-0.9841	5.4776	0.48496	169.79	-0.9842	5.4982	0.48169	169.81	-0.9842	5.5208	0.47845		
160	171.91	-0.9900	5.7774	0.46579	171.93	-0.9901	5.8006	0.46212	171.94	-0.9901				

$x = 0.367$
 $x = 0.368$
 $x = 0.369$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3879	7.02619	0.00	1.0000	0.3874	7.01429	0.00	1.0000	0.3870	7.00246
5	8.03	0.9902	0.3891	6.99384	8.03	0.9902	0.3887	6.98196	8.03	0.9902	0.3883	6.97014
10	16.04	0.9611	0.3928	6.89768	16.05	0.9610	0.3924	6.88583	16.06	0.9610	0.3920	6.87404
15	24.02	0.9134	0.3993	6.74028	24.03	0.9133	0.3989	6.72848	24.05	0.9132	0.3985	6.71675
20	31.96	0.8484	0.4085	6.52581	31.97	0.8483	0.4081	6.51409	31.99	0.8481	0.4077	6.50244
25	39.83	0.7679	0.4208	6.25993	39.85	0.7677	0.4204	6.24832	39.88	0.7674	0.4200	6.23677
30	47.63	0.6739	0.4365	5.94957	47.66	0.6736	0.4361	5.93808	47.68	0.6733	0.4357	5.92666
35	55.33	0.5688	0.4560	5.60265	55.36	0.5684	0.4556	5.59132	55.39	0.5680	0.4552	5.58005
40	62.92	0.4553	0.4801	5.22783	62.95	0.4548	0.4797	5.21669	62.98	0.4542	0.4793	5.20561
45	70.36	0.3360	0.5093	4.83420	70.40	0.3354	0.5089	4.82328	70.44	0.3348	0.5085	4.81242
50	77.65	0.2139	0.5447	4.43089	77.69	0.2132	0.5444	4.42023	77.73	0.2125	0.5440	4.40962
55	84.75	0.0915	0.5875	4.02676	84.80	0.0907	0.5871	4.01639	84.84	0.0899	0.5868	4.00607
60	91.64	-0.0287	0.6390	3.63007	91.69	-0.0295	0.6387	3.62003	91.74	-0.0304	0.6384	3.61003
65	98.30	-0.1444	0.7011	3.24813	98.35	-0.1453	0.7009	3.23845	98.40	-0.1462	0.7007	3.22883
70	104.70	-0.2537	0.7759	2.88707	104.75	-0.2547	0.7758	2.87780	104.81	-0.2556	0.7757	2.86858
75	110.81	-0.3553	0.8659	2.55167	110.87	-0.3563	0.8660	2.54283	110.93	-0.3572	0.8660	2.53404
80	116.63	-0.4482	0.9740	2.24518	116.68	-0.4491	0.9742	2.23680	116.74	-0.4500	0.9745	2.22847
85	122.12	-0.5317	1.1032	1.96942	122.18	-0.5326	1.1038	1.96152	122.24	-0.5335	1.1043	1.95367
90	127.29	-0.6058	1.2569	1.72479	127.35	-0.6066	1.2579	1.71739	127.41	-0.6075	1.2589	1.71003
95	132.12	-0.6707	1.4393	1.51056	132.18	-0.6715	1.4399	1.50354	132.24	-0.6722	1.4414	1.49677
100	136.63	-0.7269	1.6503	1.32502	136.68	-0.7276	1.6526	1.31859	136.74	-0.7283	1.6550	1.31219
105	140.81	-0.7751	1.8952	1.16587	140.87	-0.7757	1.8984	1.15990	140.93	-0.7763	1.9017	1.15396
110	144.70	-0.8161	2.1740	1.03043	144.75	-0.8167	2.1784	1.02489	144.81	-0.8172	2.1828	1.01935
115	148.30	-0.8508	2.4865	0.91589	148.35	-0.8513	2.4923	0.91075	148.40	-0.8518	2.4980	0.90565
120	151.64	-0.8800	2.8305	0.81952	151.69	-0.8804	2.8379	0.81475	151.74	-0.8808	2.8453	0.81002
125	154.75	-0.9045	3.2020	0.73879	154.80	-0.9048	3.2112	0.73435	154.84	-0.9051	3.2204	0.72994
130	157.65	-0.9249	3.5949	0.67140	157.69	-0.9252	3.6060	0.66726	157.73	-0.9254	3.6172	0.66314
135	160.36	-0.9418	4.0009	0.61539	160.40	-0.9421	4.0142	0.61150	160.44	-0.9423	4.0276	0.60763
140	162.92	-0.9559	4.4103	0.56905	162.95	-0.9561	4.4258	0.56538	162.98	-0.9562	4.4414	0.56174
145	165.33	-0.9674	4.8118	0.53098	165.36	-0.9675	4.8295	0.52750	165.39	-0.9677	4.8473	0.52404
150	167.63	-0.9768	5.1933	0.50002	167.66	-0.9769	5.2132	0.49670	167.68	-0.9770	5.2331	0.49340
155	169.83	-0.9843	5.5425	0.47523	169.85	-0.9844	5.5643	0.47204	169.88	-0.9844	5.5863	0.46886
160	171.95	-0.9902	5.8474	0.45587	171.97	-0.9902	5.8710	0.45278	171.99	-0.9902	5.8947	0.464971
165	174.02	-0.9946	6.0972	0.44136	174.03	-0.9946	6.1222	0.43835	174.05	-0.9946	6.1474	0.46356
170	176.04	-0.9976	6.2827	0.43129	176.05	-0.9976	6.3088	0.42833	176.06	-0.9976	6.3351	0.462540
175	178.03	-0.9994	6.3969	0.42536	178.03	-0.9994	6.4237	0.42424	178.03	-0.9994	6.4506	0.461953
180	180.00	-1.0000	6.4354	0.42340	180.00	-1.0000	6.4625	0.42049	180.00	-1.0000	6.4896	0.461760

 $x = 0.370$
 $x = 0.371$
 $x = 0.372$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3866	6.99068	0.00	1.0000	0.3862	6.97896	0.00	1.0000	0.3858	6.96730
5	8.04	0.9902	0.3879	6.95837	8.04	0.9902	0.3875	6.94666	8.05	0.9902	0.3871	6.93501
10	16.06	0.9610	0.3916	6.86231	16.07	0.9609	0.3912	6.85063	16.08	0.9609	0.3909	6.83901
15	24.06	0.9131	0.3981	6.70507	24.07	0.9130	0.3977	6.69344	24.08	0.9130	0.3973	6.68188
20	32.01	0.8480	0.4073	6.49083	32.02	0.8478	0.4069	6.47929	32.04	0.8477	0.4065	6.46780
25	39.90	0.7672	0.4196	6.22527	39.92	0.7670	0.4192	6.21382	39.94	0.7667	0.4188	6.20243
30	47.71	0.6729	0.4353	5.91529	47.73	0.6726	0.4349	5.90397	47.76	0.6723	0.4345	5.89271
35	55.42	0.5676	0.4548	5.56883	55.45	0.5671	0.4544	5.55767	55.48	0.5667	0.4540	5.54657
40	63.02	0.4537	0.4789	5.19458	63.05	0.4532	0.4785	5.18361	63.08	0.4527	0.4781	5.17268
45	70.47	0.3342	0.5081	4.80161	70.51	0.3336	0.5078	4.79085	70.55	0.3330	0.5074	4.78014
50	77.77	0.2118	0.5436	4.39906	77.81	0.2111	0.5432	4.38855	77.85	0.2104	0.5429	4.37810
55	84.99	0.0891	0.5884	3.99580	84.93	0.0884	0.5861	3.98558	84.97	0.0876	0.5858	3.97541
60	91.79	-0.0312	0.6381	3.60009	91.84	-0.0320	0.6378	3.59020	91.88	-0.0329	0.6375	3.58035
65	98.46	-0.1470	0.7004	3.21925	98.51	-0.1479	0.7002	3.20971	98.56	-0.1488	0.7000	3.20023
70	104.86	-0.2565	0.7756	2.85940	104.92	-0.2574	0.7755	2.85026	104.97	-0.2583	0.7753	2.84117
75	110.98	-0.3581	0.8660	2.52529	111.04	-0.3590	0.8661	2.51658	111.10	-0.3599	0.8661	2.50792
80	116.80	-0.4509	0.9747	2.22018	116.86	-0.4518	0.9750	2.21194	116.92	-0.4527	0.9753	2.20373
85	122.30	-0.5343	1.1049	1.94585	122.36	-0.5352	1.1055	1.93808	122.42	-0.5361	1.1060	1.93035
90	127.46	-0.6083	1.2599	1.70270	127.52	-0.6091	1.2609	1.69542	127.58	-0.6099	1.2619	1.68817
95	132.30	-0.6730	1.4430	1.48993	132.36	-0.6737	1.4446	1.48313	132.42	-0.6745	1.4462	1.47637
100	136.80	-0.7290	1.6573	1.30583	136.86	-0.7297	1.6596	1.29951	136.92	-0.7304	1.6619	1.29322
105	140.98	-0.7770	1.9049	1.14806	141.04	-0.7776	1.9082	1.14220	141.10	-0.7782	1.9115	1.13637
110	144.86	-0.8178	2.1872	1.01392	144.92	-0.8183	2.1916	1.00848	144.97	-0.8188	2.1961	1.00308
115	148.46	-0.8522	2.5038	0.90058	148.51	-0.8527	2.5097	0.89554	148.56	-0.8532	2.5155	0.89054
120	151.79	-0.8812	2.8527	0.80531	151.84	-0.8816	2.8601	0.80063	151.88	-0.8820	2.8676	0.79599
125	154.89	-0.9055	3.2296	0.72556	154.93	-0.9058	3.2389	0.72121	154.97	-0.9061	3.2482	0.71689
130	157.77	-0.9257	3.6285	0.65595	157.81	-0.9260	3.6398	0.65199	157.85	-0.9262	3.6511	0.65095
135	160.47	-0.9425	4.0410	0.60390	160.51	-0.9427	4.0544	0.59999	160.55	-0.9429	4.0680	0.59620
140	163.02	-0.9564	4.4570	0.55812	163.05	-0.9566	4.4727	0.55452	163.08	-0.9567	4.4885	0.55096
145	165.42	-0.9678	4.8652	0.52061	165.45	-0.9679	4.8831	0.51720	165.48	-0.9680	4.9012	0.51382
150	167.71	-0.9771	5.2531	0.49012	167.73	-0.9772	5.2733	0.48687	167.76	-0.9773	5.2935	0.48364
155	169.90	-0.9845	5.6083	0.46571	169.92	-0.9846	5.6305	0.46259	169.94	-0.9846	5.6527	0.45948
160	172.01	-0.9903	5.9185	0.44666	172.02	-0.9903	5.9424	0.44364	172.04	-0.9904	5.9665	0.44063
165	174.06	-0.9946	6.1727	0.43239	174.07	-0.9946	6.1981	0.42944	174.08	-0.9947	6.2236	0.42652
170	176.06	-0.9976	6.3614	0.42248	176.07	-0.9977	6.3879	0.41959	176.08	-0.9977	6.4146	0.42372
175	178.04	-0.9994	6.4776	0.41665	178.04	-0.9994	6.5048	0.41379	178.05	-0.9994	6.5322	0.41095
180	180.00	-1.0000	6.5169	0.41472	180.00	-1.0000	6.5443	0.41187	180.00	-1.0000	6.5719	0.40904

$x^2 = 0.373$					$x^2 = 0.374$					$x^2 = 0.375$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3854	6.95570	0.00	1.0000	0.3850	6.94415	0.00	1.0000	0.3847	6.93265		
5	8.05	0.9901	0.3867	6.92342	8.06	0.9901	0.3863	6.91188	8.06	0.9901	0.3859	6.90040		
10	16.09	0.9608	0.3905	6.82745	16.10	0.9608	0.3901	6.81594	16.10	0.9608	0.3897	6.80449		
15	24.09	0.9129	0.3969	6.67037	24.11	0.9128	0.3965	6.65892	24.12	0.9127	0.3961	6.64752		
20	32.06	0.8475	0.4061	6.45637	32.07	0.8474	0.4057	6.44499	32.09	0.8472	0.4053	6.43367		
25	39.96	0.7665	0.4184	6.19110	39.98	0.7663	0.4180	6.17982	40.00	0.7661	0.4176	6.16860		
30	47.78	0.6720	0.4341	5.88150	47.80	0.6717	0.4337	5.87035	47.83	0.6713	0.4333	5.85925		
35	55.51	0.5663	0.4536	5.53551	55.53	0.5659	0.4532	5.52451	55.56	0.5655	0.4528	5.51356		
40	63.11	0.4522	0.4777	5.16181	63.15	0.4517	0.4773	5.15099	63.18	0.4512	0.4769	5.14023		
45	70.59	0.3324	0.5070	4.76949	70.62	0.3318	0.5066	4.75888	70.66	0.3312	0.5062	4.74833		
50	77.89	0.2097	0.5425	4.36769	77.94	0.2090	0.5421	4.35734	77.98	0.2083	0.5418	4.34703		
55	85.02	0.0868	0.5854	3.96529	85.06	0.0861	0.5851	3.95522	85.11	0.0853	0.5847	3.94520		
60	91.93	-0.0337	0.6372	3.57055	91.98	-0.0345	0.6369	3.56080	92.03	-0.0354	0.6366	3.55110		
65	98.61	-0.1497	0.6998	3.19079	98.66	-0.1506	0.6995	3.18140	98.71	-0.1514	0.6993	3.17205		
70	105.02	-0.2592	0.7752	2.83213	105.08	-0.2601	0.7751	2.82313	105.13	-0.2610	0.7750	2.81418		
75	111.15	-0.3608	0.8661	2.49931	111.21	-0.3618	0.8662	2.49073	111.26	-0.3627	0.8662	2.48220		
80	116.97	-0.4536	0.9755	2.19557	117.03	-0.4545	0.9758	2.18745	117.09	-0.4554	0.9760	2.17937		
85	122.47	-0.5369	1.1066	1.92266	122.53	-0.5378	1.1072	1.91501	122.59	-0.5387	1.1078	1.90740		
90	127.64	-0.6107	1.2629	1.68096	127.70	-0.6116	1.2639	1.67380	127.75	-0.6124	1.2649	1.66666		
95	132.47	-0.6753	1.4477	1.46965	132.53	-0.6760	1.4493	1.46296	132.59	-0.6768	1.4509	1.45631		
100	136.97	-0.7310	1.6642	1.28697	137.03	-0.7317	1.6666	1.28076	137.09	-0.7324	1.6689	1.27458		
105	141.15	-0.7788	1.9148	1.13057	141.21	-0.7794	1.9180	1.12480	141.26	-0.7800	1.9213	1.11907		
110	145.02	-0.8194	2.2005	0.99771	145.08	-0.8199	2.2050	0.99237	145.13	-0.8205	2.2095	0.98706		
115	148.61	-0.8536	2.5214	0.88556	148.66	-0.8541	2.5272	0.88062	148.71	-0.8546	2.5331	0.87570		
120	151.93	-0.8824	2.8751	0.79137	151.98	-0.8828	2.8826	0.78679	152.03	-0.8832	2.8902	0.78223		
125	155.02	-0.9064	3.2576	0.71259	155.06	-0.9068	3.2670	0.70833	155.11	-0.9071	3.2764	0.70409		
130	157.89	-0.9265	3.6625	0.64694	157.94	-0.9268	3.6740	0.64296	157.98	-0.9270	3.6855	0.63901		
135	160.59	-0.9431	4.0815	0.59244	160.62	-0.9434	4.0952	0.58871	160.66	-0.9436	4.1089	0.58500		
140	163.11	-0.9569	4.5043	0.54741	163.15	-0.9571	4.5203	0.54389	163.18	-0.9572	4.5363	0.54040		
145	165.51	-0.9682	4.9193	0.51046	165.53	-0.9683	4.9375	0.50712	165.56	-0.9684	4.9558	0.50381		
150	167.78	-0.9773	5.3138	0.48043	167.80	-0.9774	5.3342	0.47724	167.83	-0.9775	5.3547	0.47408		
155	169.96	-0.9847	5.6751	0.44640	169.98	-0.9847	5.6975	0.45335	170.00	-0.9848	5.7201	0.45031		
160	172.06	-0.9904	5.9907	0.41765	172.07	-0.9904	6.0149	0.43469	172.09	-0.9905	6.0393	0.43176		
165	174.09	-0.9947	6.2493	0.40361	174.11	-0.9947	6.2750	0.42073	174.12	-0.9947	6.3010	0.41787		
170	176.09	-0.9977	6.4413	0.41387	176.10	-0.9977	6.4682	0.41104	176.10	-0.9977	6.4953	0.40823		
175	178.05	-0.9994	6.5596	0.40813	178.06	-0.9994	6.5872	0.40533	178.06	-0.9994	6.6149	0.40255		
180	180.00	-1.0000	6.5995	0.40623	180.00	-1.0000	6.6274	0.40345	180.00	-1.0000	6.6553	0.40068		

$x^2 = 0.376$					$x^2 = 0.377$					$x^2 = 0.378$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3843	6.92121	0.00	1.0000	0.3839	6.90983	0.00	1.0000	0.3835	6.89850		
5	8.06	0.9901	0.3855	6.88897	8.07	0.9901	0.3851	6.87759	8.07	0.9901	0.3847	6.86628		
10	16.11	0.9607	0.3893	6.79309	16.12	0.9607	0.3889	6.78175	16.13	0.9606	0.3885	6.77047		
15	24.13	0.9126	0.3957	6.63617	24.14	0.9125	0.3953	6.62484	24.16	0.9124	0.3949	6.61365		
20	32.11	0.8471	0.4049	6.42240	32.12	0.8469	0.4045	6.41118	32.14	0.8468	0.4041	6.40002		
25	40.02	0.7658	0.4172	6.15743	40.04	0.7656	0.4168	6.14631	40.06	0.7654	0.4164	6.13525		
30	47.87	0.6710	0.4329	5.84820	47.88	0.6707	0.4325	5.83721	47.90	0.6704	0.4321	5.82627		
35	55.59	0.5651	0.4524	5.50267	55.62	0.5647	0.4521	5.49183	55.65	0.5643	0.4517	5.48104		
40	63.21	0.4507	0.4765	5.12951	63.25	0.4502	0.4761	5.11885	63.28	0.4497	0.4757	5.10824		
45	70.70	0.3306	0.5058	4.73783	70.73	0.3300	0.5055	4.72738	70.77	0.3294	0.5051	4.71698		
50	78.02	0.2076	0.5414	4.33677	78.06	0.2069	0.5410	4.32657	78.10	0.2062	0.5407	4.31641		
55	85.15	0.0845	0.5844	3.93523	85.20	0.0837	0.5841	3.92530	85.24	0.0830	0.5837	3.91542		
60	92.08	-0.0362	0.6363	3.54145	92.12	-0.0370	0.6361	3.53184	92.17	-0.0379	0.6358	3.52227		
65	98.76	-0.1523	0.6991	3.16275	98.81	-0.1532	0.6989	3.15350	98.86	-0.1541	0.6986	3.14429		
70	105.18	-0.2619	0.7749	2.80527	105.24	-0.2628	0.7747	2.79640	105.29	-0.2637	0.7746	2.78758		
75	111.32	-0.3636	0.8663	2.47372	111.38	-0.3645	0.8663	2.46527	111.43	-0.3654	0.8663	2.45687		
80	117.15	-0.4563	0.9763	2.17133	117.21	-0.4572	0.9766	2.16333	117.26	-0.4581	0.9768	2.15537		
85	122.65	-0.5395	1.1084	1.89983	122.71	-0.5404	1.1089	1.89230	122.77	-0.5413	1.1095	1.88481		
90	127.82	-0.6132	1.2659	1.65957	127.88	-0.6140	1.2659	1.65252	127.94	-0.6148	1.2660	1.64550		
95	132.65	-0.6775	1.4525	1.44970	132.71	-0.6783	1.4541	1.44312	132.77	-0.6790	1.4557	1.43658		
100	137.15	-0.7331	1.6713	1.26843	137.21	-0.7338	1.6736	1.26232	137.26	-0.7345	1.6760	1.25624		
105	141.32	-0.7806	1.9247	1.11338	141.38	-0.7813	1.9280	1.10771	141.43	-0.7819	1.9313	1.10208		
110	145.18	-0.8210	2.2140	0.98179	145.24	-0.8215	2.2185	0.97655	145.29	-0.8221	2.2230	0.97194		
115	148.76	-0.8550	2.5391	0.87082	148.81	-0.8555	2.5450	0.86696	148.86	-0.8559	2.5510	0.86314		
120	152.08	-0.8836	2.8978	0.77770	152.12	-0.8840	2.9054	0.77320	152.17	-0.8843	2.9130	0.76873		
125	155.15	-0.9074	3.2859	0.69988	155.20	-0.9077	3.2954	0.69570	155.24	-0.9081	3.3049	0.69154		
130	158.02	-0.9273	3.6970	0.63508	158.06	-0.9276	3.7086	0.63117	158.10	-0.9278	3.7203	0.62730		
135	160.70	-0.9438	4.1226	0.58132	160.73	-0.9440	4.1365	0.57766	160.77	-0.9442	4.1504	0.57403		
140	163.21	-0.9574	4.5523	0.53693	163.25	-0.9575	4.5685	0.53348	163.28	-0.9577	4.5847	0.53006		
145	165.59	-0.9685	4.9741	0.50052	165.62	-0.9687	4.9926	0.49725	165.65	-0.9688	5.0111	0.49401		
150	167.85	-0.9776	5.3753	0.47095	167.88	-0.9777	5.3960	0.46783	167.90	-0.9778	5.4168	0.46474		
155	170.02	-0.9849	5.7428	0.44729	170.04	-0.9849	5.7656	0.44430	170.06	-0.9850	5.7885	0.44133		
160	172.11	-0.9905	6.0638	0.42884	172									

$x = 0.379$
 $x = 0.380$
 $x = 0.381$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3831	6.88723	0.00	1.0000	0.3827	6.87601	0.00	1.0000	0.3823	6.86484
5	8.08	0.9901	0.3843	6.85501	8.08	0.9901	0.3840	6.84380	8.08	0.9901	0.3836	6.83264
10	16.14	0.9606	0.3881	6.75923	16.14	0.9606	0.3877	6.74805	16.15	0.9605	0.3874	6.73692
15	24.17	0.9123	0.3945	6.60247	24.18	0.9123	0.3941	6.59134	24.19	0.9122	0.3937	6.58026
20	32.16	0.8466	0.4037	6.38891	32.17	0.8465	0.4033	6.37786	32.19	0.8463	0.4029	6.36685
25	40.08	0.7651	0.4160	6.12424	40.10	0.7649	0.4156	6.11328	40.12	0.7647	0.4152	6.10237
30	47.93	0.6701	0.4317	5.81538	47.95	0.6698	0.4313	5.80454	47.98	0.6694	0.4309	5.79376
35	55.68	0.5638	0.4513	5.47030	55.71	0.5634	0.4509	5.45961	55.73	0.5630	0.4505	5.44897
40	63.31	0.4492	0.4753	5.09768	63.34	0.4486	0.4750	5.08717	63.38	0.4481	0.4746	5.07670
45	70.81	0.3288	0.5047	4.70662	70.84	0.3282	0.5043	4.69632	70.88	0.3276	0.5039	4.68666
50	78.14	0.2056	0.5403	4.30630	78.18	0.2049	0.5399	4.29624	78.22	0.2042	0.5396	4.28622
55	85.28	0.0822	0.5834	3.90559	85.33	0.0814	0.5830	3.89580	85.37	0.0807	0.5827	3.88607
60	92.22	-0.0387	0.6355	3.51276	92.27	-0.0395	0.6352	3.50328	92.31	-0.0404	0.6349	3.49386
65	98.91	-0.1550	0.6984	3.13512	98.96	-0.1558	0.6982	3.12600	99.02	-0.1567	0.6980	3.11692
70	105.35	-0.2646	0.7745	2.77880	105.40	-0.2655	0.7744	2.77006	105.45	-0.2664	0.7743	2.76136
75	111.49	-0.3663	0.8664	2.44851	111.54	-0.3672	0.8664	2.44018	111.60	-0.3681	0.8665	2.43190
80	117.32	-0.4590	0.9771	2.14746	117.38	-0.4599	0.9774	2.13958	117.44	-0.4608	0.9776	2.13174
85	122.83	-0.5421	1.1101	1.87736	122.89	-0.5430	1.1110	1.86994	122.94	-0.5438	1.1113	1.86256
90	128.00	-0.6156	1.2690	1.63852	128.06	-0.6164	1.2700	1.63158	128.12	-0.6173	1.2710	1.62467
95	132.83	-0.6798	1.4573	1.43007	132.89	-0.6805	1.4589	1.42360	132.94	-0.6813	1.4605	1.41716
100	137.32	-0.7352	1.6784	1.25020	137.38	-0.7358	1.6807	1.24419	137.44	-0.7365	1.6831	1.23822
105	141.49	-0.7825	1.9347	1.09649	141.54	-0.7831	1.9380	1.09092	141.60	-0.7837	1.9414	1.08539
110	145.35	-0.8226	2.2276	0.96816	145.40	-0.8231	2.2321	0.96101	145.45	-0.8237	2.2367	0.95589
115	148.91	-0.8564	2.5570	0.85635	148.96	-0.8569	2.5630	0.85158	149.02	-0.8573	2.5690	0.84665
120	152.22	-0.8847	2.9207	0.76429	152.27	-0.8851	2.9284	0.75987	152.31	-0.8855	2.9361	0.75548
125	155.28	-0.9084	3.3145	0.68741	155.33	-0.9087	3.3241	0.68331	155.37	-0.9090	3.3338	0.67924
130	158.14	-0.9281	3.7320	0.62345	158.18	-0.9283	3.7437	0.61962	158.22	-0.9286	3.7555	0.61582
135	160.81	-0.9444	4.1643	0.57042	160.84	-0.9446	4.1783	0.56684	160.88	-0.9448	4.1924	0.56328
140	163.31	-0.9579	4.6009	0.52666	163.34	-0.9580	4.6173	0.52329	163.38	-0.9582	4.6337	0.51994
145	165.68	-0.9689	5.0298	0.49079	165.71	-0.9690	5.0485	0.48759	165.73	-0.9692	5.0673	0.48441
150	167.93	-0.9779	5.4377	0.46166	167.95	-0.9780	5.4587	0.45861	167.98	-0.9781	5.4798	0.45559
155	170.08	-0.9851	5.8115	0.43838	170.10	-0.9851	5.8346	0.43545	170.12	-0.9852	5.8579	0.43255
160	172.16	-0.9906	6.1381	0.42022	172.17	-0.9907	6.1631	0.41739	172.19	-0.9907	6.1883	0.41458
165	174.17	-0.9948	6.4059	0.40563	174.18	-0.9948	6.4324	0.40387	174.19	-0.9949	6.4591	0.40113
170	176.14	-0.9977	6.6048	0.39720	176.14	-0.9977	6.6325	0.39449	176.15	-0.9977	6.6603	0.39180
175	178.08	-0.9994	6.7273	0.39165	178.08	-0.9994	6.7557	0.38867	178.08	-0.9994	6.7843	0.38632
180	180.00	-1.0000	6.7686	0.38982	180.00	-1.0000	6.7973	0.38715	180.00	-1.0000	6.8261	0.38450

 $x = 0.382$
 $x = 0.383$
 $x = 0.384$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3820	6.85373	0.00	1.0000	0.3816	6.84266	0.00	1.0000	0.3812	6.83165
5	8.09	0.9901	0.3832	6.82154	8.09	0.9900	0.3828	6.81049	8.10	0.9900	0.3824	6.79949
10	16.16	0.9605	0.3870	6.72585	16.17	0.9604	0.3866	6.71483	16.18	0.9604	0.3862	6.70386
15	24.20	0.9121	0.3934	6.56924	24.22	0.9120	0.3930	6.55827	24.23	0.9119	0.3926	6.54735
20	32.20	0.8462	0.4026	6.35590	32.22	0.8460	0.4022	6.34500	32.24	0.8459	0.4018	6.33416
25	40.14	0.7645	0.4148	6.09152	40.16	0.7642	0.4144	6.08071	40.18	0.7640	0.4141	6.06996
30	48.00	0.6691	0.4305	5.78302	48.03	0.6688	0.4301	5.77234	48.05	0.6685	0.4297	5.76170
35	55.76	0.5626	0.4501	5.43838	55.79	0.5622	0.4497	5.42784	55.82	0.5618	0.4493	5.41735
40	63.41	0.4476	0.4742	5.06629	63.44	0.4471	0.4738	5.05593	63.47	0.4466	0.4734	5.04561
45	70.91	0.3270	0.5036	4.67586	70.95	0.3264	0.5032	4.66570	70.99	0.3258	0.5028	4.65559
50	78.26	0.2035	0.5392	4.27625	78.30	0.2028	0.5388	4.26633	78.34	0.2021	0.5385	4.25646
55	85.42	0.0799	0.5824	3.87637	85.46	0.0791	0.5820	3.86673	85.50	0.0784	0.5817	3.85712
60	92.36	-0.0412	0.6346	3.48447	92.41	-0.0420	0.6343	3.47514	92.46	-0.0429	0.6340	3.46584
65	99.07	-0.1576	0.6978	3.10788	99.12	-0.1585	0.6975	3.09889	99.17	-0.1593	0.6973	3.08994
70	105.51	-0.2673	0.7742	2.75271	105.56	-0.2682	0.7740	2.74410	105.61	-0.2691	0.7739	2.73553
75	111.66	-0.3690	0.8665	2.42366	111.71	-0.3699	0.8665	2.41547	111.77	-0.3708	0.8666	2.40731
80	117.49	-0.4616	0.9779	2.12394	117.55	-0.4625	0.9782	2.11618	117.61	-0.4634	0.9784	2.10846
85	123.00	-0.5447	1.1119	1.85522	123.06	-0.5455	1.1125	1.84792	123.12	-0.5464	1.1130	1.84065
90	128.17	-0.6181	1.2721	1.61780	128.23	-0.6189	1.2731	1.61096	128.29	-0.6197	1.2741	1.60417
95	133.00	-0.6820	1.4622	1.41076	133.06	-0.6828	1.4638	1.40439	133.12	-0.6835	1.4654	1.39806
100	137.49	-0.7372	1.6855	1.23227	137.55	-0.7379	1.6879	1.22636	137.61	-0.7386	1.6903	1.22049
105	141.66	-0.7843	1.9447	1.07988	141.71	-0.7849	1.9481	1.07441	141.77	-0.7855	1.9515	1.06897
110	145.51	-0.8242	2.2413	0.95080	145.56	-0.8247	2.2459	0.94574	145.61	-0.8252	2.2505	0.94071
115	149.07	-0.8578	2.5750	0.84214	149.12	-0.8582	2.5811	0.83746	149.17	-0.8587	2.5872	0.83281
120	152.36	-0.8859	2.9439	0.75113	152.41	-0.8863	2.9517	0.74679	152.46	-0.8867	2.9595	0.74249
125	155.42	-0.9094	3.3435	0.67519	155.46	-0.9097	3.3533	0.67116	155.50	-0.9100	3.3630	0.66717
130	158.26	-0.9289	3.7673	0.61205	158.30	-0.9291	3.7792	0.60830	158.34	-0.9294	3.7912	0.60457
135	160.91	-0.9450	4.2065	0.55974	160.95	-0.9452	4.2207	0.55623	160.99	-0.9454	4.2350	0.55274
140	163.41	-0.9584	4.6502	0.51661	163.44	-0.9585	4.6668	0.51330	163.47	-0.9587	4.6835	0.51002
145	165.76	-0.9693	5.0862	0.48126	165.79	-0.9694	5.1052	0.47813	165.82	-0.9695	5.1242	0.47502
150	168.00	-0.9782	5.5010	0.45258	168.03	-0.9782	5.5224	0.44959	168.05	-0.9783	5.5438	0.44663
155	170.14	-0.9852	5.8812	0.42966	170.16	-0.9853	5.9047	0.42679	170.18	-0.9854	5.9283	0.42395
160	172.20	-0.9908	6.2135	0.41179	172.22	-0.9908	6.2389	0.40902	172.24	-0.9908	6.2644	0.40627
165	174.20	-0.9949	6.4859	0.39841	174.22	-0.9949	6.5129	0.39572	174.23	-0.9949	6.5400	0.39304
170	176.16	-0.9978	6.6883	0.38914	176.17	-0.9978	6.7165	0.38649	176.18	-0.9978	6.7447	0.38386
175	178.09	-0.9994	6.8130	0.38368	178.09	-0.9994	6.8419	0.38106	178.10	-0.9994	6.8709	0.37846
180	180.00	-1.0000	6.8551	0.38188	180.00	-1.0000	6.8842	0.37927	180.00	-1.0000	6.9135	0.37668

x = 0.385					x = 0.386					x = 0.387				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3808	6.82069	0.00	1.0000	0.3804	6.80979	0.00	1.0000	0.3801	6.79893		
5	8.10	0.9900	0.3821	6.78854	8.10	0.9900	0.3817	6.77764	8.11	0.9900	0.3813	6.76679		
10	16.19	0.9604	0.3858	6.63294	16.19	0.9603	0.3854	6.68207	16.20	0.9603	0.3851	6.67125		
15	24.24	0.9118	0.3922	6.53648	24.25	0.9117	0.3918	6.52566	24.27	0.9117	0.3915	6.51489		
20	32.25	0.8457	0.4014	6.32336	32.27	0.8456	0.4010	6.31261	32.28	0.8454	0.4006	6.30192		
25	40.20	0.7638	0.4137	6.05926	40.22	0.7635	0.4133	6.04860	40.24	0.7633	0.4129	6.03800		
30	48.07	0.6682	0.4293	5.75112	48.10	0.6679	0.4290	5.74058	48.12	0.6675	0.4286	5.73010		
35	55.85	0.5614	0.4489	5.40691	55.88	0.5610	0.4485	5.39652	55.90	0.5606	0.4482	5.38618		
40	63.51	0.4461	0.4730	5.03534	63.54	0.4456	0.4726	5.02512	63.57	0.4451	0.4723	5.01495		
45	71.02	0.3252	0.5024	4.64552	71.06	0.3246	0.5021	4.63551	71.10	0.3240	0.5017	4.62554		
50	78.38	0.2014	0.5381	4.24663	78.42	0.2007	0.5378	4.23685	78.46	0.2000	0.5374	4.22711		
55	85.55	0.0776	0.5814	3.84757	85.59	0.0768	0.5810	3.83805	85.64	0.0761	0.5807	3.82859		
60	92.50	-0.0437	0.6337	3.45659	92.55	-0.0445	0.6334	3.44739	92.60	-0.0453	0.6332	3.43822		
65	99.22	-0.1602	0.6971	3.08103	99.27	-0.1611	0.6969	3.07217	99.32	-0.1619	0.6967	3.06335		
70	105.67	-0.2700	0.7738	2.72700	105.72	-0.2709	0.7737	2.71851	105.77	-0.2718	0.7736	2.71006		
75	111.82	-0.3717	0.8666	2.39919	111.88	-0.3726	0.8667	2.39111	111.93	-0.3735	0.8667	2.38306		
80	117.67	-0.4643	0.9787	2.10077	117.72	-0.4652	0.9790	2.09313	117.78	-0.4661	0.9793	2.08552		
85	123.18	-0.5473	1.1136	1.83343	123.24	-0.5481	1.1142	1.82623	123.30	-0.5490	1.1148	1.81908		
90	128.35	-0.6205	1.2752	1.59740	128.41	-0.6213	1.2762	1.59067	128.47	-0.6221	1.2772	1.58398		
95	133.18	-0.6843	1.4670	1.39176	133.24	-0.6850	1.4687	1.38550	133.30	-0.6858	1.4703	1.37926		
100	137.67	-0.7392	1.6927	1.21464	137.72	-0.7399	1.6952	1.20883	137.78	-0.7406	1.6976	1.20305		
105	141.82	-0.7961	1.9549	1.06356	141.88	-0.7967	1.9584	1.05819	141.93	-0.7973	1.0618	1.05284		
110	145.67	-0.8258	2.2552	0.93571	145.72	-0.8263	2.2598	0.93074	145.77	-0.8268	2.2645	0.92580		
115	149.22	-0.8591	2.5933	0.82819	149.27	-0.8596	2.5995	0.82360	149.32	-0.8600	2.6057	0.81903		
120	152.50	-0.8870	2.9674	0.73821	152.55	-0.8874	2.9752	0.73396	152.60	-0.8878	2.9832	0.72973		
125	155.55	-0.9103	3.3729	0.66320	155.59	-0.9106	3.3827	0.65925	155.64	-0.9109	3.3926	0.65533		
130	158.38	-0.9296	3.8032	0.60087	158.42	-0.9299	3.8152	0.65720	158.46	-0.9302	3.8273	0.65155		
135	161.02	-0.9457	4.2493	0.54928	161.06	-0.9459	4.2637	0.54564	161.10	-0.9461	4.2781	0.54424		
140	163.51	-0.9586	4.7002	0.50676	163.54	-0.9590	4.7170	0.50352	163.57	-0.9592	4.7339	0.50030		
145	165.85	-0.9697	5.1434	0.47193	165.88	-0.9698	5.1627	0.46887	165.90	-0.9699	5.1820	0.46582		
150	168.07	-0.9784	5.5653	0.44369	168.10	-0.9785	5.5869	0.44076	168.12	-0.9786	5.6086	0.43786		
155	170.20	-0.9854	5.9520	0.42112	170.22	-0.9855	5.9758	0.41832	170.24	-0.9855	5.9997	0.41553		
160	172.25	-0.9909	6.2900	0.40353	172.27	-0.9909	6.3158	0.40082	172.28	-0.9909	6.3417	0.39813		
165	174.24	-0.9950	6.5672	0.39038	174.25	-0.9950	6.5946	0.38774	174.27	-0.9950	6.6221	0.38512		
170	176.19	-0.9978	6.7732	0.38125	176.19	-0.9978	6.8017	0.37866	176.20	-0.9978	6.8304	0.37609		
175	178.10	-0.9995	6.9000	0.37588	178.10	-0.9995	6.9293	0.37332	178.11	-0.9995	6.9588	0.37078		
180	180.00	-1.0000	6.9429	0.37411	180.00	-1.0000	6.9724	0.37156	180.00	-1.0000	7.0021	0.36903		

x = 0.388					x = 0.389					x = 0.390				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3797	6.79813	0.00	1.0000	0.3793	6.77737	0.00	1.0000	0.3789	6.76667		
5	8.11	0.9900	0.3809	6.75600	8.12	0.9900	0.3805	6.74525	8.12	0.9900	0.3802	6.73456		
10	16.21	0.9602	0.3847	6.66049	16.22	0.9602	0.3843	6.64977	16.23	0.9602	0.3839	6.63910		
15	24.28	0.9116	0.3911	6.50418	24.29	0.9115	0.3907	6.49351	24.30	0.9114	0.3903	6.48289		
20	32.30	0.8453	0.4003	6.29127	32.32	0.8451	0.3999	6.28067	32.33	0.8450	0.3995	6.27012		
25	40.26	0.7631	0.4125	6.02745	40.28	0.7629	0.4121	6.01694	40.30	0.7626	0.4118	6.00648		
30	48.15	0.6672	0.4282	5.71966	48.17	0.6669	0.4278	5.70927	48.19	0.6666	0.4274	5.69893		
35	55.93	0.5602	0.4478	5.37588	55.96	0.5598	0.4474	5.36563	55.99	0.5593	0.4470	5.35543		
40	63.60	0.4446	0.4719	5.00483	63.63	0.4441	0.4715	4.99475	63.67	0.4436	0.4711	4.98472		
45	71.13	0.3234	0.5013	4.61561	71.17	0.3228	0.5009	4.60573	71.21	0.3222	0.5006	4.59590		
50	78.50	0.1994	0.5371	4.21742	78.54	0.1987	0.5367	4.20778	78.58	0.1980	0.5363	4.19817		
55	85.68	0.0753	0.5804	3.81916	85.72	0.0746	0.5801	3.80978	85.77	0.0738	0.5797	3.80044		
60	92.65	-0.0462	0.6329	3.42910	92.69	-0.0470	0.6326	3.42002	92.74	-0.0478	0.6323	3.41099		
65	99.37	-0.1628	0.6964	3.05456	99.42	-0.1637	0.6962	3.04582	99.47	-0.1645	0.6960	3.03712		
70	105.83	-0.2727	0.7735	2.70166	105.88	-0.2736	0.7734	2.69329	105.93	-0.2745	0.7733	2.68496		
75	111.99	-0.3744	0.8668	2.37506	112.05	-0.3753	0.8668	2.36710	112.10	-0.3762	0.8669	2.35917		
80	117.84	-0.4670	0.9795	2.07795	117.90	-0.4679	0.9798	2.07041	117.95	-0.4687	0.9801	2.06292		
85	123.35	-0.5498	1.1154	1.81196	123.41	-0.5507	1.1160	1.80487	123.47	-0.5515	1.1166	1.79782		
90	128.53	-0.6229	1.2783	1.57732	128.59	-0.6237	1.2793	1.57069	128.65	-0.6245	1.2804	1.56410		
95	133.35	-0.6865	1.4720	1.37306	133.41	-0.6873	1.4736	1.36690	133.47	-0.6880	1.4753	1.36076		
100	137.84	-0.7413	1.7000	1.19730	137.90	-0.7419	1.7025	1.19158	137.95	-0.7426	1.7049	1.18590		
105	141.99	-0.7879	1.9652	1.04752	142.05	-0.7885	1.9687	1.04224	142.10	-0.7891	1.9721	1.03698		
110	145.83	-0.8273	2.2692	0.92089	145.88	-0.8279	2.2733	0.91501	145.93	-0.8284	2.2786	0.91115		
115	149.37	-0.8605	2.6118	0.81450	149.42	-0.8609	2.6181	0.80999	149.47	-0.8614	2.6243	0.80550		
120	152.65	-0.8882	2.9911	0.72553	152.69	-0.8886	2.9991	0.72136	152.74	-0.8889	3.0071	0.71722		
125	155.68	-0.9113	3.4026	0.65143	155.72	-0.9116	3.4126	0.64756	155.77	-0.9119	3.4226	0.64372		
130	158.50	-0.9304	3.8395	0.58992	158.54	-0.9307	3.8517	0.58631	158.58	-0.9309	3.8640	0.58273		
135	161.13	-0.9463	4.2927	0.53903	161.17	-0.9465	4.3072	0.53565	161.21	-0.9467	4.3219	0.53230		
140	163.60	-0.9593	4.7509	0.49711	163.63	-0.9595	4.7680	0.49393	163.67	-0.9596	4.7851	0.49078		
145	165.93	-0.9700	5.2015	0.46280	165.96	-0.9701	5.2210	0.45979	165.99	-0.9703	5.2406	0.45681		
150	168.15	-0.9787	5.6304	0.43498	168.17	-0.9788	5.6524	0.43212	168.19	-0.9788	5.6744	0.42928		
155	170.26	-0.9856	6.0238	0.41277	170.28	-0.9857	6.0479	0.41002	170.30	-0.9857	6.0722	0.40730		
160	172.30	-0.9910	6.3677	0.39546	172.32	-0.9910	6.3938	0.39280	172.33	-0.9911	6.4201	0.39017		
165	174.28													

$\frac{2}{x} = 0.391$					$\frac{2}{x} = 0.392$					$\frac{2}{x} = 0.393$				
PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$
0	0.00	1.0000	0.3786	6.75601	0.00	1.0000	0.3782	6.74540	0.00	1.0000	0.3778	6.73485	0.00	1.0000
5	8.12	0.9900	0.3798	6.72391	8.13	0.9900	0.3794	6.71331	8.13	0.9899	0.3791	6.70277	8.13	0.9899
10	16.23	0.9601	0.3836	6.62849	16.24	0.9601	0.3832	6.61792	16.25	0.9601	0.3828	6.60740	16.25	0.9601
15	24.31	0.9113	0.3899	6.47232	24.33	0.9112	0.3896	6.46180	24.34	0.9111	0.3892	6.45133	24.34	0.9111
20	32.35	0.8448	0.3991	6.25962	32.36	0.8447	0.3987	6.24917	32.38	0.8445	0.3984	6.23877	32.38	0.8445
25	40.32	0.7624	0.4114	5.99608	40.34	0.7622	0.4110	5.98571	40.36	0.7620	0.4106	5.97540	40.36	0.7620
30	48.22	0.6663	0.4270	5.68863	48.24	0.6660	0.4267	5.67839	48.27	0.6657	0.4263	5.66819	48.27	0.6657
35	56.02	0.5589	0.4466	5.34528	56.05	0.5585	0.4463	5.33517	56.07	0.5581	0.4459	5.32511	56.07	0.5581
40	63.70	0.4431	0.4708	4.97473	63.73	0.4426	0.4704	4.96479	63.76	0.4421	0.4700	4.95490	63.76	0.4421
45	71.24	0.3216	0.5002	4.58611	71.28	0.3210	0.4998	4.57637	71.31	0.3204	0.4995	4.56667	71.31	0.3204
50	78.62	0.1973	0.5360	4.18862	78.66	0.1966	0.5356	4.17910	78.70	0.1959	0.5353	4.16963	78.70	0.1959
55	85.81	0.0730	0.5794	3.79115	85.86	0.0723	0.5791	3.78190	85.90	0.0715	0.5787	3.77269	85.90	0.0715
60	92.79	-0.0486	0.6320	3.40199	92.83	-0.0495	0.6317	3.39304	92.88	-0.0503	0.6314	3.38413	92.88	-0.0503
65	99.52	-0.1654	0.6958	3.02846	99.57	-0.1663	0.6956	3.01985	99.62	-0.1671	0.6954	3.01127	99.62	-0.1671
70	105.99	-0.2754	0.7731	2.67667	106.04	-0.2763	0.7730	2.66842	106.09	-0.2772	0.7729	2.66021	106.09	-0.2772
75	112.16	-0.3771	0.8669	2.35128	112.21	-0.3780	0.8670	2.34343	112.27	-0.3789	0.8670	2.33562	112.27	-0.3789
80	118.01	-0.4696	0.9804	2.05546	118.07	-0.4705	0.9806	2.04803	118.12	-0.4714	0.9809	2.04064	118.12	-0.4714
85	123.53	-0.5524	1.1172	1.79081	123.59	-0.5532	1.1178	1.78383	123.65	-0.5541	1.1184	1.77688	123.65	-0.5541
90	128.70	-0.6253	1.2814	1.55754	128.76	-0.6261	1.2825	1.55102	128.82	-0.6269	1.2835	1.54453	128.82	-0.6269
95	133.53	-0.6887	1.4769	1.35466	133.59	-0.6895	1.4786	1.34859	133.65	-0.6902	1.4802	1.34256	133.65	-0.6902
100	138.01	-0.7433	1.7074	1.18024	138.07	-0.7433	1.7099	1.17462	138.12	-0.7446	1.7123	1.16903	138.12	-0.7446
105	142.16	-0.7877	1.8756	1.03175	142.21	-0.7903	1.9791	1.02655	142.27	-0.7909	1.9826	1.02138	142.27	-0.7909
110	145.99	-0.8289	2.2833	0.90633	146.04	-0.8294	2.2881	0.90153	146.09	-0.8299	2.2929	0.89676	146.09	-0.8299
115	149.52	-0.8618	2.6306	0.80105	149.57	-0.8623	2.6368	0.79662	149.62	-0.8627	2.6431	0.79221	149.62	-0.8627
120	152.79	-0.8893	3.0151	0.71309	152.83	-0.8897	3.0232	0.70900	152.88	-0.8901	3.0313	0.70493	152.88	-0.8901
125	155.81	-0.9122	3.4327	0.63990	155.86	-0.9125	3.4428	0.63610	155.90	-0.9128	3.4530	0.63233	155.90	-0.9128
130	158.62	-0.9312	3.8763	0.57918	158.66	-0.9314	3.8866	0.57564	158.70	-0.9317	3.9011	0.57213	158.70	-0.9317
135	161.24	-0.9469	4.3366	0.52898	161.28	-0.9471	4.3514	0.52567	161.31	-0.9473	4.3662	0.52239	161.31	-0.9473
140	163.70	-0.9598	4.8023	0.48765	163.73	-0.9600	4.8196	0.48454	163.76	-0.9601	4.8370	0.48146	163.76	-0.9601
145	166.02	-0.9704	5.2603	0.45385	166.05	-0.9705	5.2801	0.45091	166.07	-0.9706	5.3001	0.44798	166.07	-0.9706
150	168.22	-0.9789	5.6966	0.42645	168.24	-0.9790	5.7188	0.42365	168.27	-0.9791	5.7412	0.42087	168.27	-0.9791
155	170.32	-0.9858	6.0966	0.40459	170.34	-0.9858	6.1212	0.40190	170.36	-0.9859	6.1458	0.39923	170.36	-0.9859
160	172.35	-0.9911	6.4465	0.38755	172.36	-0.9911	6.4730	0.38496	172.38	-0.9912	6.4997	0.38238	172.38	-0.9912
165	174.31	-0.9951	6.7335	0.37482	174.33	-0.9951	6.7617	0.37229	174.34	-0.9951	6.7900	0.36978	174.34	-0.9951
170	176.23	-0.9978	6.9467	0.36599	176.24	-0.9978	6.9762	0.36351	176.25	-0.9979	7.0058	0.36105	176.25	-0.9979
175	178.12	-0.9995	7.0781	0.36079	178.13	-0.9995	7.1083	0.35834	178.13	-0.9995	7.1387	0.35591	178.13	-0.9995
180	180.00	-1.0000	7.1225	0.35908	180.00	-1.0000	7.1530	0.35664	180.00	-1.0000	7.1836	0.35421	180.00	-1.0000

2 x = 0.394					2 x = 0.395					2 x = 0.396				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3774	6.72434	0.00	1.0000	0.3771	6.71387	0.00	1.0000	0.3767	6.70346		
5	8.14	0.9899	0.3787	6.69227	8.14	0.9899	0.3783	6.68181	8.14	0.9899	0.3779	6.67141		
10	16.26	0.9600	0.3824	6.59693	16.27	0.9600	0.3821	6.58650	16.27	0.9599	0.3817	6.57613		
15	24.35	0.9110	0.3888	6.44091	24.36	0.9110	0.3884	6.43053	24.37	0.9109	0.3881	6.42020		
20	32.40	0.8444	0.3980	6.22841	32.41	0.8442	0.3976	6.21810	32.43	0.8441	0.3973	6.20784		
25	40.38	0.7617	0.4102	5.96514	40.40	0.7615	0.4099	5.95492	40.42	0.7613	0.4095	5.94474		
30	48.29	0.6653	0.4259	5.65803	48.32	0.6650	0.4255	5.64793	48.34	0.6647	0.4252	5.63787		
35	56.10	0.5577	0.4455	5.31510	56.13	0.5573	0.4451	5.30513	56.16	0.5569	0.4447	5.29520		
40	63.80	0.4416	0.4696	4.94505	63.83	0.4411	0.4692	4.93528	63.86	0.4406	0.4689	4.92548		
45	71.35	0.3198	0.4991	4.55702	71.39	0.3192	0.4987	4.54740	71.42	0.3186	0.4984	4.53784		
50	78.74	0.1953	0.5349	4.16020	78.78	0.1946	0.5346	4.15082	78.82	0.1939	0.5342	4.14148		
55	85.94	0.0708	0.5784	3.76352	85.99	0.0700	0.5781	3.75440	86.03	0.0692	0.5778	3.74532		
60	92.93	-0.0511	0.6312	3.37526	92.98	-0.0519	0.6309	3.36643	93.02	-0.0527	0.6306	3.35764		
65	99.67	-0.1680	0.6952	3.00273	99.72	-0.1689	0.6949	2.99423	99.77	-0.1697	0.6947	2.98577		
70	106.15	-0.2781	0.7728	2.65203	106.20	-0.2790	0.7727	2.64390	106.25	-0.2799	0.7726	2.63580		
75	112.32	-0.3798	0.8670	2.32784	112.38	-0.3807	0.8671	2.32010	112.43	-0.3816	0.8671	2.31240		
80	118.18	-0.4723	0.9812	2.03329	118.24	-0.4731	0.9815	2.02597	118.30	-0.4740	0.9818	2.01869		
85	123.70	-0.5549	1.1190	1.76997	123.76	-0.5558	1.1196	1.76310	123.82	-0.5566	1.1202	1.75626		
90	128.88	-0.6277	1.2846	1.53807	128.94	-0.6285	1.2856	1.53164	129.00	-0.6293	1.2867	1.52525		
95	133.70	-0.6909	1.4819	1.33655	133.76	-0.6917	1.4836	1.33057	133.82	-0.6924	1.4853	1.32463		
100	138.18	-0.7453	1.7148	1.16345	138.24	-0.7459	1.7172	1.15793	138.30	-0.7466	1.7197	1.15242		
105	142.32	-0.7915	1.9861	1.01624	142.38	-0.7921	1.9896	1.01113	142.43	-0.7926	1.9931	1.00605		
110	146.15	-0.8305	2.2976	0.89202	146.20	-0.8310	2.3025	0.88730	146.25	-0.8315	2.3073	0.88261		
115	149.67	-0.8632	2.6495	0.78784	149.72	-0.8636	2.6558	0.78349	149.77	-0.8640	2.6622	0.77916		
120	152.93	-0.8904	3.0395	0.70088	152.98	-0.8908	3.0476	0.69686	153.02	-0.8912	3.0559	0.69287		
125	155.94	-0.9131	3.4632	0.62858	155.99	-0.9134	3.4734	0.62485	156.03	-0.9138	3.4837	0.62115		
130	158.74	-0.9319	3.9135	0.56864	158.78	-0.9322	3.9261	0.56517	158.82	-0.9325	3.9387	0.56173		
135	161.35	-0.9475	4.3812	0.51912	161.39	-0.9477	4.3962	0.51588	161.42	-0.9479	4.4112	0.51267		
140	163.80	-0.9603	4.8544	0.47839	163.83	-0.9604	4.8720	0.47534	163.86	-0.9606	4.8896	0.47232		
145	166.10	-0.9707	5.3201	0.44508	166.13	-0.9708	5.3402	0.44220	166.16	-0.9710	5.3604	0.43934		
150	168.29	-0.9792	5.7637	0.41811	168.32	-0.9793	5.7863	0.41536	168.34	-0.9794	5.8090	0.41264		
155	170.38	-0.9859	6.1706	0.39658	170.40	-0.9860	6.1955	0.39395	170.42	-0.9861	6.2205	0.39134		
160	172.40	-0.9912	6.5782	0.37592	172.41	-0.9912	6.5935	0.37378	172.43	-0.9913	6.5806	0.37475		
165	174.35	-0.9955	6.8185	0.36729	174.36	-0.9955	6.8472	0.36691	174.37	-0.9952	6.8759	0.36236		
170	176.26	-0.9979	7.0355	0.35860	176.27	-0.9979	7.0654	0.35617	176.27	-0.9979	7.0955	0.35376		
175	178.14	-0.9995	7.1692	0.35349	178.14	-0.9995	7.1999	0.35109	178.14	-0.9995	7.2308	0.34871		
180	180.00	-1.0000	7.2144	0.35181	180.00	-1.0000	7.2454	0.34942	180.00	-1.0000	7.2765	0.34704		

$x = 0.397$					$x = 0.398$					$x = 0.399$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.3763	6.69310	0.00	1.0000	0.3760	6.68278	0.00	1.0000	0.3756	6.67250	0.00	1.0000
5	8.15	0.9899	0.3776	6.66105	8.15	0.9899	0.3772	6.65074	8.16	0.9899	0.3769	6.64048	8.16	0.9899
10	16.28	0.9599	0.3813	6.56580	16.29	0.9599	0.3810	6.55552	16.30	0.9598	0.3806	6.54528	16.30	0.9598
15	24.39	0.9108	0.3877	6.40992	24.40	0.9107	0.3873	6.39968	24.41	0.9106	0.3870	6.38949	24.41	0.9106
20	32.44	0.8439	0.3969	6.19763	32.46	0.8438	0.3965	6.18746	32.48	0.8436	0.3961	6.17734	32.48	0.8436
25	40.44	0.7610	0.4091	5.93462	40.46	0.7608	0.4087	5.92454	40.48	0.7606	0.4084	5.91450	40.48	0.7606
30	48.36	0.6644	0.4248	5.62785	48.39	0.6641	0.4244	5.61788	48.41	0.6638	0.4240	5.60796	48.41	0.6638
35	56.19	0.5565	0.4444	5.28533	56.21	0.5561	0.4440	5.27549	56.24	0.5557	0.4436	5.26570	56.24	0.5557
40	63.89	0.4401	0.4685	4.91577	63.92	0.4396	0.4681	4.90609	63.96	0.4391	0.4678	4.89646	63.96	0.4391
45	71.46	0.3180	0.4980	4.52831	71.49	0.3174	0.4976	4.51883	71.53	0.3168	0.4973	4.50939	71.53	0.3168
50	78.86	0.1932	0.5339	4.13218	78.90	0.1925	0.5335	4.12292	78.94	0.1918	0.5332	4.11370	78.94	0.1918
55	86.07	0.0685	0.5774	3.73627	86.12	0.0677	0.5771	3.72727	86.16	0.0670	0.5768	3.71831	86.16	0.0670
60	93.07	-0.0536	0.6303	3.34889	93.12	-0.0544	0.6300	3.34018	93.16	-0.0552	0.6297	3.33151	93.16	-0.0552
65	99.82	-0.1706	0.6945	2.97734	99.87	-0.1715	0.6943	2.96896	99.92	-0.1723	0.6941	2.96052	99.92	-0.1723
70	106.30	-0.2807	0.7725	2.62774	106.36	-0.2816	0.7724	2.61972	106.41	-0.2825	0.7723	2.61173	106.41	-0.2825
75	112.49	-0.3825	0.8672	2.30473	112.54	-0.3834	0.8672	2.29710	112.60	-0.3843	0.8673	2.28951	112.60	-0.3843
80	118.35	-0.4749	0.9820	2.01144	118.41	-0.4758	0.9823	2.00423	118.47	-0.4767	0.9826	1.99705	118.47	-0.4767
85	123.88	-0.5574	1.1209	1.74945	123.94	-0.5583	1.1215	1.74267	124.00	-0.5591	1.1221	1.73593	124.00	-0.5591
90	129.06	-0.6301	1.2878	1.51889	129.11	-0.6309	1.2888	1.51256	129.17	-0.6317	1.2899	1.50626	129.17	-0.6317
95	133.88	-0.6931	1.4870	1.31872	133.94	-0.6939	1.4886	1.31284	134.00	-0.6946	1.4903	1.30699	134.00	-0.6946
100	138.35	-0.7473	1.7222	1.14695	138.41	-0.7479	1.7247	1.14151	138.47	-0.7486	1.7273	1.13609	138.47	-0.7486
105	142.49	-0.7932	1.9967	1.00099	142.54	-0.7938	2.0052	0.99597	142.60	-0.7944	2.0038	0.99097	142.60	-0.7944
110	146.30	-0.8320	2.3121	0.87795	146.36	-0.8325	2.3170	0.87332	146.41	-0.8330	2.3218	0.86871	146.41	-0.8330
115	149.82	-0.8645	2.6886	0.77486	149.87	-0.8649	2.6750	0.77059	149.92	-0.8654	2.6815	0.76634	149.92	-0.8654
120	153.07	-0.8916	3.0641	0.68889	153.12	-0.8919	3.0724	0.68495	153.16	-0.8923	3.0807	0.68102	153.16	-0.8923
125	156.07	-0.9141	3.4940	0.61747	156.12	-0.9144	3.5044	0.61381	156.16	-0.9147	3.5148	0.61018	156.16	-0.9147
130	158.86	-0.9327	3.9513	0.55831	158.90	-0.9330	3.9640	0.55491	158.94	-0.9332	3.9768	0.55153	158.94	-0.9332
135	161.46	-0.9481	4.4263	0.50947	161.49	-0.9483	4.4415	0.50629	161.53	-0.9485	4.4568	0.50313	161.53	-0.9485
140	163.89	-0.9607	4.9073	0.46931	163.92	-0.9609	4.9251	0.46633	163.96	-0.9610	4.9430	0.46336	163.96	-0.9610
145	166.19	-0.9711	5.3807	0.43650	166.21	-0.9712	5.4011	0.43367	166.24	-0.9713	5.4215	0.43087	166.24	-0.9713
150	168.36	-0.9794	5.8318	0.40993	168.39	-0.9795	5.8547	0.40724	168.41	-0.9796	5.8777	0.40457	168.41	-0.9796
155	170.44	-0.9861	6.2457	0.38874	170.46	-0.9862	6.2709	0.38616	170.48	-0.9862	6.2963	0.38361	170.48	-0.9862
160	172.44	-0.9913	6.6078	0.37224	172.46	-0.9914	6.6351	0.36976	172.48	-0.9914	6.6626	0.36728	172.48	-0.9914
165	174.39	-0.9952	6.9049	0.35992	174.40	-0.9952	6.9339	0.35749	174.41	-0.9952	6.9632	0.35509	174.41	-0.9952
170	176.28	-0.9979	7.1257	0.35137	176.29	-0.9979	7.1561	0.34900	176.30	-0.9979	7.1866	0.34664	176.30	-0.9979
175	178.15	-0.9995	7.2618	0.34635	178.15	-0.9995	7.2929	0.34400	178.16	-0.9995	7.3243	0.34167	178.16	-0.9995
180	180.00	-1.0000	7.3077	0.34469	180.00	-1.0000	7.3392	0.34235	180.00	-1.0000	7.3708	0.34003	180.00	-1.0000

2 x = 0.400					2 x = 0.401					2 x = 0.402				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3752	6.66228	0.00	1.0000	0.3749	6.65210	0.00	1.0000	0.3745	6.64196		
5	8.16	0.9899	0.3765	6.63026	8.16	0.9899	0.3761	6.62009	8.17	0.9899	0.3758	6.60997		
10	16.31	0.9598	0.3802	6.53509	16.31	0.9597	0.3799	6.52495	16.32	0.9597	0.3795	6.51485		
15	24.42	0.9105	0.3866	6.37935	24.43	0.9104	0.3862	6.36925	24.44	0.9104	0.3859	6.35920		
20	32.49	0.8435	0.3958	6.16726	32.51	0.8433	0.3954	6.15723	32.52	0.8432	0.3950	6.14724		
25	40.50	0.7604	0.4080	5.90451	40.52	0.7601	0.4076	5.89456	40.54	0.7599	0.4073	5.88466		
30	48.43	0.6635	0.4237	5.59808	48.46	0.6632	0.4233	5.58824	48.48	0.6628	0.4229	5.57845		
35	56.27	0.5553	0.4433	5.25595	56.30	0.5549	0.4429	5.24625	56.33	0.5545	0.4425	5.23659		
40	63.99	0.4386	0.4674	4.88688	64.02	0.4381	0.4670	4.87734	64.05	0.4376	0.4667	4.86784		
45	71.57	0.3162	0.4969	4.50000	71.60	0.3156	0.4965	4.49064	71.64	0.3150	0.4962	4.48133		
50	78.98	0.1912	0.5328	4.10453	79.02	0.1905	0.5325	4.09539	79.06	0.1898	0.5321	4.08630		
55	86.20	0.0662	0.5765	3.70939	86.25	0.0655	0.5761	3.70051	86.29	0.0647	0.5758	3.69167		
60	93.21	-0.0560	0.6295	3.32287	93.26	-0.0568	0.6292	3.31428	93.30	-0.0576	0.6289	3.30573		
65	99.97	-0.1732	0.6939	2.95231	100.02	-0.1741	0.6937	2.94404	100.07	-0.1749	0.6935	2.93581		
70	106.46	-0.2834	0.7722	2.60378	106.52	-0.2843	0.7721	2.59587	106.57	-0.2852	0.7720	2.58799		
75	112.65	-0.3852	0.8674	2.28195	112.71	-0.3861	0.8674	2.27442	112.77	-0.3870	0.8675	2.26693		
80	118.52	-0.4775	0.9829	1.98991	118.58	-0.4784	0.9832	1.98280	118.64	-0.4793	0.9835	1.97572		
85	124.05	-0.5600	1.1227	1.72922	124.11	-0.5608	1.1233	1.72254	124.17	-0.5616	1.1239	1.71589		
90	129.23	-0.6325	1.2910	1.50000	129.29	-0.6332	1.2921	1.49376	129.35	-0.6340	1.2932	1.48756		
95	134.05	-0.6953	1.4920	1.30116	134.11	-0.6961	1.4937	1.29537	134.17	-0.6968	1.4954	1.28961		
100	138.52	-0.7492	1.7298	1.13070	138.58	-0.7499	1.7323	1.12534	138.64	-0.7506	1.7348	1.12001		
105	142.65	-0.7950	2.0074	0.98600	142.71	-0.7956	2.0110	0.98105	142.77	-0.7962	2.0146	0.97614		
110	146.46	-0.8335	2.3267	0.86413	146.52	-0.8340	2.3316	0.85957	146.57	-0.8346	2.3366	0.85504		
115	149.97	-0.8658	2.6880	0.76211	150.02	-0.8662	2.6945	0.75792	150.07	-0.8667	2.7010	0.75374		
120	153.21	-0.8927	3.0890	0.67712	153.26	-0.8930	3.0974	0.67325	153.30	-0.8934	3.1058	0.66940		
125	156.20	-0.9150	3.5253	0.60657	156.25	-0.9153	3.5358	0.60298	156.29	-0.9156	3.5464	0.59941		
130	158.98	-0.9334	3.9896	0.54817	159.02	-0.9337	4.0025	0.54484	159.06	-0.9339	4.0154	0.54153		
135	161.57	-0.9487	4.4721	0.50000	161.60	-0.9489	4.4875	0.49688	161.64	-0.9491	4.5030	0.49379		
140	163.99	-0.9612	4.9609	0.46042	164.02	-0.9614	4.9790	0.45749	164.05	-0.9615	4.9971	0.45458		
145	166.27	-0.9714	5.4421	0.42809	166.30	-0.9715	5.4628	0.42532	166.33	-0.9717	5.4836	0.42257		
150	168.43	-0.9797	5.9009	0.40192	168.46	-0.9798	5.9242	0.39929	168.48	-0.9799	5.9475	0.39668		
155	170.50	-0.9863	6.3219	0.38106	170.52	-0.9864	6.3475	0.37854	170.54	-0.9864	6.3733	0.37604		
160	172.49	-0.9914	6.6903	0.36483	172.51	-0.9915	6.7181	0.36239	172.52	-0.9915	6.7460	0.35997		
165	174.42	-0.9953	6.9926	0.35270	174.43	-0.9953	7.0221	0.35033	174.44	-0.9953	7.0518	0.34777		
170	176.31	-0.9979	7.2173	0.34430	176.31	-0.9979	7.2481	0.34197	176.32	-0.9979	7.2791	0.33966		
175	178.16	-0.9995	7.3558	0.33935	178.16	-0.9995	7.3874	0.33706	178.17	-0.9995	7.4192	0.33477		
180	180.00	-1.0000	7.4025	0.33772	180.00	-1.0000	7.4345	0.33543	180.00	-1.0000	7.4666	0.33316		

$$\frac{2}{x} = 0.403$$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3742	6.63188
5	8.17	0.9898	0.3754	6.59989
10	16.33	0.9597	0.3791	6.50480
15	24.46	0.9103	0.3855	6.34919
20	32.54	0.8430	0.3947	6.13730
25	40.56	0.7597	0.4069	5.87481
30	48.51	0.6625	0.4226	5.56870
35	56.35	0.5541	0.4421	5.22697
40	64.08	0.4371	0.4663	4.85838
45	71.67	0.3145	0.4958	4.47206
50	79.10	0.1891	0.5318	4.07725
55	86.33	0.0640	0.5755	3.68287
60	93.35	-0.0585	0.6286	3.29721
65	100.12	-0.1758	0.6932	2.92761
70	106.62	-0.2861	0.7719	2.58015
75	112.82	-0.3878	0.8675	2.25948
80	118.70	-0.4802	0.9837	1.96868
85	124.23	-0.5625	1.1245	1.70928
90	129.41	-0.6348	1.2942	1.48139
95	134.23	-0.6975	1.4972	1.28388
100	138.70	-0.7512	1.7374	1.11471
105	142.82	-0.7967	2.0182	0.97125
110	146.62	-0.8351	2.3415	0.85054
115	150.12	-0.8671	2.7075	0.74959
120	153.35	-0.8938	3.1142	0.66557
125	156.33	-0.9159	3.5570	0.59587
130	159.10	-0.9342	4.0284	0.53823
135	161.67	-0.9493	4.5186	0.49072
140	164.08	-0.9617	5.0153	0.45170
145	166.35	-0.9718	5.5045	0.41984
150	168.51	-0.9799	5.9710	0.39408
155	170.56	-0.9865	6.3992	0.37355
160	172.54	-0.9915	6.7740	0.35757
165	174.46	-0.9953	7.0816	0.34564
170	176.33	-0.9979	7.3103	0.33737
175	178.17	-0.9995	7.4512	0.33251
180	180.00	-1.0000	7.4988	0.33090

$$\frac{2}{x} = 0.404$$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3738	6.62183
8.18	0.9898	0.3750	6.58985
16.34	0.9596	0.3788	6.49479
24.47	0.9102	0.3851	6.33923
32.56	0.8429	0.3943	6.12740
40.58	0.7595	0.4065	5.86499
48.53	0.6622	0.4222	5.55899
56.38	0.5537	0.4418	5.21740
64.11	0.4366	0.4659	4.84896
71.71	0.3139	0.4955	4.46283
79.14	0.1885	0.5314	4.06823
86.38	0.0632	0.5752	3.67410
93.40	-0.0593	0.6284	3.28873
100.17	-0.1766	0.6930	2.91945
106.68	-0.2869	0.7718	2.57235
112.88	-0.3887	0.8676	2.25206
118.75	-0.4810	0.9840	1.96167
124.29	-0.5633	1.1252	1.70270
129.47	-0.6356	1.2953	1.47525
134.29	-0.6982	1.4989	1.27818
138.75	-0.7519	1.7399	1.10944
142.88	-0.7973	2.0218	0.96638
146.68	-0.8356	2.3465	0.84605
150.17	-0.8675	2.7141	0.74547
153.40	-0.8941	3.1227	0.66176
156.38	-0.9162	3.5676	0.59235
159.14	-0.9344	4.0414	0.53496
161.71	-0.9495	4.5342	0.48766
164.11	-0.9618	5.0336	0.44883
166.38	-0.9719	5.5255	0.41713
168.53	-0.9800	5.9947	0.39150
170.58	-0.9865	6.4255	0.37108
172.56	-0.9916	6.8022	0.35518
174.47	-0.9953	7.1116	0.34332
176.34	-0.9980	7.3416	0.33509
178.18	-0.9995	7.4834	0.33026
180.00	-1.0000	7.5312	0.32865

$$\frac{2}{x} = 0.405$$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3734	6.61183
8.18	0.9898	0.3747	6.57986
16.34	0.9596	0.3784	6.48482
24.46	0.9101	0.3848	6.32931
32.57	0.8427	0.3939	6.11755
40.60	0.7592	0.4062	5.85523
48.55	0.6619	0.4218	5.54933
56.41	0.5533	0.4414	5.20787
64.15	0.4361	0.4656	4.83959
71.74	0.3133	0.4951	4.45364
79.18	0.1878	0.5311	4.05926
86.42	0.0624	0.5749	3.66538
93.44	-0.0601	0.6281	3.28029
100.22	-0.1775	0.6928	2.91133
106.73	-0.2878	0.7717	2.56458
112.93	-0.3896	0.8676	2.24467
118.81	-0.4819	0.9843	1.95469
124.34	-0.5642	1.1258	1.69615
129.52	-0.6364	1.2964	1.46913
134.34	-0.6990	1.5006	1.27250
138.81	-0.7525	1.7425	1.10419
142.93	-0.7979	2.0254	0.96155
146.73	-0.8361	2.3514	0.84160
150.22	-0.8680	2.7207	0.74136
153.44	-0.8945	3.1312	0.65798
156.42	-0.9165	3.5783	0.58885
159.18	-0.9347	4.0545	0.53171
161.74	-0.9497	4.5499	0.48463
164.15	-0.9620	5.0520	0.44598
166.41	-0.9720	5.5466	0.41444
168.55	-0.9801	6.0184	0.38894
170.60	-0.9866	6.4515	0.36862
172.57	-0.9916	6.8306	0.35281
174.48	-0.9954	7.1418	0.34101
176.34	-0.9980	7.3731	0.33283
178.18	-0.9995	7.5157	0.32803
180.00	-1.0000	7.5639	0.32644

$$\frac{2}{x} = 0.406$$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3731	6.60188
5	8.18	0.9898	0.3743	6.56192
10	16.35	0.9595	0.3781	6.47891
15	24.45	0.9100	0.3844	6.31944
20	32.59	0.8426	0.3936	6.10774
25	40.62	0.7590	0.4058	5.84550
30	48.58	0.6616	0.4214	5.53971
35	56.44	0.5529	0.4410	5.19838
40	64.18	0.4356	0.4652	4.83025
45	71.76	0.3127	0.4947	4.44449
50	79.22	0.1871	0.5307	4.05033
55	86.46	0.0617	0.5745	3.65669
60	93.49	-0.0603	0.6278	3.27189
65	100.27	-0.1793	0.6926	2.90324
70	106.78	-0.2887	0.7716	2.55684
75	112.99	-0.3905	0.8677	2.23732
80	118.87	-0.4828	0.9846	1.94775
85	124.40	-0.5650	1.1264	1.68963
90	129.58	-0.6372	1.2975	1.46305
95	134.40	-0.6997	1.5023	1.26686
100	138.87	-0.7532	1.7451	1.09897
105	142.99	-0.7985	2.0291	0.95674
110	146.78	-0.8366	2.3564	0.83717
115	150.27	-0.8684	2.7274	0.73729
120	153.49	-0.8949	3.1398	0.65422
125	156.46	-0.9168	3.5890	0.58537
130	159.22	-0.9349	4.0677	0.52848
135	161.78	-0.9499	4.5657	0.48161
140	164.18	-0.9621	5.0705	0.44315
145	166.44	-0.9721	5.5679	0.41177
150	168.58	-0.9802	6.0423	0.38640
155	170.62	-0.9866	6.4778	0.36518
160	172.59	-0.9916	6.8591	0.35046
165	174.49	-0.9954	7.1721	0.33872
170	176.35	-0.9980	7.4048	0.33059
175	178.18	-0.9995	7.5482	0.32581
180	180.00	-1.0000	7.5966	0.32423

$$\frac{2}{x} = 0.407$$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3727	6.59197
8.19	0.9898	0.3740	6.56002
16.36	0.9595	0.3777	6.46503
24.50	0.9099	0.3841	6.30951
32.60	0.8424	0.3932	6.09797
40.64	0.7588	0.4054	5.83582
48.60	0.6613	0.4211	5.53013
56.46	0.5525	0.4407	5.18893
64.21	0.4351	0.4648	4.82096
71.81	0.3121	0.4944	4.43539
79.26	0.1864	0.5304	4.04143
86.51	0.0609	0.5742	3.64805
93.54	-0.0617	0.6275	3.26352
100.32	-0.1792	0.6924	2.89519
106.83	-0.2896	0.7715	2.54914
113.04	-0.3914	0.8677	2.23000
118.92	-0.4836	0.9849	1.94083
124.46	-0.5658	1.1270	1.68315
129.64	-0.6380	1.2986	1.45700
134.46	-0.7004	1.5041	1.26124
138.92	-0.7538	1.7476	1.09378
143.04	-0.7991	2.0327	0.95195
146.83	-0.8371	2.3614	0.83277
150.32	-0.8688	2.7340	0.73323
153.54	-0.8952	3.1484	0.65048
156.51	-0.9171	3.5998	0.58191
159.26	-0.9352	4.0809	0.52527
161.81	-0.9501	4.5815	0.47862
164.21	-0.9623	5.0891	0.44034
166.46	-0.9722	5.5892	0.40911
168.60	-0.9803	6.0662	0.38387
170.64	-0.9867	6.5043	0.36376
172.60	-0.9917	6.8978	0.34812
174.50	-0.9954	7.2025	0.33645
176.36	-0.9980	7.4366	0.32836
178.19	-0.9995	7.5808	0.32361
180.00	-1.0000	7.6296	0.32204

$$\frac{2}{x} = 0.408$$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3724	6.58210
8.19	0.9898	0.3736	6.55016
16.37	0.9595	0.3773	6.45520
24.52	0.9098	0.3837	6.29982
32.62	0.8423	0.3929	6.08824
40.66	0.7586	0.4051	5.82618
48.63	0.6610	0.4207	5.52060
56.49	0.5521	0.4403	5.17953
64.24	0.4346	0.4645	4.81171
71.85	0.3115	0.4940	4.42632
79.30	0.1857	0.5301	4.03258
86.55	0.0602	0.5739	3.63944
93.58	-0.0625	0.6273	3.25519
100.37	-0.1801	0.6922	2.88718
106.89	-0.2905	0.7713	2.54148
113.10	-0.3923	0.8678	2.22271
118.98	-0.4845	0.9852	1.93395
124.52	-0.5667	1.1277	1.67669
129.70	-0.6387	1.2997	1.45098
134.52	-0.7011	1.5058	1.25565
138.98	-0.7545	1.7502	1.08862
143.10	-0.7996	2.0364	0.94719
146.89	-0.8376	2.3665	0.82839
150.37	-0.8693	2.7407	0.72920
153.58	-0.8956	3.1570	0.64676
156.55	-0.9174	3.6107	0.57848
159.30	-0.9354	4.0942	0.52208
161.85	-0.9502	4.5974	0.47564
164.24	-0.9624	5.1077	0.43755
166.49	-0.9723	5.6106	0.40647
168.63	-0.9804	6.0903	0.38136
170.66	-0.9867	6.5309	0.36136
172.62	-0.9917	6.9166	0.34580
174.52	-0.9954	7.2331	0.33419
176.37	-0.9980	7.4686	0.32615
178.19	-0.9995	7.6137	0

$x = 0.409$					$x = 0.410$					$x = 0.411$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.3720	6.57228	0.00	1.0000	0.3717	6.56250	0.00	1.0000	0.3713	6.55276	0.00	1.0000
5	8.20	0.9898	0.3733	6.54034	8.20	0.9898	0.3729	6.53057	8.20	0.9898	0.3725	6.52084	8.20	0.9898
10	16.38	0.9594	0.3770	6.44541	16.38	0.9594	0.3766	6.43567	16.39	0.9594	0.3763	6.42596	16.39	0.9594
15	24.53	0.9098	0.3833	6.29008	24.54	0.9097	0.3830	6.28038	24.55	0.9096	0.3826	6.27072	24.55	0.9096
20	32.63	0.8421	0.3925	6.07856	32.65	0.8420	0.3921	6.06893	32.67	0.8418	0.3918	6.05933	32.67	0.8418
25	40.68	0.7584	0.4047	5.81658	40.70	0.7581	0.4043	5.80702	40.72	0.7579	0.4040	5.79751	40.72	0.7579
30	48.65	0.6607	0.4204	5.51111	48.67	0.6604	0.4200	5.50165	48.70	0.6601	0.4196	5.49224	48.70	0.6601
35	56.52	0.5517	0.4399	5.17016	56.55	0.5512	0.4396	5.16084	56.57	0.5508	0.4392	5.15155	56.57	0.5508
40	64.27	0.4341	0.4641	4.80250	64.30	0.4336	0.4637	4.79333	64.34	0.4331	0.4634	4.78420	64.34	0.4331
45	71.89	0.3109	0.4937	4.41729	71.92	0.3103	0.4933	4.40830	71.96	0.3097	0.4930	4.39935	71.96	0.3097
50	79.33	0.1851	0.5297	4.02376	79.37	0.1844	0.5294	4.01499	79.41	0.1837	0.5290	4.00625	79.41	0.1837
55	86.59	0.0594	0.5736	3.63087	86.64	0.0587	0.5733	3.62233	86.68	0.0579	0.5730	3.61384	86.68	0.0579
60	93.63	-0.0633	0.6270	3.24690	93.68	-0.0642	0.6267	3.23865	93.72	-0.0650	0.6264	3.23043	93.72	-0.0650
65	100.42	-0.1809	0.6920	2.87920	100.47	-0.1818	0.6918	2.87126	100.52	-0.1826	0.6916	2.86335	100.52	-0.1826
70	106.94	-0.2914	0.7712	2.53385	106.99	-0.2922	0.7711	2.52625	107.04	-0.2931	0.7710	2.51869	107.04	-0.2931
75	113.15	-0.3932	0.8679	2.21546	113.21	-0.3940	0.8679	2.20824	113.26	-0.3949	0.8680	2.20105	113.26	-0.3949
80	119.04	-0.4854	0.9555	1.92710	119.09	-0.4862	0.9558	1.92029	119.15	-0.4871	0.9561	1.91350	119.15	-0.4871
85	124.58	-0.5775	1.1282	1.67026	124.63	-0.5783	1.1290	1.66387	124.68	-0.5792	1.1296	1.65750	124.68	-0.5792
90	129.76	-0.6695	1.3008	1.44499	129.82	-0.6703	1.3019	1.43902	129.87	-0.6711	1.3030	1.43309	129.87	-0.6711
95	134.58	-0.7619	1.5075	1.25009	134.63	-0.7626	1.5093	1.24456	134.69	-0.7633	1.5110	1.23906	134.69	-0.7633
100	139.04	-0.8541	1.7528	1.08348	139.09	-0.8548	1.7554	1.07837	139.15	-0.8556	1.7580	1.07329	139.15	-0.8556
105	143.15	-0.9463	2.0401	0.94246	143.21	-0.9470	2.0438	0.93775	143.26	-0.9478	2.0475	0.93307	143.26	-0.9478
110	146.94	-0.9381	2.3715	0.82404	146.99	-0.9388	2.3766	0.81971	147.04	-0.9396	2.3817	0.81540	147.04	-0.9396
115	150.42	-0.8697	2.7474	0.72520	150.47	-0.8704	2.7541	0.72121	150.52	-0.8712	2.7609	0.71725	150.52	-0.8712
120	153.63	-0.8960	3.1656	0.64307	153.68	-0.8963	3.1743	0.63940	153.72	-0.8971	3.1831	0.63575	153.72	-0.8971
125	156.59	-0.9177	3.6216	0.57507	156.64	-0.9180	3.6325	0.57167	156.68	-0.9183	3.6435	0.56830	156.68	-0.9183
130	159.33	-0.9357	4.1076	0.51891	159.37	-0.9359	4.1210	0.51576	159.41	-0.9361	4.1344	0.51264	159.41	-0.9361
135	161.89	-0.9504	4.6134	0.47269	161.92	-0.9506	4.6295	0.46975	161.96	-0.9508	4.6457	0.46683	161.96	-0.9508
140	164.27	-0.9626	5.1265	0.43477	164.30	-0.9627	5.1453	0.43201	164.34	-0.9629	5.1643	0.42928	164.34	-0.9629
145	166.52	-0.9724	5.6321	0.40385	166.55	-0.9726	5.6538	0.40125	166.57	-0.9727	5.6755	0.39867	166.57	-0.9727
150	168.65	-0.9804	6.1146	0.37887	168.67	-0.9805	6.1389	0.37639	168.70	-0.9806	6.1634	0.37394	168.70	-0.9806
155	170.68	-0.9868	6.5576	0.35897	170.70	-0.9869	6.5845	0.35660	170.72	-0.9869	6.6115	0.35425	170.72	-0.9869
160	172.63	-0.9917	6.9455	0.34350	172.65	-0.9918	6.9746	0.34121	172.67	-0.9918	7.0038	0.33894	172.67	-0.9918
165	174.53	-0.9954	7.2639	0.33195	174.54	-0.9955	7.2949	0.32972	174.55	-0.9955	7.3260	0.32751	174.55	-0.9955
170	176.38	-0.9980	7.5007	0.32395	176.38	-0.9980	7.5331	0.32177	176.39	-0.9980	7.5656	0.31960	176.39	-0.9980
175	178.20	-0.9995	7.6467	0.31925	178.20	-0.9995	7.6799	0.31709	178.20	-0.9995	7.7132	0.31495	178.20	-0.9995
180	180.00	-1.0000	7.6960	0.31770	180.00	-1.0000	7.7295	0.31555	180.00	-1.0000	7.7631	0.31342	180.00	-1.0000

$x = 0.412$					$x = 0.413$					$x = 0.414$				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3710	6.54307	0.00	1.0000	0.3706	6.53342	0.00	1.0000	0.3703	6.52381		
5	8.21	0.9898	0.3722	6.51116	8.21	0.9897	0.3718	6.50152	8.21	0.9897	0.3715	6.49192		
10	16.40	0.9593	0.3759	6.41630	16.41	0.9593	0.3756	6.40669	16.42	0.9592	0.3752	6.39711		
15	24.56	0.9095	0.3823	6.26110	24.57	0.9094	0.3819	6.25153	24.59	0.9093	0.3816	6.24199		
20	32.68	0.8417	0.3914	6.04977	32.70	0.8415	0.3911	6.04026	32.71	0.8414	0.3907	6.03079		
25	40.74	0.7577	0.4036	5.78804	40.76	0.7575	0.4033	5.77860	40.78	0.7572	0.4029	5.76921		
30	48.72	0.6597	0.4193	5.48287	48.74	0.6594	0.4189	5.47355	48.77	0.6591	0.4185	5.46426		
35	56.60	0.5504	0.4388	5.14231	56.63	0.5500	0.4385	5.13311	56.66	0.5496	0.4381	5.12395		
40	64.37	0.4326	0.4630	4.77511	64.40	0.4321	0.4627	4.76606	64.43	0.4316	0.4623	4.75704		
45	71.99	0.3091	0.4926	4.39044	72.03	0.3086	0.4923	4.38157	72.06	0.3080	0.4919	4.37273		
50	79.45	0.1830	0.5287	3.99754	79.49	0.1824	0.5284	3.98888	79.53	0.1817	0.5280	3.98025		
55	86.72	0.0572	0.5726	3.60538	86.76	0.0564	0.5723	3.59696	86.81	0.0557	0.5720	3.58857		
60	93.77	-0.0658	0.6262	3.22224	93.82	-0.0666	0.6259	3.21410	93.86	-0.0674	0.6256	3.20598		
65	100.57	-0.1835	0.6914	2.85548	100.62	-0.1843	0.6912	2.84764	100.67	-0.1852	0.6910	2.83963		
70	107.10	-0.2940	0.7709	2.51116	107.15	-0.2949	0.7708	2.50366	107.20	-0.2957	0.7707	2.49620		
75	113.32	-0.3958	0.8680	2.19390	113.37	-0.3967	0.8681	2.18678	113.43	-0.3976	0.8682	2.17969		
80	119.21	-0.4880	0.9864	1.90675	119.26	-0.4888	0.9867	1.90002	119.32	-0.4897	0.9870	1.89333		
85	124.75	-0.5700	1.1302	1.65117	124.81	-0.5708	1.1308	1.64486	124.86	-0.5716	1.1315	1.63859		
90	129.93	-0.6419	1.3041	1.42718	129.99	-0.6427	1.3052	1.42131	130.05	-0.6434	1.3063	1.41546		
95	134.75	-0.7040	1.5128	1.23358	134.81	-0.7047	1.5145	1.22813	134.86	-0.7054	1.5163	1.22271		
100	139.21	-0.7571	1.7606	1.06823	139.26	-0.7577	1.7632	1.06320	139.32	-0.7584	1.7659	1.05820		
105	143.32	-0.8019	2.0512	0.92842	143.37	-0.8025	2.0549	0.92378	143.43	-0.8031	2.0587	0.91918		
110	147.10	-0.8396	2.3868	0.81112	147.15	-0.8401	2.3919	0.80866	147.20	-0.8406	2.3970	0.80263		
115	150.57	-0.8710	2.7677	0.71331	150.62	-0.8714	2.7745	0.70940	150.67	-0.8718	2.7813	0.70551		
120	153.77	-0.8970	3.1918	0.63212	153.82	-0.8974	3.2006	0.62852	153.86	-0.8978	3.2095	0.62493		
125	156.72	-0.9186	3.6545	0.56495	156.76	-0.9189	3.6656	0.56162	156.81	-0.9192	3.6767	0.55831		
130	159.45	-0.9364	4.1480	0.50953	159.49	-0.9366	4.1616	0.50644	159.53	-0.9369	4.1752	0.50337		
135	161.99	-0.9510	4.6619	0.46393	162.03	-0.9512	4.6782	0.46105	162.06	-0.9514	4.6946	0.45819		
140	164.37	-0.9630	5.1833	0.42656	164.40	-0.9632	5.2024	0.42385	164.43	-0.9633	5.2216	0.42117		
145	166.60	-0.9728	5.6973	0.39610	166.63	-0.9729	5.7193	0.39355	166.66	-0.9730	5.7414	0.39101		
150	168.72	-0.9807	6.1880	0.37149	168.74	-0.9808	6.2127	0.36907	168.77	-0.9808	6.2375	0.36666		
155	170.74	-0.9870	6.6386	0.35191	170.76	-0.9870	6.6659	0.34959	170.78	-0.9871	6.6933	0.34728		
160	172.68	-0.9919	7.0332	0.33668	172.70	-0.9919	7.0628	0.33444	172.71	-0.9919	7.0925	0.33222		
165	174.56	-0.9955	7.3573	0.32352	174.57	-0.9955	7.3887	0.32314	174.59	-0.9955	7.4203	0.32097		
170	176.40	-0.9980	7.5982	0.31745	176.41	-0.9980	7.6311	0.31531	176.42	-0.9980	7.6641	0.31319		
175	178.21	-0.9995	7.7468	0.31283	178.21	-0.9995	7.7805	0.31071	178.21	-0.9995	7.8144	0.30862		
180	180.00	-1.0000	7.7969	0.31130	180.00	-1.0000	7.8309	0.30920	180.00	-1.0000	7.8651	0.30711		

$x = 0.415$
 $x = 0.416$
 $x = 0.417$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3699	6.51424	0.00	1.0000	0.3696	6.50471	0.00	1.0000	0.3692	6.49523
5	8.22	0.9897	0.3711	6.48236	8.22	0.9897	0.3708	6.47284	8.23	0.9897	0.3704	6.46336
10	16.42	0.9592	0.3749	6.38758	16.43	0.9592	0.3745	6.37808	16.44	0.9591	0.3742	6.36863
15	24.60	0.9093	0.3812	6.23250	24.61	0.9092	0.3809	6.22305	24.62	0.9091	0.3805	6.21364
20	32.73	0.8412	0.3903	6.02136	32.74	0.8411	0.3900	6.01197	32.76	0.8409	0.3896	6.00262
25	40.80	0.7570	0.4025	5.75986	40.82	0.7568	0.4022	5.75056	40.84	0.7566	0.4018	5.74129
30	48.79	0.6588	0.4182	5.45501	48.81	0.6585	0.4178	5.44580	48.84	0.6582	0.4175	5.43663
35	56.68	0.5492	0.4378	5.11982	56.71	0.5488	0.4374	5.10574	56.74	0.5484	0.4371	5.09669
40	64.46	0.4311	0.4613	4.74807	64.49	0.4306	0.4616	4.73913	64.52	0.4301	0.4612	4.73024
45	72.10	0.3074	0.4916	4.36393	72.13	0.3068	0.4912	4.35518	72.17	0.3062	0.4909	4.34645
50	79.57	0.1810	0.5277	3.97167	79.61	0.1804	0.5273	3.96311	79.65	0.1797	0.5270	3.95460
55	86.85	0.0549	0.5717	3.58022	86.89	0.0542	0.5714	3.57190	86.94	0.0535	0.5711	3.56363
60	93.91	-0.0682	0.6253	3.19791	93.96	-0.0690	0.6251	3.18986	94.00	-0.0698	0.6248	3.18186
65	100.72	-0.1860	0.6908	2.83206	100.77	-0.1869	0.6906	2.82433	100.82	-0.1877	0.6904	2.81662
70	107.25	-0.2966	0.7706	2.48877	107.31	-0.2975	0.7706	2.48137	107.36	-0.2984	0.7705	2.47400
75	113.48	-0.3984	0.8682	2.17263	113.54	-0.3993	0.8683	2.16560	113.59	-0.4002	0.8683	2.15860
80	119.38	-0.4906	0.9873	1.88667	119.43	-0.4914	0.9876	1.88004	119.49	-0.4923	0.9879	1.87344
85	124.92	-0.5725	1.1321	1.63234	124.98	-0.5733	1.1327	1.62613	125.04	-0.5741	1.1334	1.61994
90	130.11	-0.6442	1.3074	1.40964	130.16	-0.6450	1.3086	1.40384	130.22	-0.6458	1.3097	1.39808
95	134.92	-0.7062	1.5181	1.21732	134.98	-0.7069	1.5198	1.21195	135.04	-0.7076	1.5216	1.20661
100	139.38	-0.7590	1.7685	1.05322	139.43	-0.7597	1.7712	1.04827	139.49	-0.7603	1.7738	1.04334
105	143.48	-0.8037	2.0624	0.91460	143.54	-0.8042	2.0662	0.91004	143.59	-0.8048	2.0700	0.90551
110	147.25	-0.8411	2.4022	0.79842	147.31	-0.8416	2.4074	0.79423	147.36	-0.8421	2.4126	0.79007
115	150.72	-0.8723	2.7882	0.70164	150.77	-0.8727	2.7951	0.69779	150.82	-0.8731	2.8020	0.69396
120	153.91	-0.8981	3.2193	0.62137	153.96	-0.8985	3.2273	0.61783	154.00	-0.8988	3.2362	0.61430
125	156.85	-0.9195	3.6879	0.55502	156.89	-0.9198	3.6991	0.55175	156.94	-0.9201	3.7103	0.54849
130	159.57	-0.9371	4.1889	0.50031	159.61	-0.9373	4.2027	0.49728	159.65	-0.9376	4.2166	0.49427
135	162.10	-0.9516	4.7110	0.45534	162.13	-0.9518	4.7275	0.45251	162.17	-0.9520	4.7442	0.44971
140	164.46	-0.9635	5.2409	0.41850	164.49	-0.9636	5.2603	0.41585	164.52	-0.9637	5.2798	0.41322
145	166.68	-0.9731	5.7636	0.38849	166.71	-0.9732	5.7858	0.38599	166.74	-0.9733	5.8083	0.38351
150	168.79	-0.9809	6.2625	0.36427	168.81	-0.9810	6.2876	0.36189	168.84	-0.9811	6.3128	0.35953
155	170.80	-0.9871	6.7209	0.34499	170.82	-0.9872	6.7486	0.34271	170.84	-0.9872	6.7764	0.34045
160	172.73	-0.9920	7.1224	0.33001	172.74	-0.9920	7.1524	0.32781	172.76	-0.9920	7.1826	0.32563
165	174.60	-0.9956	7.4521	0.31883	174.61	-0.9956	7.4840	0.31669	174.62	-0.9956	7.5161	0.31457
170	176.42	-0.9981	7.6973	0.31109	176.43	-0.9981	7.7307	0.30899	176.44	-0.9981	7.7642	0.30692
175	178.22	-0.9995	7.8484	0.30654	178.22	-0.9995	7.8827	0.30447	178.23	-0.9995	7.9171	0.30242
180	180.00	-1.0000	7.8995	0.30504	180.00	-1.0000	7.9341	0.30298	180.00	-1.0000	7.9688	0.30093

 $x = 0.418$
 $x = 0.419$
 $x = 0.420$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3689	6.48579	0.00	1.0000	0.3685	6.47638	0.00	1.0000	0.3682	6.46702
5	8.23	0.9897	0.3701	6.45393	8.23	0.9897	0.3697	6.44453	8.24	0.9897	0.3694	6.43518
10	16.45	0.9592	0.3738	6.35922	16.45	0.9590	0.3735	6.34985	16.46	0.9590	0.3731	6.34052
15	24.63	0.9090	0.3802	6.20427	24.64	0.9089	0.3798	6.19495	24.66	0.9088	0.3795	6.18566
20	32.78	0.8408	0.3893	5.99331	32.79	0.8407	0.3889	5.98404	32.81	0.8405	0.3886	5.97482
25	40.86	0.7563	0.4015	5.73206	40.88	0.7561	0.4011	5.72287	40.90	0.7559	0.4008	5.71372
30	48.86	0.6579	0.4171	5.42750	48.88	0.6576	0.4168	5.41841	48.91	0.6573	0.4164	5.40936
35	56.77	0.5480	0.4367	5.08769	56.79	0.5476	0.4363	5.07872	56.82	0.5472	0.4360	5.06979
40	64.56	0.4296	0.4609	4.72138	64.59	0.4291	0.4605	4.71256	64.62	0.4286	0.4602	4.70377
45	72.20	0.3056	0.4905	4.33777	72.24	0.3050	0.4902	4.32912	72.27	0.3045	0.4898	4.32051
50	79.69	0.1790	0.5267	3.94612	79.73	0.1783	0.5263	3.93767	79.77	0.1777	0.5260	3.92927
55	86.98	0.0527	0.5708	3.55538	87.02	0.0520	0.5705	3.54718	87.06	0.0512	0.5701	3.53900
60	94.05	-0.0706	0.6245	3.17388	94.10	-0.0714	0.6243	3.16594	94.14	-0.0722	0.6240	3.15804
65	100.87	-0.1886	0.6902	2.80895	100.92	-0.1894	0.6900	2.80132	100.97	-0.1903	0.6898	2.79371
70	107.41	-0.2992	0.7704	2.46667	107.46	-0.3001	0.7703	2.45937	107.52	-0.3010	0.7702	2.45210
75	113.65	-0.4011	0.8684	2.15164	113.70	-0.4020	0.8685	2.14470	113.75	-0.4028	0.8685	2.13780
80	119.55	-0.4931	0.9882	1.86687	119.60	-0.4940	0.9885	1.86032	119.66	-0.4948	0.9888	1.85381
85	125.10	-0.5749	1.1340	1.61378	125.15	-0.5758	1.1347	1.60765	125.21	-0.5766	1.1353	1.60155
90	130.28	-0.6465	1.3108	1.39234	130.34	-0.6473	1.3119	1.38663	130.40	-0.6481	1.3131	1.38095
95	135.10	-0.7083	1.5234	1.20129	135.15	-0.7090	1.5252	1.19600	135.21	-0.7097	1.5270	1.19074
100	139.55	-0.7609	1.7765	1.03844	139.60	-0.7616	1.7791	1.03356	139.66	-0.7622	1.7818	1.02871
105	143.65	-0.8054	2.0738	0.90100	143.70	-0.8059	2.0776	0.89651	143.75	-0.8065	2.0814	0.89205
110	147.41	-0.8426	2.4178	0.78592	147.46	-0.8431	2.4230	0.78181	147.52	-0.8435	2.4283	0.77771
115	150.87	-0.8735	2.8090	0.69016	150.92	-0.8739	2.8159	0.68637	150.97	-0.8744	2.8229	0.68261
120	154.05	-0.8992	3.2452	0.61080	154.10	-0.8995	3.2542	0.60732	154.14	-0.8999	3.2633	0.60386
125	156.98	-0.9204	3.7217	0.54526	157.02	-0.9207	3.7330	0.54205	157.06	-0.9209	3.7445	0.53886
130	159.69	-0.9378	4.2305	0.49127	159.73	-0.9381	4.2445	0.48830	159.77	-0.9383	4.2585	0.48534
135	162.20	-0.9522	4.7609	0.44692	162.24	-0.9523	4.7776	0.44414	162.27	-0.9525	4.7945	0.44139
140	164.56	-0.9639	5.2994	0.41060	164.59	-0.9640	5.3191	0.40801	164.62	-0.9642	5.3389	0.40542
145	166.77	-0.9734	5.8308	0.38104	166.79	-0.9736	5.8534	0.37859	166.82	-0.9737	5.8761	0.37616
150	168.86	-0.9812	6.3382	0.35718	168.88	-0.9812	6.3636	0.35486	168.91	-0.9813	6.3893	0.35254
155	170.86	-0.9873	6.8044	0.33821	170.88	-0.9873	6.8326	0.33598	170.90	-0.9874	6.8609	0.33376
160	172.78	-0.9921	7.2129	0.32346	172.79	-0.9921	7.2434	0.32131	172.81	-0.9921	7.2741	0.31918
165	174.63	-0.9956	7.5484	0.31247	174.64	-0.9956	7.5808	0.31037	174.66	-0.9957	7.6135	0.30830
170	176.45	-0.9981	7.7979	0.30485	176.45	-0.9981	7.8318	0.30280	176.46	-0.9981	7.8659	0.30077
175	178.23	-0.9995	7.9518	0.30038	178.23	-0.9995	7.9866	0.29835	178.24	-0.9995	8.0216	0.29634
180	180.00	-1.0000	7.9037	0.29890	180.00	-1.0000	8.0389	0.29689	180.00	-1.0000	8.0742	0.29489

x = 0.421					x = 0.422					x = 0.423				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3678	6.45770	0.00	1.0000	0.3675	6.44841	0.00	1.0000	0.3671	6.43917		
5	8.24	0.9897	0.3691	6.42586	8.25	0.9897	0.3687	6.41659	8.25	0.9897	0.3684	6.40735		
10	16.47	0.9590	0.3728	6.33123	16.48	0.9589	0.3724	6.32198	16.48	0.9589	0.3721	6.31277		
15	24.67	0.9087	0.3791	6.17641	24.66	0.9087	0.3788	6.16720	24.69	0.9086	0.3784	6.15803		
20	32.82	0.8404	0.3882	5.96563	32.84	0.8402	0.3879	5.95648	32.85	0.8401	0.3875	5.94736		
25	40.92	0.7557	0.4004	5.70460	40.93	0.7555	0.4001	5.69553	40.95	0.7552	0.3997	5.68650		
30	48.93	0.6570	0.4161	5.40035	48.95	0.6567	0.4157	5.39137	48.98	0.6564	0.4153	5.38244		
35	56.85	0.5468	0.4356	5.06090	56.88	0.5464	0.4353	5.05204	56.90	0.5461	0.4349	5.04323		
40	64.65	0.4282	0.4598	4.69503	64.66	0.4277	0.4595	4.68632	64.71	0.4272	0.4591	4.67765		
45	72.31	0.3039	0.4895	4.31194	72.34	0.3033	0.4891	4.30340	72.38	0.3027	0.4888	4.29490		
50	79.80	0.1770	0.5257	3.92090	79.84	0.1763	0.5253	3.91256	79.88	0.1757	0.5250	3.90426		
55	87.11	0.0505	0.5698	3.53086	87.15	0.0497	0.5695	3.52276	87.19	0.0490	0.5692	3.51469		
60	94.19	-0.0730	0.6237	3.15017	94.23	-0.0738	0.6235	3.14233	94.28	-0.0746	0.6232	3.13452		
65	101.02	-0.1911	0.6896	2.78614	101.07	-0.1920	0.6894	2.77860	101.12	-0.1928	0.6892	2.77110		
70	107.57	-0.3019	0.7701	2.44487	107.62	-0.3027	0.7700	2.43766	107.67	-0.3036	0.7699	2.43048		
75	113.81	-0.4037	0.8686	2.13093	113.86	-0.4046	0.8687	2.12408	113.92	-0.4054	0.8687	2.11727		
80	119.72	-0.4957	0.9891	1.84733	119.77	-0.4966	0.9894	1.84087	119.83	-0.4974	0.9897	1.83445		
85	125.27	-0.5714	1.1360	1.59547	125.33	-0.5782	1.1366	1.58943	125.38	-0.5791	1.1373	1.58341		
90	130.45	-0.6488	1.3142	1.37530	130.51	-0.6496	1.3153	1.36967	130.57	-0.6504	1.3165	1.36406		
95	135.27	-0.7104	1.5288	1.18550	135.33	-0.7111	1.5306	1.18029	135.38	-0.7118	1.5324	1.17511		
100	139.72	-0.7629	1.7845	1.02388	139.77	-0.7635	1.7872	1.01907	139.83	-0.7641	1.7899	1.01429		
105	143.81	-0.8071	2.0853	0.88761	143.86	-0.8076	2.0891	0.88320	143.92	-0.8082	2.0930	0.87881		
110	147.57	-0.8440	2.4336	0.77364	147.62	-0.8445	2.4389	0.76959	147.67	-0.8450	2.4442	0.76556		
115	151.02	-0.8748	2.8300	0.67987	151.07	-0.8752	2.8370	0.67515	151.12	-0.8756	2.8441	0.67146		
120	154.19	-0.9002	3.2724	0.60042	154.23	-0.9006	3.2815	0.59701	154.28	-0.9009	3.2907	0.59361		
125	157.11	-0.9212	3.7559	0.53569	157.15	-0.9215	3.7675	0.53253	157.19	-0.9218	3.7790	0.52940		
130	159.80	-0.9385	4.2726	0.48240	159.84	-0.9388	4.2868	0.47948	159.88	-0.9390	4.3010	0.47658		
135	162.31	-0.9527	4.8114	0.43865	162.34	-0.9529	4.8284	0.43593	162.38	-0.9531	4.8455	0.43323		
140	164.65	-0.9643	5.3588	0.40286	164.68	-0.9645	5.3788	0.40031	164.71	-0.9646	5.3989	0.39778		
145	166.85	-0.9738	5.8990	0.37374	166.88	-0.9739	5.9220	0.37133	166.90	-0.9740	5.9451	0.36895		
150	168.93	-0.9814	6.4150	0.35024	168.95	-0.9815	6.4409	0.34796	168.98	-0.9816	6.4669	0.34569		
155	170.92	-0.9875	6.8893	0.33156	170.93	-0.9875	6.9179	0.32938	170.95	-0.9876	6.9466	0.32721		
160	172.82	-0.9922	7.3049	0.31706	172.84	-0.9922	7.3359	0.31495	172.85	-0.9922	7.3670	0.31286		
165	174.67	-0.9957	7.6463	0.30624	174.68	-0.9957	7.6792	0.30419	174.69	-0.9957	7.7124	0.30215		
170	176.47	-0.9981	7.9002	0.29875	176.48	-0.9981	7.9347	0.29674	176.48	-0.9981	7.9693	0.29475		
175	178.24	-0.9995	8.0568	0.29435	178.25	-0.9995	8.0921	0.29237	178.25	-0.9995	8.1277	0.29040		
180	180.00	-1.0000	8.1097	0.29290	180.00	-1.0000	8.1453	0.29092	180.00	-1.0000	8.1812	0.28896		

x = 0.424					x = 0.425					x = 0.426				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3668	6.42997	0.00	1.0000	0.3665	6.42080	0.00	1.0000	0.3661	6.41168		
5	8.25	0.9896	0.3680	6.39815	8.26	0.9896	0.3677	6.38900	8.26	0.9896	0.3673	6.37988		
10	16.49	0.9589	0.3718	6.30360	16.50	0.9588	0.3714	6.29446	16.51	0.9588	0.3711	6.28537		
15	24.70	0.9085	0.3781	6.14890	24.71	0.9084	0.3777	6.13980	24.73	0.9083	0.3774	6.13075		
20	32.87	0.8399	0.3872	5.93829	32.88	0.8398	0.3868	5.92926	32.90	0.8396	0.3865	5.92026		
25	40.97	0.7550	0.3994	5.67750	40.99	0.7548	0.3990	5.66854	41.01	0.7546	0.3987	5.65962		
30	49.00	0.6561	0.4150	5.37354	49.02	0.6557	0.4146	5.36468	49.05	0.6554	0.4143	5.35585		
35	56.93	0.5457	0.4346	5.03445	56.96	0.5453	0.4342	5.02570	56.99	0.5449	0.4339	5.01700		
40	64.74	0.4267	0.4588	4.66901	64.77	0.4262	0.4584	4.66041	64.81	0.4257	0.4581	4.65185		
45	72.42	0.3021	0.4884	4.28644	72.45	0.3015	0.4881	4.27801	72.49	0.3010	0.4877	4.26961		
50	79.92	0.1750	0.5247	3.89599	79.96	0.1743	0.5243	3.88776	80.00	0.1737	0.5240	3.87956		
55	87.24	0.0482	0.5689	3.50666	87.28	0.0475	0.5686	3.49865	87.32	0.0468	0.5683	3.49069		
60	94.33	-0.0764	0.6229	3.12675	94.37	-0.0763	0.6227	3.11901	94.42	-0.0771	0.6224	3.11131		
65	101.17	-0.1937	0.6890	2.76362	101.22	-0.1945	0.6888	2.75618	101.27	-0.1954	0.6886	2.74877		
70	107.73	-0.3045	0.7698	2.42334	107.78	-0.3053	0.7697	2.41623	107.83	-0.3062	0.7696	2.40914		
75	113.97	-0.4063	0.8688	2.11049	114.03	-0.4072	0.8689	2.10374	114.08	-0.4081	0.8689	2.09701		
80	119.89	-0.4983	0.9900	1.82805	119.94	-0.4991	0.9903	1.82158	120.00	-0.5000	0.9906	1.81535		
85	125.44	-0.5799	1.1379	1.57742	125.50	-0.5807	1.1386	1.57145	125.56	-0.5815	1.1392	1.56552		
90	130.63	-0.6512	1.3176	1.35849	130.69	-0.6519	1.3188	1.35294	130.74	-0.6527	1.3199	1.34742		
95	135.44	-0.7125	1.5342	1.16895	135.50	-0.7132	1.5360	1.16481	135.56	-0.7139	1.5379	1.15970		
100	139.89	-0.7648	1.7926	1.00954	139.94	-0.7654	1.7953	1.00481	140.00	-0.7660	1.7981	1.00010		
105	143.97	-0.8087	2.0969	0.87444	144.03	-0.8093	2.1007	0.87009	144.08	-0.8099	2.1046	0.86577		
110	147.73	-0.8455	2.4495	0.76155	147.78	-0.8460	2.4549	0.75756	147.83	-0.8465	2.4603	0.75360		
115	151.17	-0.8760	2.8512	0.66778	151.22	-0.8764	2.8584	0.66412	151.27	-0.8769	2.8656	0.66049		
120	154.33	-0.9013	3.2999	0.59023	154.37	-0.9016	3.3092	0.58687	154.42	-0.9020	3.3185	0.58353		
125	157.24	-0.9221	3.7907	0.52628	157.28	-0.9224	3.8024	0.52319	157.32	-0.9227	3.8141	0.52011		
130	159.92	-0.9392	4.3153	0.47369	159.96	-0.9395	4.3297	0.47082	160.00	-0.9397	4.3441	0.46797		
135	162.42	-0.9533	4.8627	0.43054	162.45	-0.9535	4.8800	0.42787	162.49	-0.9538	4.8974	0.42522		
140	164.74	-0.9640	5.4101	0.39526	164.77	-0.9643	5.4293	0.39277	164.81	-0.9650	5.4597	0.39028		
145	166.93	-0.9741	5.9683	0.36657	166.96	-0.9742	5.9916	0.36422	166.99	-0.9743	6.0151	0.36188		
150	169.00	-0.9816	6.4931	0.34344	169.02	-0.9817	6.5194	0.34120	169.05	-0.9818	6.5458	0.33898		
155	170.97	-0.9876	6.9755	0.32505	170.99	-0.9877	7.0057	0.32281	171.01	-0.9877	7.0328	0.32079		
160	172.87	-0.9923	7.3984	0.31078	172.88	-0.9923	7.4299	0.30871	172.90	-0.9923	7.4615	0.3		

2 x = 0.427					2 x = 0.426					2 x = 0.429				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²		
0	0.00	1.0000	0.3658	6.40259	0.00	1.0000	0.3654	6.39354	0.00	1.0000	0.3651	6.38453		
5	8.26	0.9896	0.3670	6.37080	8.27	0.9896	0.3667	6.36176	8.27	0.9896	0.3663	6.35275		
10	16.52	0.9587	0.3707	6.27631	16.52	0.9587	0.3704	6.26730	16.53	0.9587	0.3700	6.25832		
15	24.74	0.9082	0.3770	6.12173	24.75	0.9082	0.3767	6.11276	24.76	0.9081	0.3764	6.10382		
20	32.91	0.8395	0.3862	5.91130	32.93	0.8393	0.3858	5.90238	32.95	0.8392	0.3855	5.89350		
25	41.03	0.7544	0.3983	5.65074	41.05	0.7541	0.3980	5.64189	41.07	0.7539	0.3976	5.63309		
30	49.07	0.6551	0.4139	5.34707	49.09	0.6548	0.4136	5.33832	49.12	0.6545	0.4132	5.32960		
35	57.01	0.5445	0.4335	5.00833	57.04	0.5441	0.4332	4.99970	57.07	0.5437	0.4328	4.99110		
40	64.84	0.4252	0.4577	4.64332	64.87	0.4247	0.4574	4.63483	64.90	0.4242	0.4570	4.62637		
45	72.52	0.3004	0.4874	4.26125	72.56	0.2998	0.4871	4.25293	72.59	0.2992	0.4867	4.24464		
50	80.04	0.1730	0.5237	3.87140	80.08	0.1723	0.5234	3.86327	80.12	0.1717	0.5230	3.85518		
55	87.36	0.0460	0.5650	3.48275	87.41	0.0453	0.5677	3.47485	87.45	0.0445	0.5674	3.46698		
60	94.47	-0.0773	0.6221	3.10363	94.51	-0.0787	0.6219	3.09599	94.56	-0.0795	0.6216	3.08838		
65	101.32	-0.1962	0.6984	2.74139	101.36	-0.1971	0.6882	2.73464	101.41	-0.1979	0.6880	2.72672		
70	107.88	-0.3071	0.7695	2.40209	107.93	-0.3079	0.7694	2.39507	107.99	-0.3088	0.7693	2.38808		
75	114.14	-0.4089	0.8690	2.09032	114.19	-0.4098	0.8691	2.08365	114.25	-0.4107	0.8691	2.07701		
80	120.06	-0.5008	0.9909	1.80903	120.11	-0.5017	0.9912	1.80275	120.17	-0.5025	0.9915	1.79649		
85	125.61	-0.5823	1.1399	1.55961	125.67	-0.5831	1.1405	1.55372	125.73	-0.5840	1.1412	1.54787		
90	130.80	-0.6535	1.3211	1.34192	130.86	-0.6542	1.3222	1.33645	130.92	-0.6550	1.3234	1.33100		
95	135.61	-0.7146	1.5397	1.15462	135.67	-0.7154	1.5415	1.14956	135.73	-0.7161	1.5434	1.14452		
100	140.06	-0.7667	1.8008	0.99542	140.11	-0.7673	1.8036	0.99076	140.17	-0.7679	1.8063	0.98612		
105	144.14	-0.8104	2.1086	0.86147	144.19	-0.8110	2.1125	0.85719	144.25	-0.8115	2.1164	0.85294		
110	147.88	-0.8470	2.4657	0.74966	147.93	-0.8474	2.4711	0.74574	147.99	-0.8479	2.4765	0.74184		
115	151.32	-0.8773	2.8728	0.65687	151.36	-0.8777	2.8800	0.65328	151.41	-0.8781	2.8873	0.64970		
120	154.47	-0.9023	3.3278	0.58021	154.51	-0.9027	3.3372	0.57690	154.56	-0.9030	3.3467	0.57362		
125	157.36	-0.9230	3.8259	0.51705	157.41	-0.9232	3.8377	0.51401	157.45	-0.9235	3.8496	0.51098		
130	160.04	-0.9399	4.3586	0.46514	160.08	-0.9401	4.3732	0.46233	160.12	-0.9404	4.3879	0.45853		
135	162.52	-0.9538	4.9148	0.42259	162.56	-0.9540	4.9323	0.41997	162.59	-0.9542	4.9499	0.41737		
140	164.84	-0.9652	5.4802	0.38781	164.87	-0.9653	5.5008	0.38536	164.90	-0.9655	5.5215	0.38293		
145	167.01	-0.9744	6.0386	0.35955	167.04	-0.9745	6.0623	0.35724	167.07	-0.9746	6.0862	0.35494		
150	169.07	-0.9819	6.5724	0.33677	169.09	-0.9819	6.5991	0.33458	169.12	-0.9820	6.6259	0.33240		
155	171.03	-0.9878	7.0631	0.31867	171.05	-0.9878	7.0926	0.31658	171.07	-0.9879	7.1223	0.31449		
160	172.91	-0.9924	7.4933	0.30463	172.93	-0.9924	7.5253	0.30261	172.95	-0.9924	7.5575	0.30060		
165	174.74	-0.9958	7.8468	0.29416	174.75	-0.9958	7.8808	0.29219	174.76	-0.9958	7.9151	0.29024		
170	176.52	-0.9982	8.1098	0.28691	176.52	-0.9982	8.1454	0.28499	176.53	-0.9982	8.1812	0.28307		
175	178.26	-0.9995	8.2719	0.28266	178.27	-0.9995	8.3085	0.28075	178.27	-0.9995	8.3452	0.27887		
180	180.00	-1.0000	8.3267	0.28125	180.00	-1.0000	8.3636	0.27936	180.00	-1.0000	8.4007	0.27748		

2 x = 0.430					2 x = 0.431					2 x = 0.432				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²		
0	0.00	1.0000	0.3648	6.37555	0.00	1.0000	0.3644	6.36662	0.00	1.0000	0.3641	6.35772		
5	8.28	0.9896	0.3660	6.34379	8.28	0.9896	0.3657	6.33486	8.28	0.9896	0.3653	6.32597		
10	16.54	0.9586	0.3697	6.24937	16.55	0.9586	0.3694	6.24047	16.55	0.9586	0.3690	6.23160		
15	24.77	0.9080	0.3760	6.09491	24.78	0.9079	0.3757	6.08605	24.79	0.9078	0.3753	6.07722		
20	32.96	0.8390	0.3851	5.88465	32.98	0.8389	0.3848	5.87584	32.99	0.8388	0.3844	5.86707		
25	41.09	0.7537	0.3973	5.62431	41.11	0.7535	0.3969	5.61558	41.13	0.7532	0.3966	5.60688		
30	49.14	0.6542	0.4129	5.32093	49.16	0.6539	0.4126	5.31228	49.19	0.6536	0.4122	5.30368		
35	57.09	0.5433	0.4325	4.98254	57.12	0.5429	0.4321	4.97401	57.15	0.5425	0.4318	4.96552		
40	64.93	0.4237	0.4567	4.61795	64.96	0.4232	0.4563	4.60956	64.99	0.4228	0.4560	4.60121		
45	72.62	0.2986	0.4864	4.23638	72.66	0.2980	0.4860	4.22816	72.69	0.2975	0.4857	4.21997		
50	80.15	0.1710	0.5227	3.84712	80.19	0.1703	0.5224	3.83909	80.23	0.1697	0.5220	3.83109		
55	87.49	0.0438	0.5671	3.45914	87.53	0.0431	0.5668	3.45134	87.57	0.0423	0.5665	3.44357		
60	94.60	-0.0903	0.6213	3.08080	94.65	-0.0811	0.6211	3.07325	94.70	-0.0819	0.6208	3.06574		
65	101.46	-0.1987	0.6878	2.71944	101.51	-0.1996	0.6876	2.71218	101.56	-0.2004	0.6874	2.70495		
70	108.04	-0.3097	0.7692	2.38111	108.09	-0.3105	0.7691	2.37418	108.14	-0.3114	0.7690	2.36727		
75	114.30	-0.4115	0.8692	2.07040	114.36	-0.4124	0.8693	2.06382	114.41	-0.4133	0.8693	2.05727		
80	120.22	-0.5034	0.9918	1.79027	120.28	-0.5042	0.9921	1.78406	120.34	-0.5051	0.9925	1.77789		
85	125.79	-0.5848	1.1419	1.54204	125.84	-0.5856	1.1425	1.53623	125.90	-0.5864	1.1432	1.53046		
90	130.98	-0.6557	1.3245	1.32358	131.03	-0.6565	1.3257	1.32018	131.09	-0.6573	1.3269	1.31481		
95	135.79	-0.7168	1.5452	1.13951	135.84	-0.7175	1.5471	1.13452	135.90	-0.7181	1.5489	1.12955		
100	140.22	-0.7686	1.8091	0.98151	140.28	-0.7692	1.8119	0.97692	140.34	-0.7698	1.8146	0.97235		
105	144.30	-0.8121	2.1204	0.84871	144.36	-0.8127	2.1244	0.84449	144.41	-0.8132	2.1284	0.84030		
110	148.04	-0.8484	2.4820	0.73796	148.09	-0.8489	2.4875	0.73410	148.14	-0.8494	2.4930	0.73026		
115	151.46	-0.8785	2.8946	0.64615	151.51	-0.8789	2.9019	0.64262	151.56	-0.8793	2.9092	0.63910		
120	154.60	-0.9034	3.3561	0.57036	154.65	-0.9037	3.3656	0.56711	154.70	-0.9040	3.3752	0.56389		
125	157.49	-0.9238	3.8616	0.50798	157.53	-0.9241	3.8736	0.50499	157.57	-0.9244	3.8856	0.50202		
130	160.15	-0.9406	4.4026	0.45675	160.19	-0.9408	4.4174	0.45398	160.23	-0.9411	4.4322	0.45124		
135	162.62	-0.9544	4.9676	0.41178	162.66	-0.9546	4.9854	0.41221	162.69	-0.9547	5.0033	0.40966		
140	164.93	-0.9656	5.5423	0.38051	164.96	-0.9657	5.5632	0.37810	164.99	-0.9659	5.5843	0.37571		
145	167.09	-0.9747	6.1101	0.35266	167.12	-0.9748	6.1342	0.35040	167.15	-0.9749	6.1583	0.34815		
150	169.14	-0.9821	6.6529	0.33024	169.16	-0.9822	6.6800	0.32809	169.19	-0.9822	6.7073	0.32595		
155	171.09	-0.9879	7.1521	0.31242	171.11	-0.9880	7.1821	0.31037	171.13	-0.9880	7.2123	0.30832		
160	172.96	-0.9												

x = 0.433					x = 0.434					x = 0.435				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3638	6.34886	0.00	1.0000	0.3634	6.34003	0.00	1.0000	0.3631	6.33124		
5	8.29	0.9896	0.3650	6.31711	8.29	0.9895	0.3647	6.30830	8.30	0.9895	0.3643	6.29952		
10	16.56	0.9585	0.3687	6.22277	16.57	0.9585	0.3684	6.21397	16.58	0.9584	0.3680	6.20522		
15	24.81	0.9077	0.3750	6.06843	24.82	0.9077	0.3747	6.05967	24.83	0.9076	0.3743	6.05095		
20	33.01	0.8386	0.3841	5.85833	33.02	0.8385	0.3838	5.84963	33.04	0.8383	0.3834	5.84097		
25	41.15	0.7530	0.3963	5.59822	41.17	0.7528	0.3959	5.58959	41.18	0.7526	0.3956	5.58100		
30	49.21	0.6533	0.4119	5.29511	49.23	0.6530	0.4115	5.28657	49.25	0.6527	0.4112	5.27807		
35	57.17	0.5421	0.4314	4.95706	57.20	0.5417	0.4311	4.94864	57.23	0.5413	0.4307	4.94026		
40	65.02	0.4223	0.4556	4.59289	65.05	0.4218	0.4553	4.58461	65.08	0.4213	0.4550	4.57636		
45	72.73	0.2969	0.4854	4.21182	72.76	0.2963	0.4850	4.20370	72.80	0.2957	0.4847	4.19561		
50	80.27	0.1690	0.5217	3.82313	80.31	0.1683	0.5214	3.81520	80.35	0.1677	0.5211	3.80730		
55	87.62	0.0416	0.5652	3.43583	87.66	0.0408	0.5659	3.42812	87.70	0.0401	0.5656	3.42044		
60	94.74	-0.0027	0.6205	3.05825	94.79	-0.0035	0.6203	3.05080	94.83	-0.0042	0.6200	3.04338		
65	101.61	-0.2013	0.6872	2.69776	101.66	-0.2021	0.6870	2.69059	101.71	-0.2029	0.6868	2.68345		
70	108.20	-0.3123	0.7689	2.36040	108.25	-0.3131	0.7689	2.35355	108.30	-0.3140	0.7688	2.34673		
75	114.46	-0.4141	0.8694	2.05075	114.52	-0.4150	0.8695	2.04425	114.57	-0.4159	0.8696	2.03778		
80	120.39	-0.5059	0.9928	1.77174	120.45	-0.5068	0.9931	1.76562	120.51	-0.5076	0.9934	1.75953		
85	125.96	-0.5872	1.1439	1.52471	126.02	-0.5880	1.1445	1.51898	126.07	-0.5888	1.1452	1.51328		
90	131.15	-0.6580	1.3780	1.30947	131.21	-0.6588	1.3792	1.30415	131.27	-0.6595	1.3799	1.29885		
95	135.96	-0.7188	1.5508	1.12461	136.02	-0.7195	1.5527	1.11970	136.07	-0.7202	1.5545	1.11480		
100	140.39	-0.7704	1.8174	0.96781	140.45	-0.7711	1.8202	0.96328	140.51	-0.7717	1.8230	0.95879		
105	144.46	-0.8138	2.1324	0.83614	144.52	-0.8143	2.1364	0.83199	144.57	-0.8149	2.1404	0.82787		
110	148.20	-0.8498	2.4985	0.72645	148.25	-0.8503	2.5040	0.72265	148.30	-0.8508	2.5096	0.71888		
115	151.61	-0.8797	2.9166	0.63560	151.66	-0.8801	2.9240	0.63213	151.71	-0.8806	2.9315	0.62867		
120	154.74	-0.9044	3.3848	0.56068	154.79	-0.9047	3.3944	0.55749	154.83	-0.9051	3.4041	0.55432		
125	157.62	-0.9247	3.8978	0.49907	157.66	-0.9249	3.9099	0.49613	157.70	-0.9252	3.9222	0.49321		
130	160.27	-0.9413	4.4472	0.44851	160.31	-0.9415	4.4622	0.44580	160.35	-0.9417	4.4772	0.44310		
135	162.73	-0.9549	5.0212	0.40712	162.76	-0.9551	5.0393	0.40460	162.80	-0.9553	5.0574	0.40209		
140	165.02	-0.9660	5.6054	0.37334	165.05	-0.9662	5.6266	0.37098	165.08	-0.9663	5.6479	0.36864		
145	167.17	-0.9751	6.1827	0.34591	167.20	-0.9752	6.2071	0.34369	167.23	-0.9753	6.2317	0.34148		
150	169.21	-0.9823	6.7347	0.32383	169.23	-0.9824	6.7623	0.32172	169.25	-0.9825	6.7900	0.31963		
155	171.15	-0.9881	7.2426	0.30630	171.17	-0.9881	7.2730	0.30428	171.18	-0.9882	7.3037	0.30228		
160	173.01	-0.9926	7.6879	0.29270	173.02	-0.9926	7.7210	0.29075	173.04	-0.9926	7.7542	0.28882		
165	174.81	-0.9959	8.0539	0.28256	174.82	-0.9959	8.0891	0.28068	174.83	-0.9959	8.1245	0.27880		
170	176.56	-0.9982	8.3263	0.27555	176.57	-0.9982	8.3631	0.27371	176.58	-0.9982	8.4001	0.27187		
175	178.29	-0.9996	8.4943	0.27144	178.29	-0.9996	8.5320	0.26961	178.30	-0.9996	8.5700	0.26780		
180	180.00	-1.0000	8.5510	0.27008	180.00	-1.0000	8.5891	0.26826	180.00	-1.0000	8.6274	0.26646		

x = 0.436					x = 0.437					x = 0.438				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3628	6.32249	0.00	1.0000	0.3624	6.31377	0.00	1.0000	0.3621	6.30509		
5	8.30	0.9895	0.3640	6.29077	8.30	0.9895	0.3637	6.28206	8.31	0.9895	0.3633	6.27339		
10	16.58	0.9584	0.3677	6.19649	16.59	0.9584	0.3674	6.18781	16.60	0.9583	0.3670	6.17916		
15	24.84	0.9075	0.3740	6.04227	24.85	0.9074	0.3737	6.03362	24.86	0.9073	0.3733	6.02501		
20	33.05	0.8382	0.3831	5.83234	33.07	0.8380	0.3828	5.82374	33.08	0.8379	0.3824	5.81518		
25	41.20	0.7524	0.3952	5.57244	41.22	0.7522	0.3949	5.56392	41.24	0.7519	0.3946	5.55543		
30	49.28	0.6524	0.4108	5.26961	49.30	0.6521	0.4105	5.26118	49.32	0.6518	0.4102	5.25278		
35	57.26	0.5409	0.4304	4.93191	57.28	0.5405	0.4301	4.92359	57.31	0.5401	0.4297	4.91530		
40	65.11	0.4208	0.4546	4.56814	65.15	0.4203	0.4543	4.55996	65.18	0.4198	0.4539	4.55181		
45	72.83	0.2951	0.4843	4.18756	72.87	0.2946	0.4840	4.17953	72.90	0.2940	0.4837	4.17154		
50	80.39	0.1670	0.5207	3.79944	80.42	0.1663	0.5204	3.79161	80.46	0.1657	0.5201	3.78381		
55	87.74	0.0394	0.5653	3.41280	87.79	0.0386	0.5650	3.40519	87.83	0.0379	0.5647	3.39760		
60	94.88	-0.0850	0.6198	3.03598	94.92	-0.0858	0.6195	3.02862	94.97	-0.0866	0.6192	3.02129		
65	101.76	-0.2038	0.6866	2.67634	101.81	-0.2046	0.6864	2.66927	101.86	-0.2055	0.6862	2.66222		
70	108.35	-0.3148	0.7687	2.33994	108.40	-0.3157	0.7686	2.33318	108.46	-0.3166	0.7685	2.32645		
75	114.63	-0.4167	0.8696	2.03134	114.68	-0.4176	0.8697	2.02493	114.74	-0.4185	0.8698	2.01854		
80	120.56	-0.5085	0.9937	1.75346	120.62	-0.5093	0.9940	1.74742	120.67	-0.5102	0.9943	1.74140		
85	126.13	-0.5896	1.1459	1.50760	126.19	-0.5904	1.1465	1.50195	126.25	-0.5913	1.1472	1.49633		
90	131.32	-0.6603	1.3316	1.29358	131.38	-0.6611	1.3327	1.28833	131.44	-0.6618	1.3339	1.28310		
95	136.13	-0.7209	1.5564	1.10993	136.19	-0.7216	1.5583	1.10509	136.25	-0.7223	1.5602	1.10026		
100	140.56	-0.7723	1.8259	0.95431	140.62	-0.7729	1.8287	0.94985	140.67	-0.7736	1.8315	0.94542		
105	144.63	-0.8154	2.1444	0.82376	144.68	-0.8160	2.1485	0.81968	144.74	-0.8165	2.1526	0.81562		
110	148.35	-0.8513	2.5152	0.71512	148.40	-0.8518	2.5208	0.71138	148.46	-0.8522	2.5264	0.70767		
115	151.76	-0.8810	2.9390	0.62523	151.81	-0.8814	2.9465	0.62182	151.86	-0.8818	2.9540	0.61842		
120	154.88	-0.9054	3.4138	0.55117	154.92	-0.9057	3.4235	0.54803	154.97	-0.9061	3.4333	0.54492		
125	157.74	-0.9255	3.9344	0.49031	157.79	-0.9258	3.9468	0.48743	157.83	-0.9261	3.9592	0.48456		
130	160.39	-0.9420	4.4924	0.44042	160.42	-0.9422	4.5076	0.43775	160.46	-0.9424	4.5229	0.44351		
135	162.83	-0.9555	5.0757	0.39960	162.87	-0.9556	5.0940	0.39712	162.90	-0.9558	5.1124	0.39466		
140	165.11	-0.9664	5.6694	0.36631	165.15	-0.9666	5.6910	0.36399	165.18	-0.9667	5.7126	0.36169		
145	167.26	-0.9754	6.2564	0.33929	167.28	-0.9755	6.2812	0.33711	167.31	-0.9756	6.3061	0.33495		
150	169.28	-0.9825	6.8178	0.31755	169.30	-0.9826	6.8458	0.31548	169.32	-0.9827	6.8740	0.31343		
155	171.20	-0.9882	7.3345	0.30029	171.22	-0.9883	7.3654	0.29831	171.24	-0.9883	7.3966	0.29635		
160	173.05	-0.9927	7.7876	0.28691	173.07	-0.9927	7							

$x = 0.439$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3618	6.29645
5	8.31	0.9895	0.3630	6.26475
10	16.61	0.9583	0.3667	6.17054
15	24.87	0.9072	0.3730	6.01643
20	33.10	0.8377	0.3821	5.80666
25	41.26	0.7517	0.3942	5.54698
30	49.35	0.6515	0.4098	5.24442
35	57.34	0.5397	0.4294	4.90705
40	65.21	0.4193	0.4536	4.54370
45	72.94	0.2934	0.4833	4.16359
50	80.50	0.1650	0.5198	3.77604
55	87.87	0.0372	0.5644	3.39005
60	95.02	-0.0874	0.6190	3.01399
65	101.91	-0.2063	0.6860	2.65320
70	108.51	-0.3174	0.7664	2.31974
75	114.79	-0.4193	0.8698	2.01218
80	120.73	-0.5110	0.9947	1.73541
85	126.30	-0.5921	1.1479	1.49073
90	131.50	-0.6626	1.3351	1.27790
95	136.30	-0.7230	1.5621	1.09546
100	140.73	-0.7742	1.8344	0.94101
105	144.79	-0.8171	2.1567	0.81158
110	148.51	-0.8527	2.5321	0.70397
115	151.91	-0.8822	2.9616	0.61503
120	155.02	-0.9064	3.4432	0.54182
125	157.87	-0.9263	3.9717	0.48171
130	160.50	-0.9426	4.5383	0.43247
135	162.94	-0.9560	5.1309	0.39222
140	165.21	-0.9669	5.7344	0.35941
145	167.34	-0.9757	6.3312	0.33279
150	169.35	-0.9828	6.9023	0.31139
155	171.26	-0.9884	7.4279	0.29440
160	173.10	-0.9928	7.8889	0.28124
165	174.87	-0.9960	8.2679	0.27143
170	176.61	-0.9982	8.5500	0.26465
175	178.31	-0.9996	8.7240	0.26067
180	180.00	-1.0000	8.7828	0.25936

 $x = 0.442$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3608	6.27073
5	8.32	0.9895	0.3620	6.23905
10	16.63	0.9582	0.3657	6.14491
15	24.91	0.9070	0.3720	5.99091
20	33.14	0.8373	0.3811	5.78130
25	41.32	0.7511	0.3932	5.52183
30	49.42	0.6506	0.4088	5.21954
35	57.42	0.5385	0.4284	4.88250
40	65.30	0.4179	0.4526	4.51954
45	73.04	0.2917	0.4823	4.13991
50	80.62	0.1630	0.5188	3.75292
55	88.00	0.0349	0.5635	3.36758
60	95.15	-0.0898	0.6182	2.99226
65	102.05	-0.2088	0.6854	2.63431
70	108.66	-0.3200	0.7682	2.29979
75	114.95	-0.4219	0.8701	1.99326
80	120.90	-0.5135	0.9956	1.71760
85	126.48	-0.5945	1.1499	1.47408
90	131.67	-0.6648	1.3387	1.26244
95	136.48	-0.7251	1.5678	1.08119
100	140.90	-0.7760	1.8430	0.92790
105	144.95	-0.8187	2.1690	0.79958
110	148.66	-0.8541	2.5492	0.69300
115	152.05	-0.8834	2.9845	0.60500
120	155.15	-0.9074	3.4730	0.53263
125	158.00	-0.9272	4.0094	0.47327
130	160.62	-0.9433	4.5846	0.42467
135	163.04	-0.9565	5.1870	0.38497
140	165.30	-0.9673	5.8004	0.35264
145	167.42	-0.9760	6.4073	0.32642
150	169.42	-0.9830	6.9881	0.30535
155	171.32	-0.9885	7.5228	0.28863
160	173.14	-0.9928	7.9919	0.27568
165	174.91	-0.9961	8.3776	0.26603
170	176.63	-0.9983	8.6647	0.25936
175	178.32	-0.9996	8.8418	0.25545
180	180.00	-1.0000	8.9017	0.25416

 $x = 0.440$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3614	6.28784
8.31	0.9895	0.3627	6.25615
16.61	0.9583	0.3664	6.16196
24.89	0.9071	0.3727	6.00789
33.11	0.8376	0.3818	5.79817
41.28	0.7515	0.3939	5.53856
49.37	0.6512	0.4095	5.23609
57.36	0.5393	0.4290	4.89884
65.24	0.4189	0.4533	4.53561
72.97	0.2928	0.4830	4.15566
80.54	0.1644	0.5195	3.76830
87.91	0.0364	0.5641	3.38253
95.06	-0.0882	0.6187	3.00671
101.95	-0.2071	0.6859	2.64821
108.56	-0.3183	0.7683	2.31307
114.85	-0.4202	0.8699	2.00585
120.79	-0.5118	0.9950	1.72945
126.36	-0.5929	1.1486	1.48515
131.55	-0.6633	1.3363	1.27273
136.36	-0.7237	1.5640	1.09068
140.79	-0.7748	1.8372	0.93662
144.85	-0.8176	2.1608	0.80756
148.56	-0.8532	2.5378	0.70030
151.95	-0.8826	2.9692	0.61167
155.06	-0.9068	3.4531	0.53874
157.91	-0.9266	3.9842	0.47888
160.54	-0.9429	4.5537	0.42986
162.97	-0.9562	5.1495	0.38979
165.24	-0.9670	5.7663	0.35714
167.36	-0.9758	6.3565	0.33066
169.37	-0.9828	6.9307	0.30936
171.28	-0.9884	7.4594	0.29246
173.11	-0.9928	7.9231	0.27937
174.89	-0.9960	8.3043	0.26962
176.61	-0.9983	8.5881	0.26288
178.31	-0.9996	8.7631	0.25892
180.00	-1.0000	8.8222	0.25761

 $x = 0.443$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3605	6.26222
8.33	0.9895	0.3617	6.23056
16.64	0.9581	0.3654	6.13683
24.92	0.9069	0.3717	5.98247
33.16	0.8372	0.3808	5.77291
41.34	0.7508	0.3929	5.51352
49.44	0.6503	0.4085	5.21131
57.44	0.5381	0.4280	4.87439
65.33	0.4174	0.4522	4.51156
73.08	0.2911	0.4820	4.13208
80.65	0.1624	0.5185	3.74527
88.04	0.0342	0.5632	3.36015
95.20	-0.0906	0.6179	2.98507
102.10	-0.2096	0.6852	2.62740
108.71	-0.3209	0.7681	2.29320
115.01	-0.4228	0.8702	1.98700
120.96	-0.5144	0.9960	1.71171
126.53	-0.5953	1.1506	1.46857
131.73	-0.6656	1.3399	1.25733
136.53	-0.7258	1.5697	1.07648
140.96	-0.7767	1.8459	0.92357
145.01	-0.8192	2.1732	0.79562
148.71	-0.8546	2.5549	0.68938
152.10	-0.8838	2.9922	0.60169
155.20	-0.9078	3.4830	0.52960
158.04	-0.9274	4.0221	0.47048
160.65	-0.9435	4.6005	0.42210
163.08	-0.9567	5.2058	0.38259
165.33	-0.9674	5.8227	0.35041
167.44	-0.9761	6.4329	0.32433
169.44	-0.9831	7.0170	0.30336
171.34	-0.9886	7.5548	0.28673
173.16	-0.9929	8.0266	0.27385
174.92	-0.9961	8.4146	0.26425
176.64	-0.9983	8.7034	0.25762
178.33	-0.9996	8.8815	0.25373
180.00	-1.0000	8.9417	0.25245

 $x = 0.441$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3611	6.27927
8.32	0.9895	0.3623	6.24758
16.62	0.9582	0.3660	6.15342
24.90	0.9071	0.3723	5.99938
33.13	0.8375	0.3814	5.78972
41.30	0.7513	0.3936	5.53018
49.39	0.6509	0.4091	5.22780
57.39	0.5389	0.4287	4.89065
65.27	0.4184	0.4529	4.52756
73.01	0.2923	0.4827	4.14777
80.58	0.1637	0.5191	3.76059
87.96	0.0357	0.5638	3.37504
95.11	-0.0890	0.6185	2.99947
102.07	-0.2080	0.6856	2.64124
108.61	-0.3191	0.7682	2.30642
114.90	-0.4210	0.8700	1.99954
120.84	-0.5127	0.9953	1.72351
126.42	-0.5937	1.1493	1.47960
131.61	-0.6641	1.3375	1.26757
136.42	-0.7244	1.5659	1.08593
140.84	-0.7754	1.8401	0.93225
144.90	-0.8182	2.1649	0.80356
148.61	-0.8537	2.5435	0.69664
152.00	-0.8830	2.9768	0.60833
155.11	-0.9071	3.4630	0.53567
157.96	-0.9269	3.9967	0.47607
160.58	-0.9431	4.5692	0.42726
163.01	-0.9563	5.1682	0.38737
165.27	-0.9671	5.7783	0.35488
167.39	-0.9759	6.3818	0.32853
169.39	-0.9829	6.9593	0.30735
171.30	-0.9885	7.4910	0.29054
173.13	-0.9928	7.9574	0.27752
174.90	-0.9960	8.3408	0.26782
176.62	-0.9983	8.6263	0.26111
178.32	-0.9996	8.8023	0.25718
180.00	-1.0000	8.8618	0.25588

 $x = 0.444$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3601	6.25375
8.33	0.9895	0.3614	6.22209
16.64	0.9581	0.3651	6.12799
24.93	0.9068	0.3714	5.97446
33.17	0.8370	0.3804	5.76456
41.36	0.7506	0.3926	5.50523
49.46	0.6500	0.4081	5.20312
57.47	0.5377	0.4277	4.86630
65.36	0.4169	0.4519	4.50360
73.11	0.2905	0.4817	4.12428
80.69	0.1617	0.5182	3.73766
88.08	0.0335	0.5629	3.35275
95.24	-0.0914	0.6177	2.97791
102.15	-0.2105	0.6850	2.62052
108.77	-0.3217	0.7680	2.28663
115.06	-0.4236	0.8702	1.98077
121.01	-0.5152	0.9963	1.70585
126.59	-0.5961	1.1513	1.46310
131.78	-0.6663	1.3411	1.25225
136.59	-0.7265	1.5717	1.07179
141.01	-0.7773	1.8488	0.91927
145.06	-0.8198	2.1773	0.79168
148.77	-0.8551	2.5607	0.68578
152.15	-0.8842	2.9999	0.59840
155.24	-0.9081	3.4931	0.52659
158.08	-0.9277	4.0348	0.46772
160.69	-0.9438	4.6162	0.41955
163.11	-0.9569	5.2248	0.38022
165.36	-0.9675	5.8450	0.34820
167.47	-0.9762	6.4587	0.32224
169.46	-0.9831	7.0461	0.30138
171.36	-0.9886	7.5870	0.28484
173.17	-0.9929	8.0615	0.27203
174.93	-0.9961	8.4518	0.26249
176.64	-0.9983	8.7423	0.25590
178.33	-0.9996	8.9215	0.25203
180.00	-1.0000	8.9820	0.25075

x = 0.445					x = 0.446					x = 0.447				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3598	6.24532	0.00	1.0000	0.3595	6.23692	0.00	1.0000	0.3592	6.22855		
5	8.33	0.9894	0.3610	6.21366	8.34	0.9894	0.3607	6.20527	8.34	0.9894	0.3604	6.19891		
10	16.65	0.9688	0.3647	6.11959	16.66	0.9688	0.3644	6.11121	16.67	0.9688	0.3641	6.10287		
15	24.94	0.9067	0.3710	5.96569	24.95	0.9067	0.3707	5.95736	24.96	0.9066	0.3704	5.94905		
20	33.19	0.8369	0.3801	5.75624	33.20	0.8367	0.3798	5.74796	33.22	0.8366	0.3794	5.73971		
25	41.37	0.7504	0.3922	5.49699	41.39	0.7502	0.3919	5.48877	41.41	0.7500	0.3916	5.48059		
30	49.48	0.6497	0.4078	5.19496	49.51	0.6494	0.4075	5.18683	49.53	0.6491	0.4071	5.17874		
35	57.50	0.5374	0.4274	4.85825	57.52	0.5370	0.4270	4.85023	57.55	0.5366	0.4267	4.84224		
40	65.39	0.4164	0.4516	4.49568	65.42	0.4159	0.4512	4.48779	65.45	0.4155	0.4509	4.47993		
45	73.14	0.2900	0.4813	4.11652	73.18	0.2894	0.4810	4.10878	73.21	0.2888	0.4807	4.10108		
50	80.73	0.1611	0.5179	3.73007	80.77	0.1604	0.5175	3.72252	80.81	0.1597	0.5172	3.71499		
55	88.12	0.0327	0.5626	3.34537	88.17	0.0320	0.5623	3.33803	88.21	0.0313	0.5620	3.33072		
60	95.29	-0.0922	0.6174	2.97079	95.34	-0.0930	0.6172	2.96369	95.38	-0.0938	0.6169	2.95662		
65	102.70	-0.2113	0.6849	2.61367	102.25	-0.2121	0.6847	2.60685	102.30	-0.2130	0.6845	2.60005		
70	108.82	-0.3226	0.7679	2.28009	108.87	-0.3234	0.7678	2.27357	108.92	-0.3243	0.7677	2.26708		
75	115.12	-0.4245	0.8703	1.97457	115.17	-0.4253	0.8704	1.96839	115.23	-0.4262	0.8705	1.96224		
80	121.07	-0.5160	0.9966	1.70001	121.12	-0.5169	0.9969	1.69420	121.18	-0.5177	0.9973	1.68841		
85	126.65	-0.5969	1.1520	1.45764	126.70	-0.5977	1.1527	1.45221	126.76	-0.5985	1.1534	1.44680		
90	131.84	-0.6671	1.3423	1.24719	131.90	-0.6678	1.3435	1.24215	131.96	-0.6686	1.3447	1.23714		
95	136.65	-0.7271	1.5736	1.06712	136.70	-0.7278	1.5755	1.06248	136.76	-0.7285	1.5775	1.05785		
100	141.07	-0.7779	1.8517	0.91498	141.12	-0.7785	1.8546	0.91072	141.18	-0.7791	1.8575	0.90648		
105	145.12	-0.8203	2.1815	0.78776	145.17	-0.8209	2.1857	0.78386	145.23	-0.8214	2.1899	0.77998		
110	148.82	-0.8555	2.5665	0.68220	148.87	-0.8560	2.5723	0.67864	148.92	-0.8565	2.5781	0.67510		
115	152.20	-0.8846	3.0077	0.59513	152.25	-0.8850	3.0155	0.59188	152.30	-0.8854	3.0233	0.58864		
120	155.29	-0.9084	3.5032	0.52359	155.34	-0.9088	3.5134	0.52061	155.38	-0.9091	3.5236	0.51765		
125	158.12	-0.9280	4.0476	0.46497	158.17	-0.9283	4.0605	0.46223	158.21	-0.9285	4.0735	0.45951		
130	160.73	-0.9440	4.6321	0.41701	160.77	-0.9442	4.6480	0.41448	160.81	-0.9444	4.6639	0.41198		
135	163.14	-0.9570	5.2439	0.37786	163.18	-0.9572	5.2631	0.37552	163.21	-0.9574	5.2823	0.37320		
140	165.39	-0.9677	5.8675	0.34600	165.42	-0.9678	5.8901	0.34381	165.45	-0.9679	5.9128	0.34164		
145	167.50	-0.9763	6.4846	0.32017	167.52	-0.9764	6.5106	0.31812	167.55	-0.9765	6.5368	0.31607		
150	169.48	-0.9832	7.0753	0.29942	169.51	-0.9833	7.1047	0.29747	169.53	-0.9833	7.1343	0.29554		
155	171.37	-0.9887	7.6193	0.28297	171.39	-0.9887	7.6518	0.28111	171.41	-0.9888	7.6845	0.27926		
160	173.19	-0.9929	8.0966	0.27023	173.20	-0.9930	8.1319	0.26843	173.22	-0.9930	8.1674	0.26665		
165	174.94	-0.9961	8.4891	0.26074	174.95	-0.9961	8.5267	0.25900	174.96	-0.9961	8.5645	0.25727		
170	176.65	-0.9983	8.7814	0.25418	176.66	-0.9983	8.8207	0.25248	176.67	-0.9983	8.8602	0.25078		
175	178.33	-0.9996	8.9616	0.25033	178.34	-0.9996	9.0020	0.24865	178.34	-0.9996	9.0426	0.24698		
180	180.00	-1.0000	9.0225	0.24906	180.00	-1.0000	9.0633	0.24739	180.00	-1.0000	9.1042	0.24572		

x = 0.448					x = 0.449					x = 0.450				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3589	6.22021	0.00	1.0000	0.3585	6.21191	0.00	1.0000	0.3582	6.20365		
5	8.34	0.9894	0.3601	6.18858	8.35	0.9894	0.3598	6.18029	8.35	0.9894	0.3594	6.17203		
10	16.67	0.9688	0.3638	6.09457	16.68	0.9679	0.3634	6.08630	16.69	0.9679	0.3631	6.07806		
15	24.98	0.9065	0.3701	5.94078	24.99	0.9064	0.3697	5.93255	25.00	0.9063	0.3694	5.92434		
20	33.23	0.8364	0.3791	5.73149	33.25	0.8363	0.3788	5.72331	33.26	0.8362	0.3785	5.71515		
25	41.43	0.7497	0.3912	5.47244	41.45	0.7495	0.3909	5.46432	41.47	0.7493	0.3906	5.45624		
30	49.55	0.6488	0.4068	5.17067	49.57	0.6485	0.4065	5.16264	49.60	0.6482	0.4061	5.15464		
35	57.58	0.5362	0.4263	4.83928	57.60	0.5358	0.4260	4.82636	57.63	0.5354	0.4257	4.81846		
40	65.48	0.4150	0.4506	4.47210	65.51	0.4145	0.4502	4.46431	65.54	0.4140	0.4499	4.45654		
45	73.25	0.2882	0.4804	4.09340	73.28	0.2877	0.4800	4.08576	73.32	0.2871	0.4797	4.07814		
50	80.85	0.1591	0.5169	3.70750	80.88	0.1584	0.5166	3.70004	80.92	0.1578	0.5163	3.69260		
55	88.25	0.0306	0.5617	3.32343	88.29	0.0298	0.5614	3.31618	88.33	0.0291	0.5611	3.30895		
60	95.43	-0.0946	0.6167	2.94957	95.47	-0.0954	0.6164	2.94256	95.52	-0.0961	0.6162	2.93557		
65	102.35	-0.2138	0.6843	2.59328	102.39	-0.2146	0.6841	2.58654	102.44	-0.2155	0.6839	2.57983		
70	108.97	-0.3251	0.7676	2.26062	109.03	-0.3260	0.7676	2.25418	109.08	-0.3268	0.7675	2.24777		
75	115.28	-0.4270	0.8705	1.95612	115.33	-0.4279	0.8706	1.95002	115.39	-0.4287	0.8707	1.94394		
80	121.24	-0.5186	0.9976	1.68264	121.29	-0.5194	0.9979	1.67690	121.35	-0.5202	0.9982	1.67119		
85	126.82	-0.5993	1.1541	1.44142	126.88	-0.6001	1.1548	1.43606	126.93	-0.6009	1.1555	1.43072		
90	132.02	-0.6693	1.3460	1.23214	132.07	-0.6701	1.3472	1.22717	132.13	-0.6708	1.3484	1.22222		
95	136.82	-0.7292	1.5794	1.05325	136.88	-0.7299	1.5814	1.04867	136.93	-0.7306	1.5833	1.04411		
100	141.24	-0.7797	1.8604	0.90225	141.29	-0.7803	1.8634	0.89805	141.35	-0.7810	1.8663	0.89387		
105	145.28	-0.8219	2.1941	0.77612	145.33	-0.8225	2.1984	0.77227	145.39	-0.8230	2.2026	0.76945		
110	148.97	-0.8569	2.5840	0.67157	149.03	-0.8574	2.5899	0.66807	149.08	-0.8579	2.5958	0.66458		
115	152.35	-0.8858	3.0312	0.58543	152.39	-0.8862	3.0391	0.58222	152.44	-0.8865	3.0470	0.57904		
120	155.43	-0.9094	3.5338	0.51471	155.47	-0.9098	3.5441	0.51178	155.52	-0.9101	3.5545	0.50887		
125	158.25	-0.9288	4.0864	0.45681	158.29	-0.9291	4.0995	0.45412	158.33	-0.9293	4.1126	0.45145		
130	160.85	-0.9446	4.6800	0.40949	160.88	-0.9449	4.6961	0.40701	160.92	-0.9451	4.7154	0.40455		
135	163.25	-0.9576	5.3017	0.37088	163.28	-0.9577	5.3212	0.36658	163.32	-0.9579	5.3407	0.36330		
140	165.48	-0.9681	5.9356	0.33948	165.51	-0.9682	5.9585	0.33733	165.54	-0.9683	5.9816	0.33520		
145	167.58	-0.9766	6.5631	0.31404	167.60	-0.9767	6.5895	0.31203	167.63	-0.9768	6.6161	0.31002		
150	169.55	-0.9834	7.1640	0.29361	169.57	-0.9835	7.1938	0.29170	169.60	-0.9836	7.2239	0.28980		
155	171.43	-0.9888	7.7174	0.27742	171.45	-0.9889	7.7505	0.27560	171.47	-0.9889	7.7837	0.27378		
160	173.23	-0.9930	8.2031	0.26488	173.25	-0.9931	8.2390	0.26313	173.26	-0.9931	8.2751			

$\frac{2}{x} = 0.451$
 $\frac{2}{x} = 0.452$
 $\frac{2}{x} = 0.453$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3579	6.19541	0.00	1.0000	0.3576	6.18721	0.00	1.0000	0.3573	6.17904
5	8.36	0.9894	0.3591	6.16380	8.36	0.9894	0.3588	6.15561	8.36	0.9894	0.3585	6.14744
10	16.70	0.9578	0.3628	6.06985	16.70	0.9578	0.3625	6.06168	16.71	0.9578	0.3622	6.05353
15	25.01	0.9062	0.3691	5.91617	25.02	0.9062	0.3688	5.90803	25.03	0.9061	0.3684	5.89993
20	33.28	0.8360	0.3781	5.70703	33.29	0.8359	0.3778	5.69894	33.31	0.8357	0.3775	5.69089
25	41.49	0.7491	0.3902	5.44818	41.51	0.7489	0.3899	5.44016	41.53	0.7487	0.3896	5.43217
30	49.62	0.6479	0.4058	5.14667	49.64	0.6476	0.4055	5.13874	49.67	0.6473	0.4051	5.13083
35	57.66	0.5350	0.4254	4.81050	57.68	0.5346	0.4250	4.80277	57.71	0.5342	0.4247	4.79497
40	65.57	0.4135	0.4496	4.44881	65.60	0.4130	0.4492	4.44110	65.63	0.4126	0.4489	4.43343
45	73.35	0.2865	0.4794	4.07056	73.39	0.2859	0.4791	4.06300	73.42	0.2854	0.4787	4.05548
50	80.96	0.1571	0.5159	3.68519	81.00	0.1565	0.5156	3.67782	81.04	0.1558	0.5153	3.67047
55	88.37	0.0284	0.5608	3.30175	88.42	0.0276	0.5605	3.29458	88.46	0.0269	0.5602	3.28744
60	95.56	-0.0969	0.6159	2.92861	95.61	-0.0977	0.6156	2.92168	95.65	-0.0985	0.6154	2.91478
65	102.49	-0.2163	0.6837	2.57314	102.54	-0.2171	0.6835	2.56648	102.59	-0.2180	0.6833	2.55984
70	109.13	-0.3277	0.7674	2.24139	109.18	-0.3285	0.7673	2.23503	109.23	-0.3294	0.7672	2.22870
75	115.44	-0.4296	0.8708	1.93789	115.50	-0.4305	0.8709	1.93186	115.55	-0.4313	0.8710	1.92586
80	121.40	-0.5211	0.9886	1.66549	121.46	-0.5219	0.9889	1.65982	121.52	-0.5227	0.9892	1.65418
85	126.99	-0.6017	1.1562	1.42540	127.05	-0.6025	1.1569	1.42011	127.11	-0.6033	1.1576	1.41484
90	132.19	-0.6716	1.3496	1.21729	132.25	-0.6723	1.3509	1.21239	132.30	-0.6731	1.3521	1.20750
95	136.99	-0.7312	1.5853	1.03957	137.05	-0.7319	1.5873	1.03505	137.11	-0.7326	1.5892	1.03055
100	141.40	-0.7816	1.8693	0.88971	141.46	-0.7822	1.8723	0.88557	141.52	-0.7828	1.8752	0.88144
105	145.44	-0.8236	2.2069	0.76465	145.50	-0.8241	2.2112	0.76086	145.55	-0.8246	2.2155	0.75710
110	149.13	-0.8583	2.6017	0.66111	149.18	-0.8588	2.6077	0.65766	149.23	-0.8592	2.6136	0.65422
115	152.49	-0.8869	3.0550	0.57587	152.54	-0.8873	3.0630	0.57273	152.59	-0.8877	3.0710	0.56959
120	155.56	-0.9104	3.5648	0.50597	155.61	-0.9107	3.5753	0.50310	155.65	-0.9111	3.5858	0.50023
125	158.37	-0.9296	4.1258	0.44879	158.42	-0.9299	4.1391	0.44615	158.46	-0.9302	4.1524	0.44353
130	160.96	-0.9453	4.7287	0.40210	161.00	-0.9455	4.7450	0.39966	161.04	-0.9457	4.7615	0.39724
135	163.35	-0.9581	5.3604	0.36403	163.39	-0.9582	5.3802	0.36177	163.42	-0.9584	5.4000	0.35953
140	165.57	-0.9685	6.0445	0.33308	165.60	-0.9686	6.0641	0.33097	165.63	-0.9687	6.0815	0.32888
145	167.66	-0.9769	6.8429	0.30803	167.68	-0.9770	6.8697	0.30605	167.71	-0.9771	6.8968	0.30408
150	169.62	-0.9836	7.7541	0.28792	169.64	-0.9837	7.7844	0.28604	169.67	-0.9838	7.8150	0.28418
155	171.49	-0.9890	8.7817	0.27198	171.51	-0.9890	8.8107	0.27019	171.53	-0.9891	8.8445	0.26841
160	173.28	-0.9931	9.9314	0.25965	173.29	-0.9932	9.9619	0.25792	173.31	-0.9932	9.9946	0.25621
165	175.01	-0.9962	11.2079	0.25047	175.02	-0.9962	11.2388	0.24879	175.03	-0.9962	11.2719	0.24713
170	176.70	-0.9983	12.6206	0.24413	176.70	-0.9983	12.6521	0.24249	176.71	-0.9984	12.6859	0.24086
175	178.36	-0.9996	14.1797	0.24040	178.36	-0.9996	14.2119	0.23879	178.36	-0.9996	14.2457	0.23718
180	180.00	-1.0000	15.9000	0.23918	180.00	-1.0000	15.9312	0.23757	180.00	-1.0000	15.9650	0.23597

 $\frac{2}{x} = 0.454$
 $\frac{2}{x} = 0.455$
 $\frac{2}{x} = 0.456$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3569	6.17090	0.00	1.0000	0.3566	6.16280	0.00	1.0000	0.3563	6.15473
5	8.37	0.9894	0.3582	6.13931	8.37	0.9893	0.3578	6.13122	8.37	0.9893	0.3575	6.12315
10	16.72	0.9577	0.3618	6.04542	16.73	0.9577	0.3615	6.03735	16.73	0.9577	0.3612	6.02930
15	25.04	0.9060	0.3681	5.89185	25.05	0.9059	0.3678	5.88381	25.07	0.9058	0.3675	5.87580
20	33.32	0.8356	0.3772	5.68286	33.34	0.8354	0.3768	5.67487	33.35	0.8353	0.3765	5.66691
25	41.54	0.7484	0.3893	5.42421	41.56	0.7482	0.3889	5.41629	41.58	0.7480	0.3886	5.40839
30	49.69	0.6469	0.4048	5.12296	49.71	0.6466	0.4045	5.11512	49.73	0.6463	0.4042	5.10730
35	57.74	0.5338	0.4244	4.78720	57.76	0.5334	0.4240	4.77946	57.79	0.5331	0.4237	4.77175
40	65.66	0.4121	0.4486	4.42578	65.70	0.4116	0.4483	4.41817	65.73	0.4111	0.4479	4.41058
45	73.45	0.2845	0.4784	4.04798	73.49	0.2842	0.4781	4.04052	73.52	0.2837	0.4778	4.03308
50	81.07	0.1551	0.5150	3.66315	81.11	0.1545	0.5147	3.65586	81.15	0.1538	0.5144	3.64860
55	88.50	0.0262	0.5599	3.28033	88.54	0.0254	0.5596	3.27324	88.58	0.0247	0.5593	3.26618
60	95.70	-0.0993	0.6151	2.90790	95.74	-0.1001	0.6149	2.90105	95.79	-0.1009	0.6146	2.89422
65	102.64	-0.2188	0.6832	2.53323	102.69	-0.2196	0.6830	2.52665	102.73	-0.2204	0.6828	2.52009
70	109.28	-0.3302	0.7671	2.22239	109.34	-0.3311	0.7671	2.21610	109.39	-0.3319	0.7670	2.20984
75	115.60	-0.4322	0.8710	1.91988	115.66	-0.4330	0.8711	1.91393	115.71	-0.4339	0.8712	1.90800
80	121.57	-0.5236	0.9996	1.64856	121.63	-0.5244	0.9999	1.64296	121.68	-0.5252	1.0002	1.63738
85	127.16	-0.6041	1.1583	1.40960	127.22	-0.6049	1.1590	1.40437	127.28	-0.6057	1.1597	1.39917
90	132.36	-0.6738	1.3533	1.20264	132.42	-0.6745	1.3546	1.19780	132.48	-0.6753	1.3558	1.19298
95	137.16	-0.7333	1.5912	1.02607	137.22	-0.7340	1.5932	1.02162	137.28	-0.7346	1.5952	1.01718
100	141.57	-0.7834	1.8782	0.87734	141.63	-0.7840	1.8812	0.87326	141.68	-0.7846	1.8842	0.86919
105	145.60	-0.8252	2.2198	0.75335	145.66	-0.8257	2.2241	0.74963	145.71	-0.8262	2.2285	0.74592
110	149.28	-0.8597	2.6196	0.65081	149.34	-0.8602	2.6257	0.64741	149.39	-0.8606	2.6317	0.64403
115	152.64	-0.8881	3.0791	0.56648	152.69	-0.8885	3.0872	0.56338	152.73	-0.8889	3.0954	0.56030
120	155.70	-0.9114	3.5963	0.49739	155.74	-0.9117	3.6069	0.49456	155.79	-0.9120	3.6175	0.49174
125	158.50	-0.9304	4.1658	0.44092	158.54	-0.9307	4.1792	0.43832	158.58	-0.9310	4.1927	0.43574
130	161.07	-0.9459	4.7780	0.39484	161.11	-0.9462	4.7947	0.39245	161.15	-0.9464	4.8114	0.39007
135	163.45	-0.9586	5.4200	0.35730	163.49	-0.9588	5.4401	0.35509	163.52	-0.9589	5.4603	0.35288
140	165.66	-0.9689	6.0751	0.32680	165.70	-0.9690	6.0967	0.32473	165.73	-0.9691	6.1225	0.32268
145	167.74	-0.9772	6.7239	0.30213	167.76	-0.9773	6.7513	0.30019	167.79	-0.9774	6.7787	0.29826
150	169.69	-0.9838	7.3457	0.28233	169.71	-0.9839	7.3765	0.28049	169.73	-0.9840	7.4076	0.27866
155	171.54	-0.9891	7.9185	0.26665	171.56	-0.9892	7.9527	0.26489	171.58	-0.9892	7.9871	0.26315
160	173.32	-0.9932	8.4215	0.25451	173.34	-0.9932	8.4586	0.25282	173.35	-0.9933	8.4959	0.25114
165	175.04	-0.9963	8.8552	0.24548	175.05	-0.9963	8.8747	0.24384	175.07	-0.9963	8.9145	0.24221
170	176.72	-0.9984	9.1433	0.23925	176.73	-0.9984	9.1847	0.23764	176.73	-0.9984	9.2263	0.23605
175	178.37	-0.9996	9.3334	0.23559	178.37	-0.9996	9.3759	0.23400	178.37	-0.9996	9.4186	0.23243
180	180.00	-1.0000	9.3977	0.23438	180.00	-1.0000	9.4405	0.23280	180.00	-1.0000	9.4837	0.23124

z x = 0.457					z x = 0.458					z x = 0.459				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3560	6.14669	0.00	1.0000	0.3557	6.13868	0.00	1.0000	0.3554	6.13070		
5	8.38	0.9893	0.3572	6.11512	8.38	0.9893	0.3569	6.10711	8.39	0.9893	0.3566	6.09914		
10	16.74	0.9576	0.3609	6.02129	16.75	0.9576	0.3606	6.01331	16.76	0.9575	0.3603	6.00535		
15	25.08	0.9057	0.3672	5.86782	25.09	0.9057	0.3668	5.85987	25.10	0.9056	0.3665	5.85196		
20	33.37	0.8352	0.3762	5.65898	33.38	0.8350	0.3759	5.65108	33.40	0.8349	0.3756	5.64321		
25	41.60	0.7478	0.3883	5.40053	41.62	0.7476	0.3880	5.39269	41.64	0.7474	0.3876	5.38489		
30	49.76	0.6460	0.4038	5.09952	49.78	0.6457	0.4035	5.09177	49.80	0.6454	0.4032	5.08405		
35	57.81	0.5327	0.4234	4.76407	57.84	0.5323	0.4230	4.75642	57.87	0.5319	0.4227	4.74880		
40	65.76	0.4106	0.4476	4.40302	65.79	0.4101	0.4473	4.39550	65.82	0.4097	0.4469	4.38800		
45	73.56	0.2831	0.4774	4.02567	73.59	0.2825	0.4771	4.01829	73.62	0.2819	0.4768	4.01094		
50	81.19	0.1532	0.5141	3.64136	81.23	0.1525	0.5138	3.63416	81.26	0.1519	0.5134	3.62698		
55	88.63	0.0240	0.5591	3.25915	88.67	0.0233	0.5588	3.25215	88.71	0.0225	0.5585	3.24517		
60	95.83	-0.1017	0.6144	2.88743	95.88	-0.1024	0.6141	2.88065	95.93	-0.1032	0.6139	2.87391		
65	102.78	-0.2213	0.6826	2.53356	102.83	-0.2221	0.6824	2.52705	102.88	-0.2229	0.6822	2.52057		
70	109.44	-0.3328	0.7669	2.20361	109.49	-0.3336	0.7668	2.19740	109.54	-0.3345	0.7667	2.19122		
75	115.77	-0.4347	0.8713	1.90209	115.82	-0.4356	0.8714	1.89621	115.87	-0.4364	0.8715	1.89035		
80	121.74	-0.5261	1.0006	1.63183	121.80	-0.5269	1.0009	1.62630	121.85	-0.5277	1.0013	1.62079		
85	127.33	-0.6065	1.1604	1.39399	127.39	-0.6072	1.1611	1.38883	127.45	-0.6080	1.1618	1.38369		
90	132.53	-0.6760	1.3571	1.18818	132.59	-0.6768	1.3583	1.18340	132.65	-0.6775	1.3596	1.17865		
95	137.33	-0.7353	1.5972	1.01276	137.39	-0.7360	1.5992	1.00837	137.45	-0.7367	1.6012	1.00399		
100	141.74	-0.7852	1.8873	0.86515	141.80	-0.7858	1.8903	0.86112	141.85	-0.7864	1.8933	0.85712		
105	145.77	-0.8268	2.2328	0.74222	145.82	-0.8273	2.2372	0.73855	145.87	-0.8278	2.2416	0.73490		
110	149.44	-0.8611	2.6378	0.64067	149.49	-0.8615	2.6439	0.63732	149.54	-0.8620	2.6500	0.63399		
115	152.78	-0.8893	3.1035	0.55723	152.83	-0.8897	3.1117	0.55418	152.88	-0.8901	3.1200	0.55115		
120	155.83	-0.9124	3.6282	0.48894	155.88	-0.9127	3.6389	0.48616	155.93	-0.9130	3.6497	0.48339		
125	158.63	-0.9312	4.2063	0.43317	158.67	-0.9315	4.2199	0.43062	158.71	-0.9317	4.2336	0.42809		
130	161.19	-0.9466	4.8282	0.38771	161.23	-0.9468	4.8451	0.38536	161.26	-0.9470	4.8620	0.38302		
135	163.56	-0.9591	5.4805	0.35069	163.59	-0.9593	5.5009	0.34852	163.62	-0.9594	5.5214	0.34636		
140	165.76	-0.9693	6.1465	0.32064	165.79	-0.9694	6.1705	0.31861	165.82	-0.9695	6.1947	0.31659		
145	167.81	-0.9775	6.8064	0.29634	167.84	-0.9776	6.8341	0.29443	167.87	-0.9777	6.8621	0.29254		
150	169.76	-0.9841	7.4388	0.27685	169.78	-0.9841	7.4702	0.27504	169.80	-0.9842	7.5017	0.27325		
155	171.60	-0.9893	8.0216	0.26142	171.62	-0.9893	8.0564	0.25969	171.64	-0.9894	8.0913	0.25798		
160	173.37	-0.9933	8.5334	0.24948	173.38	-0.9933	8.5712	0.24782	173.40	-0.9934	8.6092	0.24617		
165	175.08	-0.9963	8.9545	0.24060	175.09	-0.9963	8.9947	0.23899	175.10	-0.9963	9.0352	0.23739		
170	176.74	-0.9984	9.2681	0.23446	176.75	-0.9984	9.3102	0.23289	176.76	-0.9984	9.3526	0.23133		
175	178.38	-0.9996	9.4616	0.23087	178.38	-0.9996	9.5049	0.22931	178.39	-0.9996	9.5484	0.22777		
180	180.00	-1.0000	9.5270	0.22968	180.00	-1.0000	9.5707	0.22814	180.00	-1.0000	9.6145	0.22660		

z x = 0.460					z x = 0.461					z x = 0.462				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3551	6.12275	0.00	1.0000	0.3547	6.11484	0.00	1.0000	0.3544	6.10695		
5	8.39	0.9893	0.3563	6.09120	8.39	0.9893	0.3560	6.08329	8.40	0.9893	0.3556	6.07541		
10	16.76	0.9575	0.3600	5.99743	16.77	0.9575	0.3596	5.98955	16.78	0.9574	0.3593	5.98169		
15	25.11	0.9055	0.3662	5.84407	25.12	0.9054	0.3659	5.83621	25.13	0.9053	0.3656	5.82839		
20	33.41	0.8347	0.3752	5.63538	33.43	0.8346	0.3749	5.62757	33.44	0.8344	0.3746	5.61979		
25	41.66	0.7471	0.3873	5.37712	41.68	0.7469	0.3870	5.36937	41.69	0.7467	0.3867	5.36166		
30	49.82	0.6452	0.4029	5.07636	49.85	0.6449	0.4025	5.06870	49.87	0.6446	0.4022	5.06106		
35	57.89	0.5315	0.4224	4.74121	57.92	0.5311	0.4221	4.73365	57.95	0.5307	0.4217	4.72611		
40	65.85	0.4092	0.4466	4.38053	65.88	0.4087	0.4463	4.37309	65.91	0.4082	0.4460	4.36568		
45	73.66	0.2814	0.4765	4.00362	73.69	0.2808	0.4761	3.99632	73.73	0.2802	0.4758	3.98906		
50	81.30	0.1512	0.5131	3.61983	81.34	0.1506	0.5128	3.61270	81.38	0.1499	0.5125	3.60561		
55	88.75	0.0218	0.5582	3.23822	88.79	0.0211	0.5579	3.23130	88.83	0.0204	0.5576	3.22440		
60	95.97	-0.1040	0.6136	2.86719	96.02	-0.1048	0.6134	2.86050	96.06	-0.1056	0.6131	2.85383		
65	102.93	-0.2237	0.6820	2.51412	102.98	-0.2246	0.6819	2.50768	103.03	-0.2254	0.6817	2.50128		
70	109.59	-0.3353	0.7667	2.18506	109.64	-0.3362	0.7666	2.17892	109.70	-0.3370	0.7665	2.17281		
75	115.93	-0.4373	0.8715	1.88451	115.98	-0.4381	0.8716	1.87870	116.04	-0.4390	0.8717	1.87291		
80	121.91	-0.5285	1.0016	1.61531	121.96	-0.5294	1.0019	1.60984	122.02	-0.5302	1.0023	1.60440		
85	127.50	-0.6088	1.1625	1.37858	127.56	-0.6096	1.1633	1.37348	127.62	-0.6104	1.1640	1.36841		
90	132.71	-0.6782	1.3608	1.17391	132.76	-0.6790	1.3621	1.16920	132.82	-0.6797	1.3634	1.16450		
95	137.50	-0.7373	1.6032	0.99963	137.56	-0.7380	1.6053	0.99530	137.62	-0.7387	1.6073	0.99098		
100	141.91	-0.7870	1.8964	0.85313	141.96	-0.7876	1.8995	0.84916	142.02	-0.7882	1.9025	0.84521		
105	145.93	-0.8283	2.2460	0.73126	145.98	-0.8289	2.2505	0.72764	146.04	-0.8294	2.2549	0.72404		
110	149.59	-0.8625	2.6562	0.63068	149.64	-0.8629	2.6624	0.62738	149.70	-0.8634	2.6686	0.62411		
115	152.93	-0.8904	3.1283	0.54813	152.98	-0.8908	3.1366	0.54513	153.03	-0.8912	3.1450	0.54215		
120	155.97	-0.9133	3.6606	0.48063	156.02	-0.9137	3.6714	0.47790	156.06	-0.9140	3.6824	0.47517		
125	158.75	-0.9320	4.2474	0.42556	158.79	-0.9323	4.2612	0.42306	158.83	-0.9325	4.2751	0.42056		
130	161.30	-0.9472	4.8791	0.38070	161.34	-0.9474	4.8962	0.37839	161.38	-0.9476	4.9134	0.37610		
135	163.66	-0.9596	5.5420	0.34421	163.69	-0.9598	5.5627	0.34207	163.73	-0.9599	5.5836	0.33995		
140	165.85	-0.9696	6.2190	0.31459	165.88	-0.9698	6.2435	0.31260	165.91	-0.9699	6.2681	0.31062		
145	167.89	-0.9778	6.8901	0.29066	167.92	-0.9779	6.9184	0.28879	167.95	-0.9780	6.9467	0.28693		
150	169.82	-0.9843	7.5335	0.27147	169.85	-0.9843	7.5654	0.26970	169.87	-0.9844	7.5975	0.26794		
155	171.66	-0.9894	8.1265	0.25628	171.68	-0.9895	8.1618	0.25460	171.69	-0.9895	8.1974	0.25292		
160	173.41	-0.9934	8.6473	0.24454	173.43	-0.9934	8.6857	0.24292	173.44	-0.9935</				

$x = 0.463$
 $x = 0.464$
 $x = 0.465$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.3541	6.09910	0.00	1.0000	0.3538	6.09127	0.00	1.0000	0.3535	6.08348
5	8.40	0.9893	0.3553	6.06757	8.40	0.9893	0.3550	6.05975	8.41	0.9893	0.3547	6.05195
10	16.79	0.9574	0.3590	5.97386	16.79	0.9574	0.3587	5.96605	16.80	0.9573	0.3584	5.96829
15	25.14	0.9052	0.3653	5.82059	25.15	0.9052	0.3650	5.81283	25.17	0.9051	0.3646	5.80510
20	33.46	0.8343	0.3743	5.61204	33.47	0.8342	0.3740	5.60433	33.49	0.8340	0.3737	5.59664
25	41.71	0.7465	0.3864	5.35398	41.73	0.7463	0.3860	5.34632	41.75	0.7461	0.3857	5.33870
30	49.89	0.6443	0.4019	5.05346	49.91	0.6440	0.4016	5.04589	49.94	0.6437	0.4013	5.03834
35	57.97	0.5303	0.4214	4.71861	58.00	0.5299	0.4211	4.71114	58.02	0.5296	0.4208	4.70369
40	65.94	0.4077	0.4457	4.35830	65.97	0.4073	0.4453	4.35094	66.00	0.4068	0.4450	4.34362
45	73.76	0.2797	0.4755	3.98182	73.79	0.2791	0.4752	3.97461	73.83	0.2785	0.4749	3.96742
50	81.42	0.1493	0.5122	3.59854	81.45	0.1486	0.5119	3.59150	81.49	0.1480	0.5116	3.58448
55	88.88	0.0196	0.5573	3.21753	88.92	0.0189	0.5570	3.21068	88.96	0.0182	0.5568	3.20386
60	96.11	-0.1064	0.6129	2.84719	96.15	-0.1071	0.6126	2.84057	96.20	-0.1079	0.6124	2.83398
65	103.07	-0.2262	0.6815	2.49490	103.12	-0.2270	0.6813	2.48854	103.17	-0.2279	0.6811	2.48221
70	109.75	-0.3379	0.7664	2.16672	109.80	-0.3387	0.7663	2.16065	109.85	-0.3396	0.7663	2.15461
75	116.09	-0.4398	0.8718	1.86714	116.14	-0.4406	0.8719	1.86140	116.20	-0.4415	0.8720	1.85568
80	122.08	-0.5310	1.0026	1.59899	122.13	-0.5319	1.0030	1.59359	122.19	-0.5327	1.0033	1.58821
85	127.68	-0.6112	1.1647	1.36336	127.73	-0.6120	1.1654	1.35833	127.79	-0.6128	1.1661	1.35332
90	132.88	-0.6804	1.3646	1.15983	132.94	-0.6812	1.3659	1.15517	132.99	-0.6819	1.1572	1.15054
95	137.68	-0.7393	1.6093	0.98668	137.73	-0.7400	1.6114	0.98240	137.79	-0.7407	1.6134	0.97814
100	142.08	-0.7888	1.9056	0.84128	142.13	-0.7894	1.9087	0.83737	142.19	-0.7900	1.9118	0.83347
105	146.09	-0.8299	2.2594	0.72046	146.14	-0.8304	2.2639	0.71689	146.20	-0.8310	2.2684	0.71334
110	149.75	-0.8638	2.6748	0.62085	149.80	-0.8643	2.6810	0.61760	149.85	-0.8647	2.6873	0.61437
115	153.07	-0.8916	3.1534	0.53918	153.12	-0.8920	3.1618	0.53623	153.17	-0.8924	3.1703	0.53329
120	156.11	-0.9143	3.6934	0.47247	156.15	-0.9146	3.7044	0.46977	156.20	-0.9149	3.7155	0.46709
125	158.88	-0.9328	4.2891	0.41808	158.92	-0.9331	4.3031	0.41562	158.96	-0.9333	4.3173	0.41317
130	161.42	-0.9479	4.9308	0.37382	161.45	-0.9481	4.9482	0.37155	161.49	-0.9483	4.9657	0.36930
135	163.76	-0.9601	5.6045	0.33783	163.79	-0.9603	5.6255	0.33574	163.83	-0.9604	5.6467	0.33365
140	165.94	-0.9700	6.2928	0.30865	165.97	-0.9702	6.3176	0.30670	166.00	-0.9703	6.3426	0.30475
145	167.97	-0.9780	6.9753	0.28508	168.00	-0.9781	7.0040	0.28325	168.02	-0.9782	7.0328	0.28142
150	169.89	-0.9845	7.6297	0.26619	169.91	-0.9845	7.6622	0.26446	169.94	-0.9846	7.6948	0.26273
155	171.71	-0.9896	8.2331	0.25125	171.73	-0.9896	8.2691	0.24960	171.75	-0.9897	8.3053	0.24795
160	173.46	-0.9935	8.7632	0.23970	173.47	-0.9935	8.8023	0.23811	173.49	-0.9935	8.8415	0.23652
165	175.14	-0.9964	9.1994	0.23111	175.15	-0.9964	9.2410	0.22957	175.17	-0.9964	9.2829	0.23429
170	176.79	-0.9984	9.5243	0.22518	176.79	-0.9984	9.5679	0.22367	176.80	-0.9984	9.6117	0.22217
175	178.40	-0.9996	9.7248	0.22170	178.40	-0.9996	9.7696	0.22021	178.41	-0.9996	9.8146	0.21873
180	180.00	-1.0000	9.7926	0.22056	180.00	-1.0000	9.8378	0.21907	180.00	-1.0000	9.8832	0.21760

 $x = 0.466$
 $x = 0.467$
 $x = 0.468$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.3532	6.07572	0.00	1.0000	0.3529	6.06798	0.00	1.0000	0.3526	6.06028
5	8.41	0.9892	0.3544	6.04421	8.41	0.9892	0.3541	6.03648	8.42	0.9892	0.3538	6.02878
10	16.81	0.9573	0.3581	5.95056	16.82	0.9572	0.3578	5.94285	16.82	0.9572	0.3575	5.93517
15	25.18	0.9050	0.3643	5.79739	25.19	0.9049	0.3640	5.78972	25.20	0.9048	0.3637	5.78207
20	33.50	0.8339	0.3733	5.58898	33.52	0.8337	0.3730	5.58135	33.53	0.8336	0.3727	5.57376
25	41.77	0.7458	0.3854	5.33110	41.79	0.7456	0.3851	5.32354	41.81	0.7454	0.3848	5.31600
30	49.96	0.6434	0.4009	5.03083	49.98	0.6431	0.4006	5.02334	50.00	0.6428	0.4003	5.01588
35	58.05	0.5292	0.4205	4.69627	58.08	0.5288	0.4201	4.68888	58.10	0.5284	0.4199	4.68152
40	66.03	0.4063	0.4447	4.33632	66.06	0.4058	0.4444	4.32905	66.09	0.4054	0.4440	4.32180
45	73.86	0.2780	0.4746	3.96027	73.90	0.2774	0.4742	3.95314	73.93	0.2768	0.4739	3.94603
50	81.53	0.1473	0.5113	3.57749	81.57	0.1467	0.5110	3.57053	81.60	0.1460	0.5107	3.56359
55	89.00	0.0175	0.5565	3.19707	89.04	0.0167	0.5562	3.19030	89.08	0.0160	0.5559	3.18356
60	96.24	-0.1087	0.6121	2.82741	96.29	-0.1095	0.6119	2.82087	96.33	-0.1103	0.6116	2.81435
65	103.22	-0.2287	0.6809	2.47590	103.27	-0.2295	0.6808	2.46962	103.32	-0.2303	0.6806	2.46336
70	109.90	-0.3404	0.7662	2.14859	109.95	-0.3413	0.7661	2.14260	110.00	-0.3421	0.7660	2.13663
75	116.25	-0.4423	0.8721	1.84998	116.31	-0.4432	0.8722	1.84431	116.36	-0.4440	0.8723	1.83865
80	122.24	-0.5335	1.0036	1.58286	122.30	-0.5343	1.0040	1.57753	122.35	-0.5352	1.0043	1.57222
85	127.85	-0.6136	1.1669	1.34833	127.90	-0.6143	1.1676	1.34336	127.96	-0.6151	1.1683	1.33841
90	133.05	-0.6826	1.3685	1.14592	133.11	-0.6834	1.3697	1.14133	133.17	-0.6841	1.1710	1.13675
95	137.85	-0.7414	1.6155	0.97390	137.90	-0.7420	1.6176	0.96968	137.96	-0.7427	1.6196	0.96547
100	142.24	-0.7906	1.9149	0.82960	142.30	-0.7912	1.9181	0.82574	142.35	-0.7918	1.9212	0.82190
105	146.25	-0.8315	2.2729	0.70981	146.31	-0.8320	2.2774	0.70630	146.36	-0.8325	2.2820	0.70280
110	149.90	-0.8652	2.6936	0.61116	149.95	-0.8656	2.6999	0.60797	150.00	-0.8661	2.7063	0.60479
115	153.22	-0.8927	3.1788	0.53037	153.27	-0.8931	3.1873	0.52746	153.32	-0.8935	3.1959	0.52457
120	156.24	-0.9152	3.7266	0.46443	156.29	-0.9156	3.7378	0.46178	156.33	-0.9159	3.7491	0.45915
125	159.00	-0.9336	4.3314	0.41073	159.04	-0.9338	4.3457	0.40831	159.08	-0.9341	4.3600	0.40590
130	161.53	-0.9485	4.9832	0.36705	161.57	-0.9487	5.0009	0.36483	161.60	-0.9489	5.0187	0.36261
135	163.86	-0.9606	5.6679	0.33158	163.90	-0.9608	5.6893	0.32952	163.93	-0.9609	5.7108	0.32747
140	166.03	-0.9704	6.3677	0.30282	166.06	-0.9705	6.3930	0.30090	166.09	-0.9707	6.4184	0.29900
145	168.05	-0.9783	7.0619	0.27961	168.08	-0.9784	7.0910	0.27781	168.10	-0.9785	7.1204	0.27602
150	169.96	-0.9847	7.7276	0.26102	169.98	-0.9847	7.7606	0.25932	170.00	-0.9848	7.7938	0.25762
155	171.77	-0.9897	8.3416	0.24632	171.79	-0.9897	8.3782	0.24469	171.80	-0.9898	8.4150	0.24308
160	173.50	-0.9936	8.8810	0.23495	173.52	-0.9936	8.9208	0.23339	173.53	-0.9936	8.9608	0.23184
165	175.18	-0.9965	9.3250	0.22651	175.19	-0.9965	9.3674	0.22499	175.20	-0.9965	9.4100	0.22348
170	176.81	-0.9984	9.6558	0.22067	176.82	-0.9985	9.7001	0.21919	176.82	-0.9985	9.7447	0.21772
175	178.41	-0.9996	9.8599	0.21726	178.41	-0.9996	9.9055	0.21579	178.42	-0.9996	9.9513	0.21434
180	180.00	-1.0000	9.9289	0.21613	180.00	-1.0000	9.9749	0.21467	180.00	-1.0000	10.0211	0.21323

x = 0.469					x = 0.470					x = 0.471				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3523	6.05260	0.00	1.0000	0.3520	6.04496	0.00	1.0000	0.3517	6.03734		
5	8.42	0.9892	0.3535	6.02111	8.43	0.9892	0.3532	6.01347	8.43	0.9892	0.3529	6.00586		
10	16.83	0.9572	0.3572	5.92752	16.84	0.9571	0.3569	5.91990	16.84	0.9571	0.3565	5.91231		
15	25.21	0.9048	0.3634	5.77445	25.22	0.9047	0.3631	5.76687	25.23	0.9046	0.3628	5.75931		
20	33.55	0.8334	0.3724	5.56619	33.56	0.8333	0.3721	5.55864	33.58	0.8332	0.3718	5.55113		
25	41.82	0.7452	0.3845	5.30949	41.84	0.7450	0.3842	5.30101	41.86	0.7448	0.3838	5.29356		
30	50.02	0.6425	0.4000	5.00845	50.05	0.6422	0.3997	5.00105	50.07	0.6419	0.3994	4.99367		
35	58.13	0.5280	0.4195	4.67419	58.16	0.5276	0.4192	4.66688	58.18	0.5272	0.4189	4.65960		
40	66.12	0.4049	0.4437	4.31459	66.15	0.4044	0.4434	4.30740	66.18	0.4039	0.4431	4.30024		
45	73.96	0.2763	0.4736	3.93896	74.00	0.2757	0.4733	3.93191	74.03	0.2751	0.4730	3.92489		
50	81.64	0.1454	0.5104	3.55668	81.68	0.1447	0.5101	3.54980	81.72	0.1441	0.5098	3.54294		
55	89.12	0.0153	0.5556	3.17685	89.17	0.0146	0.5553	3.17016	89.21	0.0138	0.5550	3.16349		
60	96.38	-0.1111	0.6114	2.80786	96.42	-0.1118	0.6111	2.80140	96.47	-0.1126	0.6109	2.79495		
65	103.37	-0.2312	0.6804	2.45712	103.41	-0.2320	0.6802	2.45091	103.46	-0.2328	0.6800	2.44472		
70	110.06	-0.3429	0.7660	2.13068	110.11	-0.3438	0.7659	2.12475	110.16	-0.3446	0.7658	2.11885		
75	116.41	-0.4449	0.8723	1.83302	116.47	-0.4457	0.8724	1.82741	116.52	-0.4465	0.8725	1.82182		
80	122.41	-0.5360	1.0047	1.56693	122.47	-0.5368	1.0050	1.56166	122.52	-0.5376	1.0054	1.55642		
85	128.02	-0.6159	1.1691	1.33348	128.08	-0.6167	1.1698	1.32858	128.13	-0.6175	1.1705	1.32369		
90	133.22	-0.6848	1.3723	1.13219	133.28	-0.6856	1.3736	1.12766	133.34	-0.6863	1.1749	1.12314		
95	138.02	-0.7434	1.6217	0.96129	138.08	-0.7440	1.6238	0.95712	138.13	-0.7447	1.6259	0.95298		
100	142.41	-0.7924	1.9244	0.81807	142.47	-0.7930	1.9275	0.81427	142.52	-0.7936	1.9307	0.81048		
105	146.41	-0.8331	2.2865	0.69932	146.47	-0.8336	2.2911	0.69586	146.52	-0.8341	2.2957	0.69241		
110	150.06	-0.8665	2.7127	0.60162	150.11	-0.8670	2.7191	0.59848	150.16	-0.8674	2.7255	0.59535		
115	153.37	-0.8939	3.2045	0.52169	153.41	-0.8943	3.2132	0.51883	153.46	-0.8946	3.2219	0.51599		
120	156.38	-0.9162	3.7604	0.45653	156.42	-0.9165	3.7717	0.45392	156.47	-0.9168	3.7831	0.45133		
125	159.12	-0.9344	4.3744	0.40350	159.17	-0.9346	4.3889	0.40112	159.21	-0.9349	4.4034	0.39875		
130	161.64	-0.9491	5.0365	0.36041	161.68	-0.9493	5.0545	0.35822	161.72	-0.9495	5.0725	0.35605		
135	163.96	-0.9611	5.7324	0.32543	164.00	-0.9612	5.7541	0.32341	164.03	-0.9614	5.7760	0.32140		
140	166.12	-0.9708	6.4439	0.29710	166.15	-0.9709	6.4696	0.29522	166.18	-0.9710	6.4954	0.29334		
145	168.13	-0.9786	7.1499	0.27424	168.16	-0.9787	7.1796	0.27248	168.18	-0.9788	7.2094	0.27072		
150	170.02	-0.9849	7.8272	0.25594	170.05	-0.9849	7.8608	0.25427	170.07	-0.9850	7.8945	0.25261		
155	171.82	-0.9898	8.4520	0.24147	171.84	-0.9899	8.4892	0.23988	171.86	-0.9899	8.5266	0.23830		
160	173.55	-0.9937	9.0010	0.23030	173.56	-0.9937	9.0414	0.22876	173.58	-0.9937	9.0821	0.22724		
165	175.21	-0.9965	9.4529	0.22199	175.22	-0.9965	9.4960	0.22050	175.23	-0.9965	9.5393	0.21903		
170	176.83	-0.9985	9.7896	0.21626	176.84	-0.9985	9.8347	0.21480	176.84	-0.9985	9.8801	0.21336		
175	178.42	-0.9996	9.9974	0.21290	178.43	-0.9996	10.0437	0.21146	178.43	-0.9996	10.0904	0.21004		
180	180.00	-1.0000	10.0676	0.21179	180.00	-1.0000	10.1144	0.21036	180.00	-1.0000	10.1614	0.20894		

x = 0.472					x = 0.473					x = 0.474				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3514	6.02976	0.00	1.0000	0.3511	6.02220	0.00	1.0000	0.3508	6.01467		
5	8.43	0.9892	0.3526	5.99828	8.44	0.9892	0.3523	5.99073	8.44	0.9892	0.3520	5.98321		
10	16.85	0.9571	0.3562	5.90475	16.86	0.9570	0.3559	5.89722	16.87	0.9570	0.3556	5.88971		
15	25.24	0.9045	0.3625	5.75178	25.25	0.9044	0.3622	5.74428	25.26	0.9043	0.3619	5.73680		
20	33.59	0.8330	0.3715	5.54365	33.60	0.8329	0.3712	5.53619	33.62	0.8327	0.3709	5.52876		
25	41.88	0.7446	0.3835	5.28614	41.90	0.7443	0.3832	5.27874	41.92	0.7441	0.3829	5.27137		
30	50.09	0.6416	0.3990	4.98633	50.11	0.6413	0.3987	4.97901	50.14	0.6410	0.3984	4.97172		
35	58.21	0.5268	0.4185	4.65235	58.23	0.5265	0.4182	4.64513	58.26	0.5261	0.4179	4.63793		
40	66.21	0.4034	0.4428	4.29310	66.24	0.4030	0.4425	4.28599	66.27	0.4025	0.4421	4.27881		
45	74.06	0.2746	0.4727	3.91789	74.10	0.2740	0.4724	3.91092	74.13	0.2734	0.4720	3.90397		
50	81.76	0.1434	0.5095	3.53611	81.79	0.1428	0.5092	3.52930	81.83	0.1421	0.5089	3.52252		
55	89.25	0.0131	0.5548	3.15685	89.29	0.0124	0.5545	3.15023	89.33	0.0117	0.5542	3.14364		
60	96.51	-0.1134	0.6107	2.78853	96.56	-0.1142	0.6104	2.78214	96.60	-0.1150	0.6102	2.77577		
65	103.51	-0.2336	0.6798	2.43855	103.56	-0.2344	0.6797	2.43241	103.61	-0.2353	0.6795	2.42629		
70	110.21	-0.3455	0.7657	2.11297	110.26	-0.3463	0.7657	2.10711	110.31	-0.3471	0.7656	2.10127		
75	116.58	-0.4474	0.8726	1.81626	116.63	-0.4482	0.8727	1.81071	116.68	-0.4491	0.8728	1.80519		
80	122.58	-0.5384	1.0057	1.55119	122.63	-0.5393	1.0061	1.54598	122.69	-0.5401	1.0064	1.54080		
85	128.19	-0.6183	1.1713	1.31882	128.25	-0.6190	1.1720	1.31397	128.30	-0.6198	1.1728	1.30915		
90	133.39	-0.6870	1.3762	1.11864	133.45	-0.6877	1.3775	1.11416	133.51	-0.6885	1.1788	1.10970		
95	138.19	-0.7453	1.6280	0.94885	138.25	-0.7460	1.6301	0.94474	138.30	-0.7467	1.6322	0.94064		
100	142.58	-0.7942	1.9339	0.80671	142.63	-0.7948	1.9371	0.80296	142.69	-0.7954	1.9403	0.79922		
105	146.58	-0.8346	2.3004	0.68898	146.63	-0.8351	2.3050	0.68557	146.68	-0.8357	2.3097	0.68217		
110	150.21	-0.8679	2.7320	0.59223	150.26	-0.8683	2.7385	0.58913	150.31	-0.8687	2.7450	0.58605		
115	153.51	-0.8950	3.2306	0.51316	153.56	-0.8954	3.2394	0.51034	153.61	-0.8958	3.2482	0.50754		
120	156.51	-0.9171	3.7946	0.44875	156.56	-0.9174	3.8061	0.44619	156.60	-0.9178	3.8177	0.44364		
125	159.25	-0.9351	4.4180	0.39640	159.29	-0.9354	4.4327	0.39405	159.33	-0.9356	4.4475	0.39172		
130	161.76	-0.9497	5.0907	0.35388	161.79	-0.9499	5.1089	0.35173	161.83	-0.9501	5.1272	0.34959		
135	164.06	-0.9615	5.7979	0.31940	164.10	-0.9617	5.8200	0.31741	164.13	-0.9619	5.8422	0.31543		
140	166.21	-0.9712	6.5214	0.29148	166.24	-0.9713	6.5475	0.28963	166.27	-0.9714	6.5737	0.28779		
145	168.21	-0.9789	7.2394	0.26897	168.23	-0.9790	7.2696	0.26724	168.26	-0.9791	7.2999	0.26552		
150	170.09	-0.9851	7.9285	0.25096	170.11	-0.9851	7.9626	0.24932	170.14	-0.9852	7.9970	0.24769		
155	171.88	-0.9900	8.5642	0.23673	171.90	-0.9900	8.6021	0.23516	171.92	-0.9901	8.6402	0.23361		
160	173.59	-0.9937	9.1230	0.22573	173.60	-0.9938	9.1641	0.22423	173.62	-0.9938	9.2055			

$x = 0.475$					$x = 0.476$					$x = 0.477$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.3505	6.00717	0.00	1.0000	0.3502	5.99970	0.00	1.0000	0.3499	5.99225	0.00	1.0000
5	8.44	0.9892	0.3517	5.97571	8.45	0.9891	0.3514	5.96823	8.45	0.9891	0.3511	5.96081	8.45	0.9891
10	16.87	0.9589	0.3553	5.88223	16.88	0.9569	0.3550	5.87479	16.89	0.9569	0.3547	5.86737	16.89	0.9569
15	25.31	0.9043	0.3616	5.72936	25.29	0.9042	0.3613	5.72194	25.30	0.9041	0.3610	5.71455	25.30	0.9041
20	33.63	0.8326	0.3705	5.52136	33.65	0.8325	0.3702	5.51399	33.66	0.8323	0.3699	5.50665	33.66	0.8323
25	41.93	0.7439	0.3826	5.26403	41.95	0.7437	0.3823	5.25672	41.97	0.7435	0.3820	5.24944	41.97	0.7435
30	50.16	0.6407	0.3981	4.96446	50.18	0.6404	0.3978	4.95722	50.20	0.6401	0.3975	4.95001	50.20	0.6401
35	58.29	0.5257	0.4176	4.63076	58.31	0.5253	0.4173	4.62362	58.34	0.5249	0.4170	4.61650	58.34	0.5249
40	66.30	0.4020	0.4418	4.27186	66.33	0.4015	0.4415	4.26483	66.36	0.4011	0.4412	4.25782	66.36	0.4011
45	74.17	0.2729	0.4717	3.89706	74.20	0.2723	0.4714	3.89016	74.23	0.2717	0.4711	3.88330	74.23	0.2717
50	81.87	0.1415	0.5055	3.51576	81.91	0.1408	0.5082	3.50903	81.94	0.1402	0.5079	3.50232	81.94	0.1402
55	89.37	0.0110	0.5539	3.13708	89.41	0.0102	0.5536	3.13053	89.45	0.0095	0.5534	3.12401	89.45	0.0095
60	96.65	-0.1157	0.6099	2.76942	96.69	-0.1165	0.6097	2.76310	96.74	-0.1173	0.6094	2.75679	96.74	-0.1173
65	103.65	-0.2361	0.6793	2.42019	103.70	-0.2369	0.6791	2.41412	103.75	-0.2377	0.6789	2.40807	103.75	-0.2377
70	110.36	-0.3480	0.7655	2.09546	110.42	-0.3488	0.7654	2.08967	110.47	-0.3497	0.7654	2.08389	110.47	-0.3497
75	116.74	-0.4499	0.8729	1.79969	116.79	-0.4507	0.8730	1.79420	116.85	-0.4516	0.8731	1.78874	116.85	-0.4516
80	122.74	-0.5409	1.0068	1.53563	122.80	-0.5417	1.0072	1.53049	122.86	-0.5425	1.0075	1.52537	122.86	-0.5425
85	128.36	-0.6206	1.1735	1.30434	128.42	-0.6214	1.1742	1.29955	128.47	-0.6222	1.1750	1.29478	128.47	-0.6222
90	133.67	-0.6892	1.3801	1.10526	133.62	-0.6899	1.3814	1.10084	133.68	-0.6907	1.3828	1.09643	133.68	-0.6907
95	138.36	-0.7473	1.6343	0.93657	138.42	-0.7480	1.6364	0.93251	138.47	-0.7487	1.6386	0.92847	138.47	-0.7487
100	142.74	-0.7959	1.9435	0.79550	142.80	-0.7965	1.9467	0.79180	142.86	-0.7971	1.9500	0.78812	142.86	-0.7971
105	146.74	-0.8362	2.3143	0.67879	146.79	-0.8367	2.3190	0.67542	146.85	-0.8372	2.3238	0.67207	146.85	-0.8372
110	150.36	-0.8692	2.7516	0.58298	150.42	-0.8696	2.7581	0.57992	150.47	-0.8701	2.7647	0.57689	150.47	-0.8701
115	153.65	-0.8961	3.2571	0.50475	153.70	-0.8965	3.2660	0.50198	153.75	-0.8969	3.2750	0.49923	153.75	-0.8969
120	156.65	-0.9161	3.8293	0.44110	156.69	-0.9184	3.8410	0.43858	156.74	-0.9187	3.8528	0.43608	156.74	-0.9187
125	159.37	-0.9359	4.4623	0.38941	159.41	-0.9361	4.4772	0.38711	159.45	-0.9364	4.4822	0.38482	159.45	-0.9364
130	161.87	-0.9503	5.1456	0.34747	161.91	-0.9505	5.1642	0.34535	161.94	-0.9507	5.1828	0.34325	161.94	-0.9507
135	164.17	-0.9621	5.8645	0.31347	164.20	-0.9622	5.8869	0.31152	164.23	-0.9624	5.9095	0.30957	164.23	-0.9624
140	166.30	-0.9715	6.6001	0.28597	166.33	-0.9717	6.6266	0.28415	166.36	-0.9718	6.6533	0.28234	166.36	-0.9718
145	168.29	-0.9792	7.3304	0.26380	168.31	-0.9793	7.3611	0.26210	168.34	-0.9794	7.3920	0.26041	168.34	-0.9794
150	170.16	-0.9853	8.0315	0.24607	170.18	-0.9853	8.0662	0.24446	170.20	-0.9854	8.1012	0.24286	170.20	-0.9854
155	171.93	-0.9901	8.6785	0.23207	171.95	-0.9902	8.7170	0.23053	171.97	-0.9902	8.7557	0.22901	171.97	-0.9902
160	173.63	-0.9939	9.2471	0.22125	173.65	-0.9939	9.2890	0.21978	173.66	-0.9939	9.3311	0.21831	173.66	-0.9939
165	175.28	-0.9966	9.7154	0.21222	175.29	-0.9966	9.7600	0.21179	175.30	-0.9966	9.8050	0.21037	175.30	-0.9966
170	176.87	-0.9985	10.0643	0.20768	176.88	-0.9985	10.1111	0.20628	176.89	-0.9985	10.1581	0.20489	176.89	-0.9985
175	178.44	-0.9996	10.2797	0.20443	178.45	-0.9996	10.3277	0.20305	178.45	-0.9996	10.3760	0.20168	178.45	-0.9996
180	180.00	-1.0000	10.3525	0.20336	180.00	-1.0000	10.4010	0.20199	180.00	-1.0000	10.4497	0.20062	180.00	-1.0000

2 x = 0.478					2 x = 0.479					2 x = 0.480				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3496	5.96483	0.00	1.0000	0.3493	5.97745	0.00	1.0000	0.3490	5.97008		
5	8.45	0.9891	0.3508	5.93540	8.46	0.9891	0.3505	5.94602	8.46	0.9891	0.3502	5.93866		
10	16.90	0.9568	0.3544	5.85997	16.90	0.9568	0.3541	5.85261	16.91	0.9568	0.3538	5.84527		
15	25.31	0.9040	0.3606	5.70719	25.32	0.9039	0.3603	5.69865	25.33	0.9039	0.3600	5.69255		
20	33.68	0.8322	0.3696	5.49933	33.69	0.8320	0.3693	5.49204	33.71	0.8319	0.3690	5.48478		
25	41.99	0.7433	0.3817	5.24218	42.01	0.7431	0.3814	5.23495	42.03	0.7428	0.3810	5.22774		
30	50.22	0.6396	0.3972	4.94283	50.25	0.6395	0.3968	4.93567	50.27	0.6392	0.3965	4.92854		
35	58.36	0.5245	0.4167	4.60941	58.39	0.5241	0.4163	4.60235	58.41	0.5238	0.4160	4.59531		
40	66.39	0.4006	0.4409	4.25085	66.42	0.4001	0.4406	4.24389	66.44	0.3996	0.4403	4.23697		
45	74.27	0.2712	0.4708	3.87645	74.30	0.2706	0.4705	3.86964	74.33	0.2700	0.4702	3.86285		
50	81.98	0.1395	0.5076	3.49564	82.02	0.1389	0.5073	3.48899	82.05	0.1382	0.5070	3.48235		
55	89.50	0.0088	0.5531	3.11752	89.54	0.0081	0.5528	3.11105	89.58	0.0074	0.5525	3.10460		
60	96.78	-0.1181	0.6092	2.75052	96.83	-0.1188	0.6090	2.74426	96.87	-0.1196	0.6087	2.73803		
65	103.80	-0.2385	0.6788	2.40204	103.85	-0.2393	0.6786	2.39603	103.90	-0.2402	0.6784	2.39005		
70	110.52	-0.3505	0.7653	2.07815	110.57	-0.3513	0.7652	2.07242	110.62	-0.3522	0.7651	2.06671		
75	116.90	-0.4524	0.8732	1.78331	116.95	-0.4533	0.8733	1.77789	117.01	-0.4541	0.8734	1.77249		
80	122.91	-0.5433	1.0079	1.52026	122.97	-0.5442	1.0082	1.51518	123.02	-0.5450	1.0086	1.51011		
85	128.53	-0.6229	1.1757	1.29003	128.59	-0.6237	1.1765	1.28530	128.64	-0.6245	1.1772	1.28059		
90	133.74	-0.6914	1.3841	1.09205	133.80	-0.6921	1.3854	1.08768	133.85	-0.6928	1.3868	1.08333		
95	138.53	-0.7493	1.6407	0.92445	138.59	-0.7500	1.6428	0.92045	138.64	-0.7506	1.6450	0.91646		
100	142.91	-0.7977	1.9532	0.78445	142.97	-0.7983	1.9555	0.78080	143.02	-0.7989	1.9598	0.77717		
105	146.90	-0.8377	2.3285	0.66874	146.95	-0.8382	2.3332	0.66543	147.01	-0.8387	2.3380	0.66212		
110	150.52	-0.8705	2.7714	0.57386	150.57	-0.8709	2.7780	0.57086	150.62	-0.8714	2.7847	0.56786		
115	153.80	-0.8973	3.2839	0.49648	153.85	-0.8976	3.2930	0.49375	153.90	-0.8980	3.3020	0.49104		
120	156.78	-0.9190	3.8646	0.43358	156.83	-0.9193	3.8764	0.43110	156.87	-0.9196	3.8883	0.42863		
125	159.50	-0.9366	4.5073	0.38254	159.54	-0.9369	4.5224	0.38027	159.58	-0.9371	4.5376	0.37802		
130	161.98	-0.9509	5.2015	0.34116	162.02	-0.9512	5.2203	0.33908	162.05	-0.9514	5.2392	0.33702		
135	164.27	-0.9625	5.9322	0.30765	164.30	-0.9627	5.9550	0.30573	164.33	-0.9629	5.9779	0.30382		
140	166.39	-0.9719	6.6801	0.28055	166.42	-0.9720	6.7071	0.27877	166.44	-0.9721	6.7342	0.27699		
145	168.36	-0.9794	7.4230	0.25873	168.39	-0.9795	7.4542	0.25705	168.41	-0.9796	7.4856	0.25539		
150	170.22	-0.9855	8.1363	0.24127	170.25	-0.9855	8.1716	0.23969	170.27	-0.9856	8.2072	0.23813		
155	171.99	-0.9902	8.7947	0.22750	172.01	-0.9903	8.8339	0.22599	172.03	-0.9903	8.8733	0.22450		
160	173.68	-0.9939	9.3735	0.21686	173.69	-0.9939	9.4161	0.21541	173.71	-0.9940	9.4549	0.21398		
165	175.31	-0.9966	9.8501	0.20896	175.32	-0.9967	9.8956	0.20756	175.33	-0.9967	9.9413	0.20617		
170	176.90	-0.9985	10.2054	0.20351	176.90	-0.9985	10.2530	0.20214	176.91	-0.9985	10.3009	0.20078		
175	178.45	-0.9996	10.4247	0.20032	178.46	-0.9996	10.4736	0.19897	178.46	-0.9996	10.5228	0.19762		
180	180.00	-1.0000	10.4988	0.19927	180.00	-1.0000	10.5481	0.19792	180.00	-1.0000	10.5978	0.19655		

x = 0.481					x = 0.482					x = 0.483				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3487	5.96275	0.00	1.0000	0.3484	5.95544	0.00	1.0000	0.3481	5.94817		
5	8.47	0.9891	0.3499	5.93133	8.47	0.9891	0.3496	5.92403	8.47	0.9891	0.3493	5.91676		
10	16.92	0.9567	0.3535	5.83796	16.92	0.9567	0.3532	5.83068	16.93	0.9567	0.3529	5.82342		
15	25.34	0.9038	0.3597	5.68527	25.35	0.9037	0.3594	5.67802	25.36	0.9036	0.3591	5.67079		
20	33.72	0.8317	0.3687	5.47754	33.74	0.8316	0.3684	5.47034	33.75	0.8315	0.3681	5.46315		
25	42.04	0.7426	0.3807	5.22057	42.06	0.7424	0.3804	5.21342	42.08	0.7422	0.3801	5.20629		
30	50.29	0.6389	0.3962	4.92144	50.31	0.6386	0.3959	4.91436	50.33	0.6383	0.3956	4.90731		
35	58.44	0.5234	0.4157	4.58830	58.47	0.5230	0.4154	4.58132	58.49	0.5226	0.4151	4.57436		
40	66.47	0.3992	0.4399	4.23007	66.50	0.3987	0.4396	4.22319	66.53	0.3982	0.4393	4.21634		
45	74.37	0.2695	0.4699	3.85608	74.40	0.2689	0.4696	3.84934	74.43	0.2683	0.4692	3.84262		
50	82.09	0.1376	0.5067	3.47574	82.13	0.1369	0.5064	3.46916	82.17	0.1363	0.5061	3.46260		
55	89.62	0.0067	0.5522	3.09818	89.66	0.0059	0.5520	3.09178	89.70	0.0052	0.5517	3.08540		
60	96.91	-0.1204	0.6085	2.73182	96.96	-0.1212	0.6082	2.72564	97.00	-0.1219	0.6080	2.71948		
65	103.94	-0.2410	0.6782	2.38409	103.99	-0.2418	0.6781	2.37815	104.04	-0.2426	0.6779	2.37223		
70	110.67	-0.3530	0.7651	2.06103	110.72	-0.3538	0.7650	2.05536	110.77	-0.3547	0.7649	2.04972		
75	117.06	-0.4549	0.8735	1.76711	117.11	-0.4558	0.8736	1.76175	117.17	-0.4566	0.8737	1.75642		
80	123.08	-0.5458	1.0089	1.50507	123.13	-0.5466	1.0093	1.50004	123.19	-0.5474	1.0097	1.49504		
85	128.70	-0.6253	1.1780	1.27590	128.76	-0.6260	1.1788	1.27122	128.82	-0.6268	1.1795	1.26657		
90	133.91	-0.6935	1.3881	1.07900	133.97	-0.6943	1.3894	1.07469	134.03	-0.6950	1.3908	1.07039		
95	138.70	-0.7513	1.6471	0.91249	138.76	-0.7519	1.6493	0.90854	138.82	-0.7526	1.6515	0.90460		
100	143.08	-0.7995	1.9631	0.77355	143.13	-0.8000	1.9664	0.76995	143.19	-0.8006	1.9697	0.76636		
105	147.06	-0.8392	2.3428	0.65884	147.11	-0.8398	2.3476	0.65537	147.17	-0.8403	2.3525	0.65232		
110	150.67	-0.8718	2.7914	0.56488	150.72	-0.8723	2.7982	0.56192	150.77	-0.8727	2.8050	0.55897		
115	153.94	-0.8984	3.3111	0.48834	153.99	-0.8987	3.3203	0.48565	154.04	-0.8991	3.3295	0.48298		
120	156.91	-0.9199	3.9003	0.42618	156.96	-0.9202	3.9123	0.42374	157.00	-0.9205	3.9244	0.42131		
125	159.62	-0.9374	4.5529	0.37578	159.66	-0.9376	4.5683	0.37356	159.70	-0.9379	4.5837	0.37134		
130	162.09	-0.9516	5.2582	0.33496	162.13	-0.9518	5.2774	0.33292	162.17	-0.9520	5.2966	0.33089		
135	164.37	-0.9630	6.0010	0.30192	164.40	-0.9632	6.0241	0.30004	164.43	-0.9633	6.0474	0.29817		
140	166.47	-0.9723	6.7615	0.27523	166.50	-0.9724	6.7890	0.27348	166.53	-0.9725	6.8166	0.27174		
145	168.44	-0.9797	7.5172	0.25374	168.47	-0.9798	7.5489	0.25210	168.49	-0.9799	7.5809	0.25047		
150	170.29	-0.9857	8.2429	0.23657	170.31	-0.9857	8.2789	0.23502	170.33	-0.9858	8.3151	0.23348		
155	172.04	-0.9904	9.9130	0.22301	172.06	-0.9904	9.9529	0.22154	172.08	-0.9905	8.9930	0.22007		
160	173.72	-0.9940	9.5021	0.21255	173.74	-0.9940	9.5455	0.21113	173.75	-0.9941	9.5892	0.20972		
165	175.34	-0.9967	9.9873	0.20478	175.35	-0.9967	10.0336	0.20341	175.36	-0.9967	10.0802	0.20204		
170	176.92	-0.9986	10.3490	0.19943	176.92	-0.9986	10.3975	0.19808	176.93	-0.9986	10.4462	0.19675		
175	178.47	-0.9996	10.5723	0.19629	178.47	-0.9996	10.6221	0.19496	178.47	-0.9996	10.6721	0.19364		
180	180.00	-1.0000	10.6477	0.19525	180.00	-1.0000	10.6980	0.19393	180.00	-1.0000	10.7485	0.19262		

x = 0.484					x = 0.485					x = 0.486				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3478	5.94091	0.00	1.0000	0.3475	5.93369	0.00	1.0000	0.3472	5.92649		
5	8.48	0.9891	0.3490	5.90951	8.48	0.9891	0.3487	5.90229	8.48	0.9891	0.3484	5.89510		
10	16.94	0.9566	0.3526	5.81620	16.95	0.9566	0.3523	5.80899	16.95	0.9565	0.3520	5.80182		
15	25.37	0.9035	0.3588	5.66360	25.38	0.9035	0.3585	5.65642	25.39	0.9034	0.3582	5.64928		
20	33.77	0.8313	0.3678	5.45600	33.78	0.8312	0.3675	5.44887	33.79	0.8310	0.3672	5.44177		
25	42.10	0.7420	0.3798	5.19919	42.12	0.7418	0.3795	5.19212	42.13	0.7416	0.3792	5.18508		
30	50.36	0.6380	0.3953	4.90028	50.38	0.6377	0.3950	4.89329	50.40	0.6374	0.3947	4.88631		
35	58.52	0.5222	0.4148	4.56742	58.54	0.5218	0.4145	4.56051	58.57	0.5215	0.4142	4.55363		
40	66.56	0.3977	0.4390	4.20952	66.59	0.3973	0.4387	4.20272	66.62	0.3968	0.4384	4.19594		
45	74.47	0.2678	0.4689	3.83593	74.50	0.2672	0.4686	3.82926	74.53	0.2667	0.4683	3.82261		
50	82.20	0.1356	0.5059	3.45606	82.24	0.1350	0.5056	3.44955	82.28	0.1344	0.5053	3.44306		
55	89.74	0.0045	0.5514	3.07905	89.78	0.0038	0.5511	3.07272	89.82	0.0031	0.5508	3.06641		
60	97.05	-0.1227	0.6077	2.71333	97.09	-0.1235	0.6075	2.70722	97.14	-0.1243	0.6073	2.70112		
65	104.09	-0.2434	0.6777	2.36693	104.14	-0.2442	0.6775	2.36046	104.18	-0.2450	0.6773	2.35460		
70	110.82	-0.3555	0.7649	2.04410	110.88	-0.3563	0.7648	2.03850	110.93	-0.3572	0.7647	2.03292		
75	117.22	-0.4574	0.8738	1.75110	117.27	-0.4583	0.8739	1.74580	117.33	-0.4591	0.8740	1.74053		
80	123.25	-0.5482	1.0100	1.49005	123.30	-0.5490	1.0104	1.48508	123.36	-0.5499	1.0108	1.48014		
85	128.87	-0.6276	1.1803	1.26193	128.93	-0.6284	1.1810	1.25731	128.99	-0.6291	1.1818	1.25271		
90	134.08	-0.6957	1.3921	1.06611	134.14	-0.6964	1.3935	1.06185	134.20	-0.6971	1.3948	1.05761		
95	138.87	-0.7532	1.6537	0.90069	138.93	-0.7539	1.6559	0.89678	138.99	-0.7546	1.6580	0.89290		
100	143.25	-0.8012	1.9730	0.76279	143.30	-0.8018	1.9763	0.75924	143.36	-0.8024	1.9797	0.75570		
105	147.22	-0.8408	2.3573	0.64908	147.27	-0.8413	2.3622	0.64585	147.33	-0.8418	2.3671	0.64265		
110	150.82	-0.8731	2.8118	0.55604	150.88	-0.8736	2.8166	0.55312	150.93	-0.8740	2.8255	0.55022		
115	154.09	-0.8995	3.3387	0.48032	154.14	-0.8998	3.3480	0.47768	154.18	-0.9002	3.3573	0.47505		
120	157.05	-0.9208	3.9366	0.41899	157.09	-0.9211	3.9488	0.41649	157.14	-0.9214	3.9611	0.41410		
125	159.74	-0.9381	4.5993	0.36914	159.78	-0.9384	4.6149	0.36695	159.82	-0.9386	4.6306	0.36477		
130	162.20	-0.9522	5.3159	0.32887	162.24	-0.9524	5.3353	0.32686	162.28	-0.9525	5.3549	0.32487		
135	164.47	-0.9635	6.0709	0.29630	164.50	-0.9636	6.0944	0.29445	164.53	-0.9638	6.1181	0.29261		
140	166.56	-0.9726	6.8443	0.27001	166.59	-0.9727	6.8722	0.26829	166.62	-0.9729	6.9003	0.26658		
145	168.52	-0.9800	7.6130	0.24885	168.54	-0.9801	7.6453	0.24724	168.57	-0.9802	7.6778	0.24564		
150	170.36	-0.9859	8.3514	0.23195	170.38	-0.9859	8.3880	0.23043	170.40	-0.9860	8.4248	0.22891		
155	172.10	-0.9895	9.9334	0.21861	172.12	-0.9895	9.9740	0.21716	172.13	-0.9896	9.1148	0.21572		
160	173.77	-0.9941	9.3331	0.20932	173.78	-0.								

$\frac{2}{x} = 0.487$
 $\frac{2}{x} = 0.488$
 $\frac{2}{x} = 0.489$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.3469	5.91932	0.00	1.0000	0.3466	5.91217	0.00	1.0000	0.3463	5.90505
5	8.49	0.9890	0.3481	5.88793	8.49	0.9890	0.3478	5.88079	8.49	0.9890	0.3475	5.87368
10	16.96	0.9565	0.3517	5.79467	16.97	0.9565	0.3515	5.78755	16.97	0.9564	0.3512	5.78045
15	25.41	0.9033	0.3580	5.64216	25.42	0.9032	0.3577	5.63507	25.43	0.9031	0.3574	5.62800
20	33.81	0.8309	0.3669	5.43469	33.82	0.8308	0.3666	5.42764	33.84	0.8306	0.3663	5.42061
25	42.15	0.7414	0.3789	5.17805	42.17	0.7411	0.3786	5.17106	42.19	0.7409	0.3783	5.16409
30	50.42	0.6371	0.3944	4.87936	50.44	0.6368	0.3941	4.87244	50.47	0.6365	0.3938	4.86554
35	58.60	0.5211	0.4139	4.54677	58.62	0.5207	0.4136	4.53993	58.65	0.5203	0.4132	4.53312
40	66.65	0.3963	0.4381	4.18919	66.68	0.3958	0.4378	4.18247	66.71	0.3954	0.4375	4.17576
45	74.57	0.2661	0.4680	3.81599	74.60	0.2655	0.4677	3.80940	74.63	0.2650	0.4674	3.80282
50	82.32	0.1337	0.5050	3.43659	82.35	0.1331	0.5047	3.43015	82.39	0.1324	0.5044	3.42373
55	89.87	0.0024	0.5506	3.06013	89.91	0.0016	0.5503	3.05386	89.95	0.0009	0.5500	3.04762
60	97.18	-0.1250	0.6070	2.69505	97.23	-0.1258	0.6068	2.68899	97.27	-0.1266	0.6065	2.68296
65	104.23	-0.2459	0.6772	2.34877	104.28	-0.2467	0.6770	2.34296	104.33	-0.2475	0.6768	2.33717
70	110.98	-0.3580	0.7647	2.02736	111.03	-0.3588	0.7646	2.02182	111.08	-0.3597	0.7645	2.01630
75	117.38	-0.4599	0.8741	1.73527	117.44	-0.4608	0.8742	1.73003	117.49	-0.4616	0.8743	1.72481
80	123.41	-0.5507	1.0111	1.47521	123.47	-0.5515	1.0115	1.47030	123.52	-0.5523	1.0119	1.46540
85	129.04	-0.6299	1.1826	1.24813	129.10	-0.6307	1.1834	1.24356	129.16	-0.6314	1.1841	1.23902
90	134.26	-0.6979	1.3962	1.05339	134.31	-0.6986	1.3975	1.04918	134.37	-0.6993	1.3989	1.04499
95	139.04	-0.7552	1.6502	0.88903	139.10	-0.7559	1.6625	0.88518	139.16	-0.7565	1.6647	0.88134
100	143.41	-0.8030	1.9831	0.75218	143.47	-0.8035	1.9864	0.74868	143.52	-0.8041	1.9898	0.74519
105	147.38	-0.8423	2.3720	0.63945	147.44	-0.8428	2.3769	0.63628	147.49	-0.8433	2.3818	0.63311
110	150.98	-0.8744	2.8324	0.54732	151.03	-0.8749	2.8393	0.54445	151.08	-0.8753	2.8463	0.54159
115	154.23	-0.9006	3.3667	0.47243	154.28	-0.9009	3.3761	0.46982	154.33	-0.9013	3.3856	0.46723
120	157.18	-0.9217	3.9734	0.41173	157.23	-0.9220	3.9858	0.40936	157.27	-0.9223	3.9982	0.40701
125	159.87	-0.9389	4.6463	0.36261	159.91	-0.9391	4.6622	0.36045	159.95	-0.9394	4.6781	0.35831
130	162.32	-0.9527	5.3745	0.32289	162.35	-0.9529	5.3942	0.32091	162.39	-0.9531	5.4141	0.31895
135	164.57	-0.9639	6.1419	0.29078	164.60	-0.9641	6.1659	0.28896	164.63	-0.9643	6.1900	0.28716
140	166.65	-0.9730	6.9785	0.26488	166.68	-0.9731	6.9569	0.26319	166.71	-0.9732	6.9854	0.26151
145	168.60	-0.9803	7.7105	0.24405	168.62	-0.9803	7.7433	0.24247	168.65	-0.9804	7.7764	0.24089
150	170.42	-0.9851	8.4619	0.22741	170.44	-0.9861	8.4991	0.22592	170.47	-0.9862	8.5366	0.22444
155	172.15	-0.9906	9.1559	0.21429	172.17	-0.9907	9.1972	0.21287	172.19	-0.9907	9.2388	0.21246
160	173.81	-0.9942	9.7663	0.20417	173.82	-0.9942	9.8113	0.20281	173.84	-0.9942	9.8565	0.20145
165	175.41	-0.9968	10.2692	0.19657	175.42	-0.9968	10.3172	0.19534	175.43	-0.9968	10.3655	0.19403
170	176.96	-0.9986	10.6441	0.19149	176.97	-0.9986	10.6944	0.19020	176.97	-0.9986	10.7449	0.18891
175	178.49	-0.9997	10.8756	0.18846	178.49	-0.9997	10.9272	0.18718	178.49	-0.9997	10.9792	0.18591
180	180.00	-1.0000	10.9538	0.18746	180.00	-1.0000	11.0059	0.18619	180.00	-1.0000	11.0584	0.18493

 $\frac{2}{x} = 0.490$
 $\frac{2}{x} = 0.491$
 $\frac{2}{x} = 0.492$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.3460	5.89796	0.00	1.0000	0.3457	5.89089	0.00	1.0000	0.3454	5.88385
5	8.50	0.9890	0.3472	5.86659	8.50	0.9890	0.3469	5.85953	8.50	0.9890	0.3466	5.85249
10	16.98	0.9564	0.3509	5.77338	16.99	0.9564	0.3506	5.76634	17.00	0.9563	0.3503	5.75932
15	25.44	0.9030	0.3571	5.62096	25.45	0.9030	0.3568	5.61394	25.46	0.9029	0.3565	5.60695
20	33.85	0.8305	0.3660	5.41361	33.87	0.8303	0.3657	5.40664	33.88	0.8302	0.3654	5.39969
25	42.21	0.7407	0.3780	5.15715	42.23	0.7405	0.3777	5.15023	42.24	0.7403	0.3774	5.14334
30	50.49	0.6362	0.3935	4.85867	50.51	0.6360	0.3932	4.85182	50.53	0.6357	0.3929	4.84500
35	58.67	0.5199	0.4129	4.52634	58.70	0.5196	0.4126	4.51958	58.72	0.5192	0.4123	4.51284
40	66.74	0.3949	0.4372	4.16909	66.77	0.3944	0.4369	4.16243	66.80	0.3940	0.4365	4.15580
45	74.67	0.2644	0.4671	3.79627	74.70	0.2638	0.4668	3.78975	74.73	0.2633	0.4665	3.78324
50	82.43	0.1318	0.5041	3.41733	82.46	0.1311	0.5038	3.41096	82.50	0.1305	0.5035	3.40461
55	89.99	0.0002	0.5497	3.04141	90.03	-0.0005	0.5495	3.03521	90.07	-0.0012	0.5492	3.02904
60	97.32	-0.1274	0.6063	2.67696	97.36	-0.1281	0.6061	2.67097	97.41	-0.1289	0.6058	2.66500
65	104.38	-0.2483	0.6766	2.33140	104.42	-0.2491	0.6765	2.32565	104.47	-0.2499	0.6763	2.31992
70	111.13	-0.3605	0.7644	2.01080	111.18	-0.3613	0.7644	2.00532	111.23	-0.3622	0.7643	1.99987
75	117.54	-0.4624	0.8744	1.71961	117.60	-0.4632	0.8745	1.71444	117.65	-0.4641	0.8746	1.70928
80	123.58	-0.5531	1.0122	1.46053	123.64	-0.5539	1.0126	1.45568	123.69	-0.5547	1.0130	1.45084
85	129.21	-0.6222	1.1849	1.23449	129.27	-0.6230	1.1857	1.22998	129.33	-0.6238	1.1865	1.22548
90	134.43	-0.7000	1.4003	1.04082	134.48	-0.7007	1.4017	1.03666	134.54	-0.7014	1.4030	1.03252
95	139.21	-0.7572	1.6669	0.87753	139.27	-0.7578	1.6691	0.87372	139.33	-0.7584	1.6714	0.86994
100	143.58	-0.8047	1.9932	0.74171	143.64	-0.8053	1.9966	0.73826	143.69	-0.8058	2.0000	0.73481
105	147.54	-0.8438	2.3868	0.62996	147.60	-0.8443	2.3918	0.62683	147.65	-0.8448	2.3968	0.62371
110	151.13	-0.8757	2.8532	0.53874	151.18	-0.8762	2.8603	0.53590	151.23	-0.8766	2.8673	0.53308
115	154.38	-0.9017	3.3951	0.46465	154.42	-0.9020	3.4046	0.46209	154.47	-0.9024	3.4142	0.45954
120	157.32	-0.9226	4.0108	0.40467	157.36	-0.9229	4.0233	0.40235	157.41	-0.9232	4.0360	0.40004
125	159.99	-0.9396	4.6942	0.35618	160.03	-0.9399	4.7103	0.35406	160.07	-0.9401	4.7265	0.35196
130	162.43	-0.9533	5.4340	0.31700	162.46	-0.9535	5.4541	0.31506	162.50	-0.9537	5.4743	0.31313
135	164.67	-0.9644	6.2142	0.28536	164.70	-0.9646	6.2386	0.28357	164.73	-0.9647	6.2631	0.28179
140	166.74	-0.9733	7.0141	0.25984	166.77	-0.9735	7.0430	0.25818	166.80	-0.9736	7.0720	0.25653
145	168.67	-0.9805	7.8096	0.23933	168.70	-0.9806	7.8431	0.23778	168.72	-0.9807	7.8767	0.23624
150	170.49	-0.9862	8.5743	0.22296	170.51	-0.9863	8.6122	0.22150	170.53	-0.9864	8.6503	0.22004
155	172.21	-0.9908	9.2806	0.21006	172.23	-0.9908	9.3227	0.20866	172.24	-0.9909	9.3650	0.20728
160	173.85	-0.9942	9.9021	0.20011	173.87	-0.9943	9.9478	0.19877	173.88	-0.9943	9.9939	0.19744
165	175.44	-0.9968	10.4140	0.19272	175.45	-0.9968	10.4629	0.19143	175.46	-0.9969	10.5120	0.19014
170	176.98	-0.9986	10.7958	0.18764	176.99	-0.9986	10.8469	0.18637	177.00	-0.9986	10.8964	0.18511
175	178.50	-0.9997	11.0314	0.18466	178.50	-0.9997	11.0840	0.18340	178.50	-0.9997	11.1369	0.18216
180	180.00	-1.0000	11.1111	0.18367	180.00	-1.0000	11.1642	0.18243	180.00	-1.0000	11.2176	0.18119

2 x = 0.493					2 x = 0.494					2 x = 0.495				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3452	5.87683	0.00	1.0000	0.3449	5.86984	0.00	1.0000	0.3446	5.86288		
5	8.51	0.9890	0.3464	5.94548	8.51	0.9890	0.3461	5.83850	8.52	0.9890	0.3458	5.83154		
10	17.00	0.9563	0.3500	5.75232	17.01	0.9563	0.3497	5.74536	17.02	0.9562	0.3494	5.73841		
15	25.47	0.9028	0.3562	5.59999	25.48	0.9027	0.3559	5.59305	25.49	0.9026	0.3556	5.58613		
20	33.90	0.8301	0.3651	5.39277	33.91	0.8299	0.3648	5.38587	33.92	0.8298	0.3645	5.37900		
25	42.26	0.7401	0.3771	5.13647	42.28	0.7399	0.3768	5.12963	42.30	0.7397	0.3765	5.12281		
30	50.55	0.6354	0.3926	4.83820	50.57	0.6351	0.3923	4.83143	50.60	0.6348	0.3920	4.82468		
35	58.75	0.5188	0.4120	4.50613	58.77	0.5184	0.4117	4.49944	58.80	0.5180	0.4114	4.49278		
40	66.83	0.3935	0.4362	4.14920	66.86	0.3930	0.4359	4.14261	66.89	0.3925	0.4356	4.13606		
45	74.77	0.2627	0.4662	3.77677	74.80	0.2622	0.4659	3.77031	74.83	0.2616	0.4656	3.76388		
50	82.54	0.1299	0.5032	3.39828	82.58	0.1292	0.5029	3.39197	82.61	0.1286	0.5026	3.38569		
55	90.11	-0.0019	0.5489	3.02289	90.15	-0.0026	0.5486	3.01676	90.19	-0.0034	0.5484	3.01065		
60	97.45	-0.1297	0.6056	2.65906	97.49	-0.1304	0.6054	2.65313	97.54	-0.1312	0.6051	2.64723		
65	104.52	-0.2507	0.6761	2.31422	104.57	-0.2515	0.6760	2.30853	104.62	-0.2523	0.6758	2.30286		
70	111.28	-0.3630	0.7642	1.99443	111.34	-0.3638	0.7642	1.98901	111.39	-0.3647	0.7641	1.98361		
75	117.70	-0.4649	0.8747	1.70413	117.76	-0.4657	0.8748	1.69901	117.81	-0.4666	0.8749	1.69391		
80	123.75	-0.5555	1.0133	1.44602	123.80	-0.5563	1.0137	1.44122	123.86	-0.5571	1.0141	1.43644		
85	129.38	-0.6345	1.1872	1.22101	129.44	-0.6353	1.1880	1.21655	129.50	-0.6361	1.1888	1.21211		
90	134.60	-0.7021	1.4044	1.02940	134.66	-0.7029	1.4058	1.02429	134.71	-0.7036	1.4072	1.02020		
95	139.38	-0.7591	1.6736	0.86617	139.44	-0.7597	1.6759	0.86241	139.50	-0.7604	1.6781	0.85868		
100	143.75	-0.8064	2.0035	0.73138	143.80	-0.8070	2.0069	0.72797	143.86	-0.8076	2.0104	0.72458		
105	147.70	-0.8453	2.4018	0.62061	147.76	-0.8458	2.4069	0.61752	147.81	-0.8463	2.4119	0.61444		
110	151.28	-0.8770	2.8744	0.53028	151.34	-0.8774	2.8815	0.52748	151.39	-0.8779	2.8887	0.52471		
115	154.52	-0.9027	3.4238	0.45700	154.57	-0.9031	3.4335	0.45448	154.62	-0.9035	3.4432	0.45196		
120	157.45	-0.9235	4.0487	0.39773	157.49	-0.9238	4.0615	0.39545	157.54	-0.9241	4.0743	0.39317		
125	160.11	-0.9404	4.7427	0.34986	160.15	-0.9406	4.7591	0.34778	160.19	-0.9408	4.7755	0.34571		
130	162.54	-0.9539	5.4946	0.31122	162.58	-0.9541	5.5149	0.30931	162.61	-0.9543	5.5354	0.30741		
135	164.77	-0.9649	6.2877	0.28003	164.80	-0.9650	6.3125	0.27827	164.83	-0.9652	6.3374	0.27653		
140	166.83	-0.9737	7.1012	0.25489	166.86	-0.9738	7.1306	0.25326	166.89	-0.9739	7.1602	0.25164		
145	168.75	-0.9808	7.9106	0.23470	168.77	-0.9809	7.9446	0.23318	168.80	-0.9810	7.9788	0.23166		
150	170.55	-0.9864	8.6887	0.21859	170.57	-0.9865	8.7272	0.21716	170.60	-0.9866	8.7661	0.21573		
155	172.26	-0.9909	9.4076	0.20590	172.28	-0.9909	9.4505	0.20453	172.30	-0.9910	9.4936	0.20317		
160	173.90	-0.9943	10.0402	0.19611	173.91	-0.9944	10.0869	0.19480	173.92	-0.9944	10.1338	0.19350		
165	175.47	-0.9969	10.5615	0.18886	175.48	-0.9969	10.6133	0.18759	175.49	-0.9969	10.6613	0.18632		
170	177.00	-0.9986	10.9502	0.18386	177.01	-0.9986	11.0023	0.18261	177.02	-0.9986	11.0547	0.18138		
175	178.51	-0.9997	11.1902	0.18093	178.51	-0.9997	11.2437	0.17970	178.52	-0.9997	11.2976	0.17848		
180	180.00	-1.0000	11.2713	0.17996	180.00	-1.0000	11.3254	0.17874	180.00	-1.0000	11.3798	0.17753		

2 x = 0.496					2 x = 0.497					2 x = 0.498				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3443	5.85594	0.00	1.0000	0.3440	5.84902	0.00	1.0000	0.3437	5.84213		
5	8.52	0.9890	0.3455	5.82461	8.52	0.9890	0.3452	5.81770	8.53	0.9889	0.3449	5.81081		
10	17.02	0.9562	0.3491	5.73150	17.03	0.9561	0.3488	5.72460	17.04	0.9561	0.3485	5.71773		
15	25.50	0.9026	0.3553	5.57924	25.51	0.9025	0.3550	5.57238	25.52	0.9024	0.3547	5.56554		
20	33.94	0.8296	0.3642	5.37215	33.95	0.8295	0.3639	5.36532	33.97	0.8294	0.3637	5.35852		
25	42.32	0.7394	0.3762	5.11601	42.33	0.7392	0.3759	5.10924	42.35	0.7390	0.3756	5.10250		
30	50.62	0.6345	0.3917	4.81795	50.64	0.6342	0.3914	4.81125	50.66	0.6339	0.3911	4.80457		
35	58.83	0.5175	0.4111	4.48614	58.85	0.5173	0.4108	4.47952	58.88	0.5169	0.4105	4.47293		
40	66.92	0.3921	0.4353	4.12952	66.95	0.3916	0.4350	4.12301	66.98	0.3911	0.4347	4.11652		
45	74.87	0.2611	0.4653	3.75747	74.90	0.2605	0.4650	3.75108	74.93	0.2599	0.4647	3.74471		
50	82.65	0.1279	0.5023	3.37943	82.69	0.1273	0.5020	3.37319	82.72	0.1267	0.5017	3.36697		
55	90.23	-0.0041	0.5481	3.00457	90.27	-0.0048	0.5478	2.99850	90.31	-0.0055	0.5476	2.99246		
60	97.58	-0.1320	0.6049	2.64135	97.63	-0.1327	0.6046	2.63549	97.67	-0.1335	0.6044	2.62965		
65	104.66	-0.2532	0.6756	2.29722	104.71	-0.2540	0.6754	2.29159	104.76	-0.2548	0.6753	2.28598		
70	111.44	-0.3655	0.7640	1.97823	111.49	-0.3663	0.7640	1.97287	111.54	-0.3671	0.7639	1.96752		
75	117.87	-0.4674	0.8750	1.68882	117.92	-0.4682	0.8751	1.68376	117.97	-0.4690	0.8752	1.67871		
80	123.91	-0.5579	1.0145	1.43168	123.97	-0.5587	1.0148	1.42693	124.02	-0.5596	1.0152	1.42220		
85	129.55	-0.6368	1.1896	1.20769	129.61	-0.6376	1.1904	1.20328	129.67	-0.6383	1.1912	1.19889		
90	134.77	-0.7043	1.4086	1.01613	134.83	-0.7050	1.4100	1.01207	134.89	-0.7057	1.4114	1.00803		
95	139.55	-0.7610	1.6804	0.85495	139.61	-0.7617	1.6827	0.85125	139.67	-0.7623	1.6849	0.84755		
100	143.91	-0.8081	2.0139	0.72119	143.97	-0.8087	2.0174	0.71783	144.02	-0.8093	2.0209	0.71447		
105	147.87	-0.8468	2.4170	0.61138	147.92	-0.8473	2.4221	0.60834	147.97	-0.8478	2.4273	0.60530		
110	151.44	-0.8783	2.8958	0.52194	151.49	-0.8787	2.9030	0.51919	151.54	-0.8791	2.9103	0.51645		
115	154.66	-0.9038	3.4530	0.44946	154.71	-0.9042	3.4628	0.44698	154.76	-0.9045	3.4727	0.44450		
120	157.58	-0.9244	4.0872	0.39090	157.63	-0.9247	4.1002	0.38865	157.67	-0.9250	4.1132	0.38641		
125	160.23	-0.9411	4.7921	0.34365	160.27	-0.9413	4.8087	0.34160	160.31	-0.9416	4.8254	0.33956		
130	162.65	-0.9545	5.5561	0.30553	162.69	-0.9547	5.5768	0.30366	162.72	-0.9549	5.5976	0.30179		
135	164.87	-0.9653	6.3625	0.27479	164.90	-0.9655	6.3876	0.27307	164.93	-0.9656	6.4130	0.27135		
140	166.92	-0.9740	7.1899	0.25003	166.95	-0.9742	7.2198	0.24843	166.98	-0.9743	7.2498	0.24684		
145	168.83	-0.9810	8.0133	0.23016	168.85	-0.9811	8.0479	0.22866	168.88	-0.9812	8.0828	0.22717		
150	170.62	-0.9866	8.8051	0.21431	170.64	-0.9867	8.8444	0.21289	170.66	-0.9867	8.8839	0.21149		
155	172.32	-0.9910	9.5323	0.20182	172.33	-0.9911	9.5806	0.20048	172.35	-0.9911	9.6245	0.19914		
160	173.94	-0.9944	10.1810	0										

$\frac{2}{x} = 0.499$
 $\frac{2}{x} = 0.500$
 $\frac{2}{x} = 0.501$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3434	5.83527	0.00	1.0000	0.3431	5.82843	0.00	1.0000	0.3429	5.82161
5	8.53	0.9889	0.3446	5.80395	8.53	0.9889	0.3443	5.79712	8.54	0.9889	0.3441	5.79031
10	17.05	0.9561	0.3483	5.71089	17.05	0.9560	0.3480	5.70407	17.06	0.9560	0.3477	5.69728
15	25.53	0.9023	0.3544	5.55872	25.55	0.9022	0.3542	5.55193	25.56	0.9022	0.3539	5.54517
20	33.98	0.8292	0.3634	5.35175	34.00	0.8291	0.3631	5.34500	34.01	0.8289	0.3628	5.33827
25	42.37	0.7388	0.3753	5.09577	42.39	0.7386	0.3750	5.08908	42.41	0.7384	0.3747	5.08240
30	50.68	0.6336	0.3908	4.79792	50.70	0.6333	0.3905	4.79129	50.73	0.6330	0.3902	4.78468
35	58.90	0.5165	0.4102	4.46636	58.93	0.5161	0.4099	4.45981	58.95	0.5157	0.4096	4.45329
40	67.00	0.3907	0.4344	4.11005	67.03	0.3902	0.4341	4.10361	67.06	0.3897	0.4338	4.09719
45	74.97	0.2594	0.4644	3.73837	75.00	0.2588	0.4641	3.73205	75.03	0.2583	0.4638	3.72575
50	82.76	0.1260	0.5014	3.36078	82.80	0.1254	0.5012	3.35460	82.83	0.1247	0.5009	3.34845
55	90.36	-0.0562	0.5473	2.98644	90.40	-0.0569	0.5470	2.98044	90.44	-0.0576	0.5467	2.97446
60	97.72	-0.1343	0.6042	2.62383	97.76	-0.1350	0.6039	2.61803	97.81	-0.1358	0.6037	2.61225
65	104.81	-0.2556	0.6751	2.28040	104.86	-0.2564	0.6749	2.27483	104.90	-0.2572	0.6747	2.26928
70	111.59	-0.3680	0.7638	1.96220	111.64	-0.3688	0.7638	1.95690	111.69	-0.3696	0.7637	1.95161
75	118.03	-0.4699	0.8753	1.67368	118.08	-0.4707	0.8754	1.66867	118.13	-0.4715	0.8755	1.66367
80	124.08	-0.5604	1.0156	1.41749	124.14	-0.5612	1.0160	1.41280	124.19	-0.5620	1.0164	1.40812
85	129.73	-0.6391	1.1920	1.19452	129.78	-0.6399	1.1928	1.19016	129.84	-0.6406	1.1936	1.18582
90	134.94	-0.7064	1.4128	1.00401	135.00	-0.7071	1.4142	1.00000	135.06	-0.7078	1.4156	0.99601
95	139.73	-0.7630	1.6872	0.84388	139.78	-0.7636	1.6895	0.84022	139.84	-0.7642	1.6918	0.83657
100	144.08	-0.8098	2.0244	0.71114	144.14	-0.8104	2.0279	0.70761	144.19	-0.8110	2.0314	0.70450
105	148.03	-0.8483	2.4324	0.60228	148.08	-0.8488	2.4376	0.59928	148.13	-0.8493	2.4428	0.59629
110	151.59	-0.8796	2.9176	0.51372	151.64	-0.8800	2.9249	0.51101	151.69	-0.8804	2.9322	0.50831
115	154.81	-0.9049	3.4826	0.44204	154.86	-0.9052	3.4926	0.43959	154.90	-0.9056	3.5026	0.43716
120	157.72	-0.9253	4.1263	0.38418	157.76	-0.9256	4.1395	0.38197	157.81	-0.9259	4.1527	0.37976
125	160.36	-0.9418	4.8422	0.33754	160.40	-0.9420	4.8591	0.33552	160.44	-0.9423	4.8761	0.33352
130	162.76	-0.9551	5.6186	0.29994	162.80	-0.9553	5.6397	0.29810	162.83	-0.9555	5.6609	0.29627
135	164.97	-0.9658	6.4385	0.26964	165.00	-0.9659	6.4641	0.26795	165.03	-0.9661	6.4899	0.26626
140	167.00	-0.9744	7.2801	0.24526	167.03	-0.9745	7.3105	0.24369	167.06	-0.9746	7.3411	0.24212
145	168.90	-0.9813	8.1178	0.22569	168.93	-0.9814	8.1531	0.22422	168.95	-0.9815	8.1885	0.22276
150	170.68	-0.9868	8.9237	0.21010	170.70	-0.9869	8.9637	0.20871	170.73	-0.9869	9.0039	0.20733
155	172.37	-0.9911	9.6586	0.19782	172.39	-0.9912	9.7131	0.19650	172.41	-0.9912	9.7578	0.19519
160	173.98	-0.9945	10.3243	0.18836	174.00	-0.9945	10.3727	0.18709	174.01	-0.9945	10.4213	0.18583
165	175.53	-0.9970	10.8647	0.18134	175.55	-0.9970	10.9163	0.18012	175.56	-0.9970	10.9683	0.17890
170	177.05	-0.9987	11.2677	0.17651	177.05	-0.9987	11.3218	0.17531	177.06	-0.9987	11.3762	0.17412
175	178.53	-0.9997	11.5166	0.17368	178.53	-0.9997	11.5722	0.17250	178.54	-0.9997	11.6281	0.17133
180	180.00	-1.0000	11.6007	0.17275	180.00	-1.0000	11.6569	0.17157	180.00	-1.0000	11.7133	0.17041

 $\frac{2}{x} = 0.502$
 $\frac{2}{x} = 0.503$
 $\frac{2}{x} = 0.504$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3426	5.81482	0.00	1.0000	0.3423	5.80805	0.00	1.0000	0.3420	5.80131
5	8.54	0.9889	0.3438	5.78352	8.54	0.9889	0.3435	5.77676	8.55	0.9889	0.3432	5.77002
10	17.07	0.9560	0.3474	5.69051	17.07	0.9559	0.3471	5.68376	17.08	0.9559	0.3468	5.67704
15	25.57	0.9021	0.3536	5.53842	25.58	0.9020	0.3533	5.53170	25.59	0.9019	0.3530	5.52501
20	34.02	0.8288	0.3625	5.33157	34.04	0.8287	0.3622	5.32489	34.05	0.8285	0.3619	5.31823
25	42.42	0.7382	0.3745	5.07575	42.44	0.7380	0.3742	5.06912	42.46	0.7378	0.3739	5.06252
30	50.75	0.6327	0.3899	4.77810	50.77	0.6324	0.3896	4.77154	50.79	0.6321	0.3893	4.76500
35	58.98	0.5154	0.4093	4.44679	59.00	0.5150	0.4090	4.44031	59.03	0.5146	0.4087	4.43386
40	67.09	0.3892	0.4335	4.09079	67.12	0.3888	0.4332	4.08441	67.15	0.3883	0.4329	4.07806
45	75.07	0.2577	0.4635	3.71947	75.10	0.2571	0.4632	3.71322	75.13	0.2566	0.4629	3.70699
50	82.87	0.1241	0.5006	3.34232	82.91	0.1235	0.5003	3.33621	82.95	0.1228	0.5000	3.33012
55	90.48	-0.0083	0.5465	2.96850	90.52	-0.0090	0.5462	2.96256	90.56	-0.0098	0.5459	2.95664
60	97.85	-0.1366	0.6035	2.60649	97.89	-0.1373	0.6032	2.60076	97.94	-0.1381	0.6030	2.59504
65	104.95	-0.2580	0.6746	2.26375	105.00	-0.2588	0.6744	2.25825	105.05	-0.2596	0.6742	2.25276
70	111.74	-0.3704	0.7637	1.94635	111.79	-0.3713	0.7636	1.94110	111.84	-0.3721	0.7635	1.93587
75	118.19	-0.4723	0.8757	1.65870	118.24	-0.4732	0.8758	1.65374	118.29	-0.4740	0.8759	1.64880
80	124.25	-0.5628	1.0167	1.40347	124.30	-0.5636	1.0171	1.39882	124.36	-0.5644	1.0175	1.39420
85	129.90	-0.6414	1.1944	1.18150	129.95	-0.6422	1.1952	1.17720	130.01	-0.6429	1.1960	1.17291
90	135.11	-0.7085	1.4171	0.99203	135.17	-0.7092	1.4185	0.98807	135.23	-0.7099	1.4199	0.98413
95	139.90	-0.7649	1.6941	0.83294	139.95	-0.7655	1.6965	0.82933	140.01	-0.7662	1.6988	0.82573
100	144.25	-0.8115	2.0350	0.70121	144.30	-0.8121	2.0386	0.69793	144.36	-0.8127	2.0421	0.69467
105	148.19	-0.8498	2.4480	0.59331	148.24	-0.8503	2.4533	0.59035	148.29	-0.8508	2.4585	0.58740
110	151.74	-0.8808	2.9396	0.50563	151.79	-0.8813	2.9470	0.50295	151.84	-0.8817	2.9544	0.50029
115	154.95	-0.9059	3.5127	0.43473	155.00	-0.9063	3.5228	0.43232	155.05	-0.9067	3.5329	0.42992
120	157.85	-0.9262	4.1660	0.37757	157.89	-0.9265	4.1794	0.37538	157.94	-0.9268	4.1928	0.37321
125	160.48	-0.9425	4.8932	0.33152	160.52	-0.9427	4.9103	0.32954	160.56	-0.9430	4.9276	0.32757
130	162.87	-0.9556	5.6822	0.29444	162.91	-0.9558	5.7036	0.29263	162.95	-0.9560	5.7252	0.29083
135	165.07	-0.9662	6.5158	0.26459	165.10	-0.9664	6.5419	0.26292	165.13	-0.9665	6.5681	0.26126
140	167.09	-0.9747	7.3718	0.24057	167.12	-0.9748	7.4028	0.23903	167.15	-0.9750	7.4339	0.23749
145	168.98	-0.9816	8.2242	0.22131	169.00	-0.9816	8.2601	0.21987	169.03	-0.9817	8.2962	0.21843
150	170.75	-0.9870	9.0444	0.20597	170.77	-0.9871	9.0851	0.20461	170.79	-0.9871	9.1261	0.20325
155	172.42	-0.9913	9.8027	0.19389	172.44	-0.9913	9.8480	0.19259	172.46	-0.9914	9.8935	0.19193
160	174.02	-0.9946	10.4703	0.18458	174.04	-0.9946	10.5196	0.18334	174.05	-0.9946	10.5691	0.18211
165	175.57	-0.9970	11.0206	0.17769	175.58	-0.9970	11.0732	0.17649	175.59	-0.9970	11.1261	0.17529
170	177.07	-0.9987	11.4310	0.17294	177.07	-0.9987	11.4861	0.17177	177.08	-0.9987	11.5415	0.17060
175	178.54	-0.9997	11.6844	0.17016	178.54	-0.9997	11.7411	0.16900	178.55	-0.9997	11.7981	0.16785
180	180.00	-1.0000	11.7711	0.16924	180.00	-1.0000	11.8273	0.16809	180.00	-1.0000	11.8848	0.16695

2 x = 0.505					2 x = 0.506					2 x = 0.507				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3417	5.79459	0.00	1.0000	0.3415	5.78789	0.00	1.0000	0.3412	5.78122		
5	8.55	0.9889	0.3429	5.76330	8.55	0.9889	0.3426	5.75661	8.56	0.9889	0.3424	5.74995		
10	17.09	0.9559	0.3466	5.67034	17.10	0.9558	0.3463	5.66367	17.10	0.9558	0.3460	5.65701		
15	25.60	0.9018	0.3527	5.51834	25.61	0.9018	0.3524	5.51169	25.62	0.9017	0.3521	5.50507		
20	34.07	0.8284	0.3616	5.31160	34.08	0.8282	0.3613	5.30499	34.10	0.8281	0.3611	5.29841		
25	42.48	0.7375	0.3736	5.05594	42.50	0.7373	0.3733	5.04938	42.51	0.7371	0.3730	5.04285		
30	50.81	0.6319	0.3890	4.75848	50.83	0.6316	0.3887	4.75199	50.86	0.6313	0.3884	4.74552		
35	59.05	0.5142	0.4084	4.42743	59.08	0.5138	0.4081	4.42102	59.10	0.5135	0.4078	4.41463		
40	67.18	0.3878	0.4326	4.07173	67.21	0.3874	0.4323	4.06542	67.24	0.3871	0.4320	4.05913		
45	75.17	0.2560	0.4626	3.70078	75.20	0.2555	0.4623	3.69459	75.23	0.2549	0.4620	3.68842		
50	82.98	0.1222	0.4997	3.32406	83.02	0.1215	0.4994	3.31801	83.06	0.1209	0.4991	3.31199		
55	90.60	-0.0105	0.5457	2.95075	90.64	-0.0112	0.5454	2.94487	90.68	-0.0119	0.5451	2.93901		
60	97.98	-0.1389	0.6028	2.58934	98.03	-0.1396	0.6025	2.58366	98.07	-0.1404	0.6023	2.57800		
65	105.09	-0.2604	0.6741	2.24729	105.14	-0.2612	0.6739	2.24184	105.19	-0.2620	0.6737	2.23640		
70	111.90	-0.3729	0.7635	1.93066	111.95	-0.3737	0.7634	1.92547	112.00	-0.3746	0.7633	1.92029		
75	118.35	-0.4748	0.8760	1.64388	118.40	-0.4756	0.8761	1.63898	118.45	-0.4765	0.8762	1.63409		
80	124.41	-0.5652	1.0179	1.38959	124.47	-0.5660	1.0183	1.38500	124.53	-0.5668	1.0187	1.38043		
85	130.07	-0.6437	1.1968	1.16863	130.12	-0.6444	1.1976	1.16438	130.18	-0.6452	1.1984	1.16014		
90	135.29	-0.7106	1.4213	0.98020	135.34	-0.7113	1.4228	0.97628	135.40	-0.7120	1.4242	0.97239		
95	140.07	-0.7668	1.7011	0.82214	140.12	-0.7674	1.7035	0.81857	140.18	-0.7681	1.7058	0.81502		
100	144.41	-0.8132	2.0457	0.69142	144.47	-0.8138	2.0494	0.68818	144.53	-0.8144	2.0530	0.68496		
105	148.35	-0.8512	2.4638	0.50946	148.40	-0.8517	2.4691	0.50814	148.45	-0.8522	2.4745	0.50786		
110	151.90	-0.8821	2.9619	0.49765	151.95	-0.8825	2.9694	0.49501	152.00	-0.8829	2.9770	0.49239		
115	155.09	-0.9070	3.5432	0.42753	155.14	-0.9074	3.5534	0.42516	155.19	-0.9077	3.5637	0.42279		
120	157.98	-0.9271	4.2063	0.37105	158.03	-0.9274	4.2199	0.36891	158.07	-0.9277	4.2336	0.36677		
125	160.60	-0.9432	4.9449	0.32551	160.64	-0.9435	4.9624	0.32366	160.68	-0.9437	4.9799	0.32172		
130	162.98	-0.9562	5.7468	0.28904	163.02	-0.9564	5.7686	0.28726	163.06	-0.9566	5.7906	0.28549		
135	165.17	-0.9667	6.5945	0.25962	165.20	-0.9668	6.6210	0.25798	165.23	-0.9670	6.6477	0.25635		
140	167.18	-0.9751	7.4652	0.23537	167.21	-0.9752	7.4967	0.23445	167.24	-0.9753	7.5284	0.23294		
145	169.05	-0.9818	8.3326	0.21701	169.08	-0.9819	8.3691	0.21559	169.10	-0.9820	8.4059	0.21418		
150	170.81	-0.9872	9.1673	0.20191	170.83	-0.9872	9.2088	0.20057	170.86	-0.9873	9.2506	0.19925		
155	172.48	-0.9914	9.9393	0.19003	172.50	-0.9914	9.9854	0.18876	172.51	-0.9915	10.0318	0.18750		
160	174.07	-0.9946	10.6190	0.18088	174.08	-0.9947	10.6692	0.17967	174.10	-0.9947	10.7197	0.17846		
165	175.60	-0.9971	11.1793	0.17411	175.61	-0.9971	11.2329	0.17293	175.62	-0.9971	11.2869	0.17176		
170	177.09	-0.9987	11.5973	0.16944	177.10	-0.9987	11.6535	0.16829	177.10	-0.9987	11.7100	0.16714		
175	178.55	-0.9997	11.8554	0.16671	178.55	-0.9997	11.9132	0.16557	178.56	-0.9997	11.9713	0.16444		
180	180.00	-1.0000	11.9427	0.16581	180.00	-1.0000	12.0010	0.16468	180.00	-1.0000	12.0596	0.16355		

2 x = 0.508					2 x = 0.509					2 x = 0.510				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3409	5.77457	0.00	1.0000	0.3406	5.76795	0.00	1.0000	0.3403	5.76134		
5	8.56	0.9889	0.3421	5.74330	8.56	0.9888	0.3418	5.73668	8.57	0.9888	0.3415	5.73009		
10	17.11	0.9557	0.3457	5.65039	17.12	0.9557	0.3454	5.64378	17.12	0.9557	0.3451	5.63720		
15	25.63	0.9016	0.3519	5.49847	25.64	0.9015	0.3516	5.49189	25.65	0.9014	0.3513	5.48533		
20	34.11	0.8280	0.3608	5.29184	34.12	0.8278	0.3605	5.28530	34.14	0.8277	0.3602	5.27879		
25	42.53	0.7369	0.3727	5.03634	42.55	0.7367	0.3724	5.02985	42.57	0.7365	0.3721	5.02338		
30	50.88	0.6310	0.3881	4.73708	50.90	0.6307	0.3878	4.73265	50.92	0.6304	0.3875	4.72625		
35	59.13	0.5131	0.4075	4.40027	59.16	0.5127	0.4072	4.40192	59.18	0.5123	0.4069	4.39560		
40	67.27	0.3864	0.4377	4.05286	67.30	0.3860	0.4374	4.04662	67.33	0.3855	0.4371	4.04039		
45	75.26	0.2544	0.4617	3.68227	75.30	0.2538	0.4614	3.67615	75.33	0.2533	0.4611	3.67004		
50	83.09	0.1203	0.4989	3.30598	83.13	0.1196	0.4986	3.30000	83.17	0.1190	0.4983	3.29404		
55	90.72	-0.0126	0.5449	2.93318	90.76	-0.0133	0.5446	2.92736	90.80	-0.0140	0.5443	2.92156		
60	98.12	-0.1412	0.6021	2.57236	98.16	-0.1419	0.6018	2.56674	98.20	-0.1427	0.6016	2.56114		
65	105.24	-0.2628	0.6736	2.23099	105.29	-0.2636	0.6734	2.22560	105.33	-0.2644	0.6732	2.22022		
70	112.05	-0.3754	0.7633	1.91514	112.10	-0.3762	0.7632	1.91000	112.15	-0.3770	0.7631	1.90488		
75	118.51	-0.4773	0.8763	1.62922	118.56	-0.4781	0.8764	1.62437	118.61	-0.4789	0.8765	1.61953		
80	124.58	-0.5676	1.0191	1.37587	124.64	-0.5684	1.0194	1.37133	124.69	-0.5692	1.0198	1.36681		
85	130.24	-0.6460	1.1992	1.15591	130.29	-0.6467	1.2000	1.15170	130.35	-0.6475	1.2008	1.14751		
90	135.46	-0.7127	1.4257	0.96850	135.52	-0.7134	1.4271	0.96484	135.57	-0.7141	1.4286	0.96078		
95	140.24	-0.7687	1.7082	0.81148	140.29	-0.7693	1.7106	0.80795	140.35	-0.7700	1.7129	0.80444		
100	144.58	-0.8149	2.0566	0.68175	144.64	-0.8155	2.0603	0.67855	144.69	-0.8161	2.0639	0.67537		
105	148.51	-0.8527	2.4798	0.57573	148.56	-0.8532	2.4852	0.57285	148.61	-0.8537	2.4906	0.56998		
110	152.05	-0.8833	2.9845	0.48978	152.10	-0.8838	2.9921	0.48718	152.15	-0.8842	2.9998	0.48460		
115	155.24	-0.9081	3.5741	0.42044	155.29	-0.9084	3.5845	0.41810	155.33	-0.9088	3.5950	0.41577		
120	158.12	-0.9279	4.2473	0.36464	158.16	-0.9282	4.2611	0.36253	158.20	-0.9285	4.2749	0.36043		
125	160.72	-0.9439	4.9975	0.31979	160.76	-0.9442	5.0153	0.31787	160.80	-0.9444	5.0331	0.31596		
130	163.09	-0.9568	5.8126	0.28373	163.13	-0.9570	5.8348	0.28198	163.17	-0.9571	5.8570	0.28028		
135	165.26	-0.9671	6.6745	0.25473	165.30	-0.9673	6.7015	0.25312	165.33	-0.9674	6.7286	0.25152		
140	167.27	-0.9754	7.5603	0.23144	167.30	-0.9755	7.5924	0.22995	167.33	-0.9756	7.6246	0.22847		
145	169.13	-0.9821	8.4429	0.21278	169.16	-0.9821	8.4801	0.21139	169.18	-0.9822	8.5175	0.21001		
150	170.88	-0.9874	9.2925	0.19793	170.90	-0.9874	9.3348	0.19662	170.92	-0.9875	9.3773	0.19531		
155	172.53	-0.9915	10.0785	0.18625	172.55	-0.9916	10.1254	0.18500	172.57	-0.9916	10.1727	0.18376		
160	174.11	-0.9947	10.7725	0.17725	174.12	-0.9947	10.8217	0.17606	174.14	-0.9948	10.8731	0.17487		
165	175.63	-0.9971	11.3411	0.1705										

$\frac{2}{x} = 0.511$
 $\frac{2}{x} = 0.512$
 $\frac{2}{x} = 0.513$

PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S
0	0.00	1.0000	0.3401	5.75477	0.00	1.0000	0.3398	5.74821	0.00	1.0000	0.3395	5.74168
5	8.57	0.9888	0.3412	5.72351	8.58	0.9888	0.3410	5.71696	8.58	0.9888	0.3407	5.71043
10	17.13	0.9556	0.3449	5.63064	17.14	0.9556	0.3446	5.62411	17.14	0.9556	0.3443	5.61760
15	25.66	0.9014	0.3510	5.47880	25.67	0.9013	0.3507	5.47229	25.68	0.9012	0.3505	5.46581
20	34.15	0.8276	0.3599	5.27229	34.17	0.8274	0.3596	5.26582	34.18	0.8273	0.3593	5.25937
25	42.58	0.7363	0.3718	5.01694	42.60	0.7361	0.3716	5.01052	42.62	0.7359	0.3713	5.00412
30	50.94	0.6301	0.3872	4.71987	50.96	0.6298	0.3869	4.71352	50.98	0.6295	0.3866	4.70718
35	59.21	0.5120	0.4066	4.38930	59.23	0.5116	0.4064	4.38302	59.26	0.5112	0.4061	4.37677
40	67.35	0.3850	0.4308	4.03419	67.38	0.3846	0.4306	4.02801	67.41	0.3841	0.4303	4.02185
45	75.36	0.2527	0.4609	3.66396	75.40	0.2521	0.4606	3.65790	75.43	0.2516	0.4603	3.65185
50	83.20	0.1184	0.4980	3.28809	83.24	0.1177	0.4977	3.28217	83.28	0.1171	0.4974	3.27627
55	90.84	-0.0147	0.5441	2.91579	90.88	-0.0154	0.5438	2.91003	90.92	-0.0161	0.5435	2.90429
60	98.25	-0.1435	0.6014	2.55556	98.29	-0.1442	0.6011	2.54999	98.34	-0.1450	0.6009	2.54445
65	105.38	-0.2652	0.6730	2.21486	105.43	-0.2660	0.6729	2.20952	105.48	-0.2668	0.6727	2.20420
70	112.20	-0.3779	0.7631	1.89977	112.25	-0.3787	0.7630	1.89469	112.30	-0.3795	0.7630	1.88962
75	118.67	-0.4797	0.8767	1.61472	118.72	-0.4806	0.8768	1.60992	118.78	-0.4814	0.8769	1.60513
80	124.75	-0.5700	1.0202	1.36230	124.80	-0.5708	1.0206	1.35781	124.86	-0.5716	1.0210	1.35334
85	130.41	-0.6482	1.2016	1.14333	130.46	-0.6490	1.2025	1.13917	130.52	-0.6497	1.2033	1.13502
90	135.63	-0.7148	1.4300	0.95695	135.69	-0.7155	1.4315	0.95312	135.74	-0.7162	1.4330	0.94932
95	140.41	-0.7706	1.7153	0.80094	140.46	-0.7712	1.7177	0.79746	140.52	-0.7719	1.7201	0.79399
100	144.75	-0.8166	2.0676	0.67220	144.80	-0.8172	2.0713	0.66905	144.86	-0.8177	2.0750	0.66591
105	148.67	-0.8542	2.4960	0.56712	148.72	-0.8547	2.5015	0.56428	148.78	-0.8551	2.5069	0.56145
110	152.20	-0.8846	3.0075	0.48203	152.25	-0.8850	3.0152	0.47947	152.30	-0.8854	3.0230	0.47692
115	155.38	-0.9091	3.6055	0.41346	155.43	-0.9094	3.6161	0.41115	155.48	-0.9098	3.6267	0.40886
120	158.25	-0.9288	4.2889	0.35634	158.29	-0.9291	4.3029	0.35625	158.34	-0.9294	4.3170	0.35418
125	160.84	-0.9446	5.0510	0.31406	160.88	-0.9449	5.0690	0.31218	160.92	-0.9451	5.0872	0.31030
130	163.20	-0.9579	5.8795	0.27950	163.24	-0.9575	5.9020	0.27678	163.28	-0.9577	5.9247	0.27507
135	165.36	-0.9675	6.7559	0.24993	165.40	-0.9677	6.7834	0.24695	165.43	-0.9678	6.8110	0.24578
140	167.35	-0.9757	7.6571	0.22700	167.38	-0.9759	7.6897	0.22353	167.41	-0.9760	7.7225	0.22403
145	169.21	-0.9823	8.5552	0.20863	169.23	-0.9824	8.5931	0.20726	169.26	-0.9825	8.6312	0.20591
150	170.94	-0.9875	9.4201	0.19402	170.96	-0.9876	9.4631	0.19273	170.98	-0.9876	9.5064	0.19145
155	172.58	-0.9916	10.2202	0.18253	172.60	-0.9917	10.2681	0.18131	172.62	-0.9917	10.3162	0.18009
160	174.15	-0.9948	10.9249	0.17369	174.17	-0.9948	10.9770	0.17252	174.18	-0.9948	11.0295	0.17135
165	175.66	-0.9971	11.5600	0.16714	175.67	-0.9971	11.5617	0.16601	175.68	-0.9972	11.6177	0.16488
170	177.13	-0.9987	11.9396	0.16264	177.14	-0.9988	11.9979	0.16153	177.14	-0.9988	12.0566	0.16043
175	178.57	-0.9997	12.2073	0.16000	178.58	-0.9997	12.2673	0.15890	178.58	-0.9997	12.3277	0.15782
180	180.00	-1.0000	12.2979	0.15913	180.00	-1.0000	12.3584	0.15804	180.00	-1.0000	12.4193	0.15696

 $\frac{2}{x} = 0.514$
 $\frac{2}{x} = 0.515$
 $\frac{2}{x} = 0.516$

PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S
0	0.00	1.0000	0.3392	5.73517	0.00	1.0000	0.3390	5.72868	0.00	1.0000	0.3387	5.72221
5	8.58	0.9888	0.3404	5.70393	8.59	0.9888	0.3401	5.69745	8.59	0.9888	0.3399	5.69099
10	17.15	0.9555	0.3440	5.61111	17.16	0.9555	0.3438	5.60460	17.17	0.9555	0.3435	5.59819
15	25.69	0.9011	0.3502	5.45934	25.70	0.9010	0.3499	5.45290	25.71	0.9010	0.3496	5.44648
20	34.19	0.8271	0.3591	5.25295	34.21	0.8270	0.3588	5.24654	34.22	0.8269	0.3585	5.24016
25	42.64	0.7357	0.3710	4.99774	42.66	0.7354	0.3707	4.99139	42.67	0.7352	0.3704	4.98505
30	51.01	0.6292	0.3864	4.70087	51.03	0.6289	0.3861	4.69456	51.05	0.6287	0.3858	4.68831
35	59.28	0.5108	0.4058	4.37053	59.31	0.5104	0.4055	4.36432	59.33	0.5101	0.4052	4.35813
40	67.44	0.3836	0.4300	4.01572	67.47	0.3832	0.4297	4.00960	67.50	0.3827	0.4294	4.00350
45	75.46	0.2510	0.4600	3.64583	75.49	0.2505	0.4597	3.63983	75.53	0.2499	0.4594	3.63385
50	83.31	0.1165	0.4971	3.27038	83.35	0.1158	0.4969	3.26452	83.39	0.1152	0.4966	3.25868
55	90.96	-0.0168	0.5433	2.89858	91.00	-0.0175	0.5430	2.89288	91.05	-0.0182	0.5427	2.88720
60	98.38	-0.1458	0.6007	2.53392	98.43	-0.1465	0.6005	2.53342	98.47	-0.1473	0.6002	2.52793
65	105.52	-0.2676	0.6725	2.19890	105.57	-0.2684	0.6724	2.19361	105.62	-0.2692	0.6722	2.18835
70	112.35	-0.3803	0.7629	1.88457	112.40	-0.3811	0.7628	1.87954	112.45	-0.3820	0.7628	1.87453
75	118.83	-0.4822	0.8770	1.60036	118.88	-0.4830	0.8771	1.59561	118.94	-0.4838	0.8772	1.59088
80	124.91	-0.5723	1.0214	1.34888	124.97	-0.5731	1.0218	1.34444	125.03	-0.5739	1.0222	1.34001
85	130.58	-0.6505	1.2041	1.13089	130.64	-0.6512	1.2050	1.12678	130.69	-0.6520	1.2058	1.12268
90	135.80	-0.7169	1.4344	0.94552	135.86	-0.7176	1.4359	0.94175	135.92	-0.7183	1.4374	0.93798
95	140.58	-0.7725	1.7225	0.79054	140.64	-0.7731	1.7250	0.78710	140.69	-0.7738	1.7274	0.78367
100	144.91	-0.8183	2.0787	0.66278	144.97	-0.8188	2.0825	0.65967	145.03	-0.8194	2.0862	0.65657
105	148.83	-0.8556	2.5124	0.55863	148.88	-0.8561	2.5179	0.55593	148.94	-0.8566	2.5235	0.55304
110	152.35	-0.8858	3.0308	0.47439	152.40	-0.8862	3.0386	0.47186	152.45	-0.8866	3.0464	0.46935
115	155.52	-0.9101	3.6374	0.40657	155.57	-0.9105	3.6481	0.40430	155.62	-0.9108	3.6589	0.40204
120	158.38	-0.9297	4.3311	0.35212	158.43	-0.9299	4.3454	0.35008	158.47	-0.9302	4.3597	0.34804
125	160.96	-0.9453	5.1054	0.30843	161.00	-0.9455	5.1237	0.30658	161.05	-0.9458	5.1421	0.30473
130	163.31	-0.9579	5.9475	0.27337	163.35	-0.9581	5.9704	0.27167	163.39	-0.9583	5.9935	0.26999
135	165.46	-0.9680	6.8388	0.24522	165.49	-0.9681	6.8668	0.24366	165.53	-0.9683	6.8949	0.24212
140	167.44	-0.9761	7.7556	0.22263	167.47	-0.9762	7.7888	0.22119	167.50	-0.9763	7.8223	0.21976
145	169.28	-0.9826	8.6696	0.20456	169.31	-0.9826	8.7082	0.20321	169.33	-0.9827	8.7470	0.20188
150	171.01	-0.9877	9.5500	0.19018	171.03	-0.9878	9.5938	0.18892	171.05	-0.9878	9.6379	0.18766
155	172.64	-0.9918	10.3646	0.17888	172.66	-0.9918	10.4134	0.17768	172.67	-0.9918	10.4624	0.17649
160	174.19	-0.9949	11.0823	0.17019	174.21	-0.9949	11.4594	0.16904	174.22	-0.9949	11.8888	0.16790
165	175.69	-0.9972	11.6741	0.16376	175.70	-0.9972	11.7306	0.16265	175.71	-0.9972	11.7879	0.16154
170	177.15	-0.9988	12.1157	0.15933	177.16	-0.9988	12.1751	0.15824	177.17	-0.9988	12.2349	0.15716
175	178.58	-0.9997	12.3884	0.15674	178.59	-0.9997	12.4495	0.15566	178.59	-0.9997	12.5110	0.15460
180	180.00	-1.0000	12.4806	0.15588	180.00	-1.0000	12.5423	0.15482	180.00	-1.0000	12.6044	0.15375

x = 0.517					x = 0.518					x = 0.519				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3384	5.71577	0.00	1.0000	0.3381	5.70935	0.00	1.0000	0.3379	5.70295		
5	8.59	0.9888	0.3396	5.68455	8.60	0.9888	0.3393	5.67813	8.60	0.9888	0.3390	5.67174		
10	17.17	0.9554	0.3432	5.59177	17.18	0.9554	0.3429	5.58537	17.19	0.9553	0.3427	5.57899		
15	25.73	0.9009	0.3493	5.44008	25.74	0.9008	0.3491	5.43371	25.75	0.9007	0.3488	5.42736		
20	34.24	0.8267	0.3582	5.23300	34.25	0.8266	0.3579	5.22746	34.26	0.8264	0.3577	5.22114		
25	42.69	0.7350	0.3701	4.97874	42.71	0.7348	0.3698	4.97245	42.73	0.7346	0.3696	4.96618		
30	51.07	0.6284	0.3855	4.68206	51.09	0.6281	0.3852	4.67583	51.11	0.6278	0.3849	4.66963		
35	59.36	0.5097	0.4049	4.35196	59.38	0.5093	0.4046	4.34581	59.41	0.5089	0.4043	4.33968		
40	67.53	0.3822	0.4291	3.99743	67.56	0.3818	0.4288	3.99137	67.59	0.3813	0.4285	3.98534		
45	75.56	0.2494	0.4591	3.62789	75.59	0.2488	0.4588	3.62195	75.62	0.2483	0.4585	3.61603		
50	83.42	0.1145	0.4963	3.25286	83.46	0.1139	0.4960	3.24705	83.50	0.1133	0.4957	3.24127		
55	91.09	-0.0189	0.5425	2.88154	91.13	-0.0196	0.5422	2.87590	91.17	-0.0204	0.5419	2.87027		
60	98.51	-0.1480	0.6000	2.52246	98.56	-0.1488	0.5998	2.51701	98.60	-0.1496	0.5995	2.51158		
65	105.67	-0.2700	0.6720	2.18310	105.71	-0.2708	0.6719	2.17787	105.76	-0.2716	0.6717	2.17255		
70	112.51	-0.3828	0.7627	1.86953	112.56	-0.3836	0.7627	1.86455	112.61	-0.3844	0.7626	1.85958		
75	118.99	-0.4846	0.8773	1.58616	119.04	-0.4855	0.8775	1.58146	119.10	-0.4863	0.8776	1.57678		
80	125.08	-0.5747	1.0226	1.33560	125.14	-0.5755	1.0230	1.33120	125.19	-0.5763	1.0234	1.32682		
85	130.75	-0.6527	1.2066	1.11859	130.81	-0.6535	1.2075	1.11452	130.86	-0.6543	1.2083	1.11047		
90	135.97	-0.7190	1.4389	0.93423	136.03	-0.7197	1.4404	0.93050	136.09	-0.7204	1.4419	0.92678		
95	140.75	-0.7744	1.7298	0.78026	140.81	-0.7750	1.7323	0.77686	140.86	-0.7756	1.7347	0.77348		
100	145.08	-0.8200	2.0900	0.65349	145.14	-0.8205	2.0938	0.65041	145.19	-0.8211	2.0976	0.64735		
105	148.99	-0.8571	2.5290	0.55026	149.04	-0.8576	2.5346	0.54749	149.10	-0.8580	2.5402	0.54473		
110	152.51	-0.8871	3.0544	0.46685	152.56	-0.8875	3.0623	0.46437	152.61	-0.8879	3.0703	0.46189		
115	155.67	-0.9112	3.6697	0.39980	155.71	-0.9115	3.6806	0.39756	155.76	-0.9118	3.6916	0.39533		
120	158.51	-0.9305	4.3741	0.34601	158.56	-0.9308	4.3885	0.34399	158.60	-0.9311	4.4031	0.34199		
125	161.09	-0.9460	5.1607	0.30289	161.13	-0.9462	5.1793	0.30107	161.17	-0.9465	5.1980	0.29925		
130	163.42	-0.9584	6.0167	0.26832	163.46	-0.9586	6.0400	0.26665	163.50	-0.9588	6.0635	0.26500		
135	165.56	-0.9684	6.9232	0.24058	165.59	-0.9685	6.9516	0.23905	165.62	-0.9687	6.9803	0.23753		
140	167.53	-0.9764	7.8559	0.21834	167.56	-0.9765	7.8897	0.21693	167.59	-0.9766	7.9238	0.21552		
145	169.36	-0.9828	8.7861	0.20055	169.38	-0.9829	8.8254	0.19923	169.41	-0.9830	8.8650	0.19792		
150	171.07	-0.9879	9.6823	0.18641	171.09	-0.9879	9.7270	0.18517	171.11	-0.9880	9.7720	0.18394		
155	172.69	-0.9919	10.5118	0.17530	172.71	-0.9919	10.5615	0.17413	172.73	-0.9920	10.6115	0.17295		
160	174.24	-0.9949	11.2426	0.16676	174.25	-0.9950	11.2967	0.16563	174.26	-0.9950	11.3512	0.16451		
165	175.73	-0.9972	11.8454	0.16044	175.74	-0.9972	11.9032	0.15934	175.75	-0.9972	11.9614	0.15826		
170	177.17	-0.9988	12.2951	0.15609	177.18	-0.9988	12.3558	0.15502	177.19	-0.9988	12.4167	0.15396		
175	178.59	-0.9997	12.5730	0.15354	178.60	-0.9997	12.6353	0.15249	178.60	-0.9997	12.6980	0.15144		
180	180.00	-1.0000	12.6669	0.15270	180.00	-1.0000	12.7298	0.15165	180.00	-1.0000	12.7931	0.15061		

x = 0.520					x = 0.521					x = 0.522				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3376	5.69658	0.00	1.0000	0.3373	5.69022	0.00	1.0000	0.3370	5.68389		
5	8.60	0.9887	0.3388	5.66537	8.61	0.9887	0.3385	5.65902	8.61	0.9887	0.3382	5.65269		
10	17.19	0.9553	0.3424	5.57254	17.20	0.9553	0.3421	5.56630	17.21	0.9552	0.3418	5.55999		
15	25.76	0.9006	0.3485	5.42103	25.77	0.9006	0.3482	5.41472	25.78	0.9005	0.3480	5.40843		
20	34.28	0.8263	0.3574	5.21485	34.29	0.8262	0.3571	5.20858	34.31	0.8260	0.3568	5.20232		
25	42.74	0.7344	0.3693	4.95994	42.76	0.7342	0.3690	4.95371	42.78	0.7340	0.3687	4.94751		
30	51.13	0.6275	0.3846	4.66344	51.16	0.6272	0.3844	4.65728	51.18	0.6269	0.3841	4.65113		
35	59.43	0.5086	0.4040	4.33357	59.46	0.5082	0.4037	4.32748	59.48	0.5078	0.4034	4.32142		
40	67.61	0.3808	0.4282	3.97932	67.64	0.3804	0.4279	3.97333	67.67	0.3799	0.4276	3.96736		
45	75.66	0.2477	0.4582	3.61013	75.69	0.2472	0.4579	3.60425	75.72	0.2466	0.4577	3.59839		
50	83.53	0.1126	0.4955	3.23551	83.57	0.1120	0.4952	3.22976	83.60	0.1114	0.4949	3.22404		
55	91.21	-0.0211	0.5417	2.86467	91.25	-0.0218	0.5414	2.85909	91.29	-0.0225	0.5411	2.85352		
60	98.65	-0.1503	0.5993	2.50616	98.69	-0.1511	0.5991	2.50077	98.73	-0.1518	0.5988	2.49539		
65	105.81	-0.2724	0.6715	2.16746	105.86	-0.2732	0.6714	2.16228	105.90	-0.2740	0.6712	2.15712		
70	112.66	-0.3852	0.7625	1.85464	112.71	-0.3860	0.7625	1.84971	112.76	-0.3869	0.7624	1.84479		
75	119.15	-0.4871	0.8777	1.57211	119.20	-0.4879	0.8778	1.56746	119.26	-0.4887	0.8779	1.56282		
80	125.25	-0.5771	1.0238	1.32246	125.30	-0.5779	1.0242	1.31811	125.36	-0.5787	1.0246	1.31378		
85	130.92	-0.6550	1.2091	1.10643	130.98	-0.6558	1.2100	1.10240	131.03	-0.6565	1.2108	1.09839		
90	136.15	-0.7211	1.4434	0.92308	136.20	-0.7218	1.4449	0.91938	136.26	-0.7225	1.4464	0.91571		
95	140.92	-0.7763	1.7372	0.77011	140.98	-0.7769	1.7397	0.76675	141.03	-0.7775	1.7421	0.76341		
100	145.25	-0.8216	2.1014	0.64431	145.30	-0.8222	2.1052	0.64127	145.36	-0.8227	2.1090	0.63825		
105	149.15	-0.8585	2.5459	0.54199	149.20	-0.8590	2.5515	0.53926	149.26	-0.8595	2.5572	0.53654		
110	152.66	-0.8883	3.0783	0.45943	152.71	-0.8887	3.0863	0.45697	152.76	-0.8891	3.0944	0.45453		
115	155.81	-0.9122	3.7026	0.39312	155.86	-0.9125	3.7136	0.39092	155.90	-0.9129	3.7247	0.38872		
120	158.65	-0.9313	4.4177	0.33999	158.69	-0.9316	4.4324	0.33800	158.73	-0.9319	4.4472	0.33603		
125	161.21	-0.9467	5.2169	0.29744	161.25	-0.9469	5.2358	0.29564	161.29	-0.9471	5.2549	0.29385		
130	163.53	-0.9590	6.0871	0.26335	163.57	-0.9592	6.1108	0.26171	163.60	-0.9593	6.1347	0.26008		
135	165.66	-0.9688	7.0091	0.23602	165.69	-0.9690	7.0380	0.23452	165.72	-0.9691	7.0672	0.23303		
140	167.61	-0.9767	7.9580	0.21412	167.64	-0.9768	7.9925	0.21274	167.67	-0.9769	8.0272	0.21136		
145	169.43	-0.9830	8.9048	0.19662	169.46	-0.9831	8.9449	0.19533	169.48	-0.9832	8.9852	0.19404		
150	171.13	-0.9881	9.8172	0.18271	171.16	-0.9881	9.8627	0.18149	171.18	-0.9882	9.9085	0.18028		
155	172.74	-0.9920	10.6618	0.17179	172.76	-0.9920	10.7124	0.17063	172.78	-0.9921	10.7634	0.16948		
160	174.28	-0.9950	11.4060	0.16339	174.29	-0.9950	11.4612	0.16228	174.31					

$z = 0.523$
 $z = 0.524$
 $z = 0.525$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3368	5.67758	0.00	1.0000	0.3365	5.67129	0.00	1.0000	0.3362	5.66502
5	8.61	0.9887	0.3380	5.64639	8.62	0.9887	0.3377	5.64010	8.62	0.9887	0.3374	5.63384
10	17.21	0.9552	0.3416	5.55370	17.22	0.9552	0.3413	5.54743	17.23	0.9551	0.3410	5.54118
15	25.79	0.9004	0.3477	5.40216	25.80	0.9003	0.3474	5.39592	25.81	0.9003	0.3471	5.38969
20	34.32	0.8259	0.3565	5.19009	34.33	0.8258	0.3563	5.18988	34.35	0.8256	0.3560	5.18370
25	42.80	0.7338	0.3684	4.94133	42.81	0.7336	0.3682	4.93516	42.83	0.7334	0.3679	4.92902
30	51.20	0.6266	0.3838	4.64501	51.22	0.6263	0.3835	4.63891	51.24	0.6261	0.3832	4.63283
35	59.51	0.5074	0.4032	4.31537	59.53	0.5071	0.4029	4.30935	59.56	0.5067	0.4026	4.30334
40	67.70	0.3794	0.4273	3.95140	67.73	0.3790	0.4271	3.94547	67.76	0.3785	0.4268	3.94956
45	75.76	0.2461	0.4574	3.59255	75.79	0.2455	0.4571	3.58673	75.82	0.2450	0.4568	3.58092
50	83.64	0.1108	0.4946	3.21833	83.68	0.1101	0.4943	3.21264	83.71	0.1095	0.4941	3.20697
55	91.33	-0.0232	0.5409	2.84797	91.37	-0.0239	0.5406	2.84244	91.41	-0.0246	0.5404	2.83693
60	98.78	-0.1526	0.5986	2.49003	98.82	-0.1534	0.5984	2.48468	98.87	-0.1541	0.5982	2.47936
65	105.95	-0.2748	0.6711	2.15197	106.00	-0.2756	0.6709	2.14685	106.05	-0.2764	0.6707	2.14174
70	112.81	-0.3877	0.7624	1.83990	112.86	-0.3885	0.7623	1.83502	112.91	-0.3893	0.7623	1.83015
75	119.31	-0.4895	0.8781	1.55820	119.36	-0.4904	0.8782	1.55360	119.42	-0.4912	0.8783	1.54901
80	125.41	-0.5795	1.0250	1.30946	125.47	-0.5803	1.0254	1.30516	125.53	-0.5811	1.0258	1.30087
85	131.09	-0.6572	1.2117	1.09440	131.15	-0.6580	1.2125	1.09042	131.20	-0.6587	1.2134	1.08645
90	136.32	-0.7232	1.4479	0.91704	136.38	-0.7239	1.4494	0.90840	136.43	-0.7246	1.4510	0.90476
95	141.03	-0.7781	1.7446	0.76008	141.15	-0.7788	1.7471	0.75676	141.20	-0.7794	1.7496	0.75346
100	145.41	-0.8233	2.1129	0.63524	145.47	-0.8238	2.1168	0.63225	145.53	-0.8244	2.1207	0.62926
105	149.31	-0.8599	2.5629	0.53384	149.36	-0.8604	2.5687	0.53114	149.42	-0.8609	2.5744	0.52846
110	152.81	-0.8895	3.1026	0.45210	152.86	-0.8899	3.1107	0.44969	152.91	-0.8903	3.1190	0.44728
115	155.95	-0.9132	3.7359	0.38654	156.00	-0.9135	3.7471	0.38437	156.05	-0.9139	3.7584	0.38221
120	158.78	-0.9322	4.4620	0.33406	158.82	-0.9325	4.4770	0.33211	158.87	-0.9327	4.4920	0.33016
125	161.33	-0.9474	5.2740	0.29208	161.37	-0.9476	5.2933	0.29031	161.41	-0.9478	5.3127	0.28855
130	163.64	-0.9595	6.1587	0.25847	163.68	-0.9597	6.1829	0.25686	163.71	-0.9599	6.2072	0.25525
135	165.76	-0.9693	7.0965	0.23154	165.79	-0.9694	7.1260	0.23007	165.82	-0.9695	7.1556	0.22860
140	167.70	-0.9770	8.0621	0.20998	167.73	-0.9772	8.0972	0.20862	167.76	-0.9773	8.1325	0.20726
145	169.51	-0.9833	9.0257	0.19276	169.53	-0.9834	9.0665	0.19149	169.56	-0.9834	9.1076	0.19022
150	171.20	-0.9882	9.9546	0.17908	171.22	-0.9883	10.0010	0.17788	171.24	-0.9883	10.0477	0.17669
155	172.80	-0.9921	10.8147	0.16834	172.81	-0.9921	10.0663	0.16721	172.83	-0.9922	10.1182	0.16608
160	174.32	-0.9951	11.5727	0.16009	174.33	-0.9951	11.6289	0.15900	174.35	-0.9951	11.6855	0.15792
165	175.70	-0.9973	12.2390	0.15398	175.73	-0.9973	12.1561	0.15293	175.81	-0.9973	12.3186	0.15188
170	177.21	-0.9988	12.6647	0.14978	177.22	-0.9988	12.7277	0.14875	177.23	-0.9988	12.7911	0.14773
175	178.61	-0.9997	12.9530	0.14732	178.62	-0.9997	13.0178	0.14631	178.62	-0.9997	13.0830	0.14530
180	180.00	-1.0000	13.0505	0.14651	180.00	-1.0000	13.1159	0.14550	180.00	-1.0000	13.1818	0.14450

 $z = 0.526$
 $z = 0.527$
 $z = 0.528$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3360	5.65878	0.00	1.0000	0.3357	5.65255	0.00	1.0000	0.3354	5.64635
5	8.62	0.9887	0.3371	5.62760	8.63	0.9887	0.3369	5.62138	8.63	0.9887	0.3366	5.61518
10	17.24	0.9551	0.3407	5.53495	17.24	0.9551	0.3405	5.52875	17.25	0.9550	0.3402	5.52256
15	25.82	0.9002	0.3469	5.38349	25.83	0.9001	0.3466	5.37731	25.84	0.9000	0.3463	5.37115
20	34.36	0.8255	0.3567	5.17753	34.38	0.8253	0.3554	5.17138	34.39	0.8252	0.3552	5.16526
25	42.85	0.7331	0.3676	4.92290	42.87	0.7329	0.3673	4.91680	42.88	0.7327	0.3670	4.91072
30	51.26	0.6258	0.3829	4.62677	51.28	0.6255	0.3826	4.62073	51.30	0.6252	0.3824	4.61471
35	59.58	0.5063	0.4023	4.29735	59.61	0.5059	0.4020	4.29139	59.63	0.5056	0.4017	4.28544
40	67.79	0.3780	0.4265	3.94366	67.82	0.3776	0.4262	3.93779	67.84	0.3771	0.4259	3.93193
45	75.85	0.2444	0.4565	3.57514	75.89	0.2439	0.4562	3.56938	75.92	0.2433	0.4559	3.56363
50	83.75	0.1089	0.4938	3.20132	83.79	0.1082	0.4935	3.19569	83.82	0.1076	0.4932	3.19008
55	91.45	-0.0253	0.5401	2.83144	91.49	-0.0260	0.5398	2.82597	91.53	-0.0267	0.5396	2.82051
60	98.91	-0.1549	0.5979	2.47405	98.95	-0.1556	0.5977	2.46876	99.00	-0.1564	0.5975	2.46349
65	106.09	-0.2772	0.6702	2.13664	106.14	-0.2780	0.6704	2.13157	106.19	-0.2788	0.6702	2.12651
70	112.96	-0.3901	0.7622	1.82530	113.01	-0.3909	0.7621	1.82047	113.06	-0.3918	0.7621	1.81566
75	119.47	-0.4920	0.8784	1.54444	119.52	-0.4928	0.8785	1.53988	119.58	-0.4936	0.8787	1.53534
80	125.58	-0.5819	1.0262	1.29560	125.64	-0.5826	1.0266	1.29234	125.69	-0.5834	1.0270	1.28810
85	131.26	-0.6595	1.2142	1.08250	131.32	-0.6602	1.2151	1.07856	131.38	-0.6610	1.2159	1.07464
90	136.49	-0.7253	1.4525	0.90114	136.55	-0.7259	1.4540	0.89753	136.61	-0.7266	1.4556	0.89394
95	141.26	-0.7800	1.7521	0.75016	141.32	-0.7806	1.7547	0.74689	141.38	-0.7812	1.7572	0.74362
100	145.58	-0.8249	2.1246	0.62629	145.64	-0.8255	2.1285	0.62334	145.69	-0.8260	2.1324	0.62039
105	149.47	-0.8614	2.5802	0.52579	149.52	-0.8618	2.5860	0.52313	149.58	-0.8623	2.5919	0.52049
110	152.96	-0.8907	3.1272	0.44489	153.01	-0.8911	3.1355	0.44250	153.06	-0.8915	3.1438	0.44013
115	156.09	-0.9142	3.7698	0.38006	156.14	-0.9146	3.7812	0.37792	156.19	-0.9149	3.7926	0.37579
120	158.91	-0.9330	4.5071	0.32823	158.95	-0.9333	4.5223	0.32630	159.00	-0.9336	4.5375	0.32433
125	161.45	-0.9480	5.3322	0.28680	161.49	-0.9483	5.3518	0.28506	161.53	-0.9485	5.3715	0.28339
130	163.75	-0.9601	6.2316	0.25366	163.79	-0.9602	6.2562	0.25208	163.82	-0.9604	6.2809	0.25050
135	165.85	-0.9697	7.1855	0.22714	165.89	-0.9698	7.2155	0.22569	165.92	-0.9699	7.2457	0.22424
140	167.79	-0.9774	8.1680	0.20591	167.82	-0.9775	8.2038	0.20457	167.84	-0.9776	8.2398	0.20324
145	169.58	-0.9835	9.1489	0.18897	169.61	-0.9836	9.1905	0.18772	169.63	-0.9837	9.2324	0.18647
150	171.26	-0.9884	10.0947	0.17551	171.28	-0.9884	10.1419	0.17434	171.30	-0.9885	10.1895	0.17317
155	172.85	-0.9922	10.9705	0.16495	172.87	-0.9923	11.0231	0.16384	172.88	-0.9923	11.0761	0.16273
160	174.36	-0.9952	11.7425	0.15684	174.38	-0.9952	11.7999	0.15577	174.39	-0.9952	11.8576	0.15547
165	175.82	-0.9973	12.3795	0.15094	175.83	-0.9974	12.4408	0.14961	175.84	-0.9974	12.5025	0.14878
170	177.24	-0.9988	12.8550	0.14671	177.24	-0.9988	12.9192	0.14570	177.25	-0.9988	12.9839	0.14470
175	178.62	-0.9997	13.1487	0.14430	178.63	-0.9997	13.2148	0.14330	178.63	-0.9997	13.2813	0.14232
180	180.00	-1.0000	13.2480	0.14350	180.00	-1.0000	13.3147	0.14251	180.00	-1.0000	13.3819	0.14153

2 x = 0.529					2 x = 0.530					2 x = 0.531				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.3352	5.64017	0.00	1.0000	0.3349	5.63400	0.00	1.0000	0.3346	5.62786	0.00	1.0000
5	8.63	0.9887	0.3363	5.60900	8.64	0.9887	0.3361	5.60284	8.64	0.9886	0.3358	5.59671	8.65	0.9886
10	17.26	0.9550	0.3399	5.51640	17.26	0.9550	0.3397	5.51025	17.27	0.9549	0.3394	5.50413	17.29	0.9548
15	25.85	0.8999	0.3461	5.36501	25.86	0.8999	0.3458	5.35889	25.87	0.8998	0.3455	5.35279	25.90	0.8997
20	34.40	0.8251	0.3549	5.15915	34.42	0.8249	0.3546	5.15307	34.43	0.8248	0.3543	5.14700	34.47	0.8246
25	42.90	0.7325	0.3668	4.90466	42.92	0.7323	0.3665	4.89862	42.94	0.7321	0.3662	4.89261	42.98	0.7319
30	51.33	0.6249	0.3821	4.60871	51.35	0.6246	0.3818	4.60273	51.37	0.6243	0.3815	4.59677	51.42	0.6240
35	59.66	0.5052	0.4014	4.27952	59.68	0.5048	0.4012	4.27361	59.71	0.5044	0.4009	4.26772	59.77	0.5041
40	67.87	0.3767	0.4256	3.92610	67.90	0.3762	0.4253	3.92028	67.93	0.3757	0.4251	3.91449	67.98	0.3754
45	75.95	0.2428	0.4557	3.55791	75.98	0.2422	0.4554	3.55220	76.02	0.2417	0.4551	3.54651	76.08	0.2414
50	83.86	0.1070	0.4929	3.18448	83.90	0.1063	0.4927	3.17891	83.93	0.1057	0.4924	3.17335	84.00	0.1053
55	91.57	-0.0274	0.5393	2.81507	91.61	-0.0281	0.5391	2.80965	91.65	-0.0288	0.5388	2.80425	91.73	-0.0295
60	99.04	-0.1571	0.5973	2.45823	99.09	-0.1579	0.5970	2.45300	99.13	-0.1587	0.5968	2.44777	99.20	-0.1594
65	106.24	-0.2796	0.6701	2.12147	106.28	-0.2804	0.6699	2.11644	106.33	-0.2812	0.6697	2.11143	106.40	-0.2820
70	113.11	-0.3926	0.7620	1.81086	113.17	-0.3934	0.7620	1.80607	113.22	-0.3942	0.7619	1.80131	113.30	-0.3950
75	119.63	-0.4944	0.8788	1.53081	119.68	-0.4952	0.8789	1.52630	119.74	-0.4960	0.8790	1.52180	119.82	-0.4968
80	125.75	-0.5842	1.0275	1.28387	125.80	-0.5850	1.0279	1.27966	125.86	-0.5858	1.0283	1.27546	125.94	-0.5866
85	131.43	-0.6617	1.2168	1.07073	131.49	-0.6625	1.2177	1.06683	131.55	-0.6632	1.2185	1.06295	131.63	-0.6640
90	136.66	-0.7273	1.4571	0.89036	136.72	-0.7280	1.4586	0.88679	136.78	-0.7287	1.4602	0.88324	136.86	-0.7294
95	141.43	-0.7819	1.7597	0.74037	141.49	-0.7825	1.7623	0.73713	141.55	-0.7831	1.7649	0.73391	141.63	-0.7838
100	145.75	-0.8266	2.1364	0.61746	145.80	-0.8271	2.1404	0.61454	145.86	-0.8277	2.1443	0.61163	145.94	-0.8284
105	149.63	-0.8628	2.5978	0.51785	149.68	-0.8633	2.6036	0.51523	149.74	-0.8637	2.6096	0.51262	149.82	-0.8644
110	153.11	-0.8919	3.1522	0.43777	153.17	-0.8923	3.1606	0.43542	153.22	-0.8927	3.1691	0.43308	153.30	-0.8934
115	156.24	-0.9152	3.8042	0.37367	156.28	-0.9156	3.8158	0.37157	156.33	-0.9159	3.8274	0.36947	156.42	-0.9166
120	159.04	-0.9338	4.5529	0.32248	159.09	-0.9341	4.5683	0.32059	159.13	-0.9344	4.5838	0.31870	159.20	-0.9350
125	161.57	-0.9487	5.3913	0.28160	161.61	-0.9489	5.4113	0.27989	161.65	-0.9491	5.4313	0.27819	161.73	-0.9498
130	163.86	-0.9606	6.3058	0.24894	163.90	-0.9608	6.3309	0.24738	163.93	-0.9609	6.3560	0.24583	164.02	-0.9616
135	165.95	-0.9701	7.2761	0.22281	165.98	-0.9702	7.3067	0.22138	166.02	-0.9704	7.3375	0.21997	166.10	-0.9711
140	167.87	-0.9777	8.2760	0.20192	167.90	-0.9778	8.3124	0.20060	167.93	-0.9779	8.3491	0.19929	168.02	-0.9786
145	169.66	-0.9837	9.2745	0.18524	169.68	-0.9838	9.3169	0.18401	169.71	-0.9839	9.3595	0.18279	169.80	-0.9846
150	171.33	-0.9886	10.2374	0.17201	171.35	-0.9886	10.2856	0.17086	171.37	-0.9887	10.3341	0.16971	171.46	-0.9894
155	172.90	-0.9923	11.1294	0.16163	172.92	-0.9924	11.1830	0.16053	172.94	-0.9924	11.2370	0.15945	173.04	-0.9931
160	174.40	-0.9952	11.9157	0.15366	174.42	-0.9953	11.9742	0.15261	174.43	-0.9953	12.0331	0.15157	174.54	-0.9959
165	175.85	-0.9974	12.5646	0.14776	175.86	-0.9974	12.6271	0.14675	175.87	-0.9974	12.6901	0.14574	176.00	-0.9981
170	177.26	-0.9989	13.0490	0.14371	177.26	-0.9989	13.1146	0.14272	177.27	-0.9989	13.1805	0.14173	177.40	-0.9991
175	178.63	-0.9997	13.3483	0.14133	178.64	-0.9997	13.4157	0.14036	178.64	-0.9997	13.4835	0.13939	178.80	-0.9999
180	180.00	-1.0000	13.4495	0.14055	180.00	-1.0000	13.5175	0.13958	180.00	-1.0000	13.5860	0.13862	180.00	-1.0000

2 x = 0.532					2 x = 0.533					2 x = 0.534				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3344	5.62174	0.00	1.0000	0.3341	5.61564	0.00	1.0000	0.3338	5.60956		
5	8.64	0.9886	0.3355	5.59059	8.65	0.9886	0.3353	5.58449	8.65	0.9886	0.3350	5.57842		
10	17.28	0.9549	0.3391	5.49803	17.28	0.9548	0.3389	5.49195	17.29	0.9548	0.3386	5.48589		
15	25.88	0.8997	0.3452	5.34671	25.89	0.8996	0.3450	5.34065	25.90	0.8995	0.3447	5.33462		
20	34.45	0.8247	0.3541	5.14096	34.46	0.8245	0.3538	5.13493	34.47	0.8244	0.3535	5.12893		
25	42.95	0.7319	0.3659	4.88661	42.97	0.7317	0.3657	4.88063	42.99	0.7315	0.3654	4.87467		
30	51.39	0.6240	0.3812	4.59083	51.41	0.6237	0.3810	4.58491	51.43	0.6235	0.3807	4.57901		
35	59.73	0.5041	0.4006	4.26186	59.76	0.5037	0.4003	4.25601	59.78	0.5033	0.4000	4.25018		
40	67.96	0.3753	0.4248	3.90871	67.99	0.3748	0.4245	3.90295	68.02	0.3743	0.4242	3.89721		
45	76.05	0.2411	0.4548	3.54084	76.08	0.2406	0.4545	3.53519	76.11	0.2400	0.4542	3.52956		
50	83.97	0.1051	0.4921	3.16781	84.00	0.1044	0.4918	3.16229	84.04	0.1038	0.4916	3.15678		
55	91.69	-0.0295	0.5385	2.79886	91.73	-0.0302	0.5383	2.79349	91.77	-0.0309	0.5380	2.78814		
60	99.17	-0.1594	0.5966	2.44257	99.22	-0.1602	0.5964	2.43738	99.26	-0.1609	0.5961	2.43221		
65	106.38	-0.2820	0.6696	2.10644	106.43	-0.2828	0.6694	2.10146	106.47	-0.2836	0.6693	2.09650		
70	113.27	-0.3950	0.7619	1.79656	113.32	-0.3958	0.7618	1.79182	113.37	-0.3966	0.7618	1.78710		
75	119.79	-0.4968	0.8792	1.51732	119.85	-0.4977	0.8793	1.51286	119.90	-0.4985	0.8794	1.50841		
80	125.91	-0.5866	1.0287	1.27128	125.97	-0.5874	1.0291	1.26711	126.03	-0.5881	1.0295	1.26295		
85	131.60	-0.6640	1.2194	1.05909	131.66	-0.6647	1.2203	1.05523	131.72	-0.6654	1.2211	1.05139		
90	136.83	-0.7294	1.4618	0.87970	136.89	-0.7301	1.4633	0.87617	136.95	-0.7308	1.4649	0.87266		
95	141.60	-0.7837	1.7674	0.73070	141.66	-0.7843	1.7700	0.72750	141.72	-0.7850	1.7726	0.72431		
100	145.91	-0.8282	2.1483	0.60873	145.97	-0.8287	2.1524	0.60585	146.03	-0.8293	2.1564	0.60298		
105	149.79	-0.8642	2.6155	0.51002	149.85	-0.8647	2.6215	0.50743	149.90	-0.8651	2.6275	0.50486		
110	153.27	-0.8931	3.1776	0.43075	153.32	-0.8935	3.1861	0.42843	153.37	-0.8939	3.1947	0.42613		
115	156.38	-0.9162	3.8391	0.36738	156.43	-0.9166	3.8509	0.36531	156.47	-0.9169	3.8627	0.36324		
120	159.17	-0.9347	4.5994	0.31683	159.22	-0.9349	4.6151	0.31496	159.26	-0.9352	4.6309	0.31310		
125	161.69	-0.9494	5.4515	0.27649	161.73	-0.9496	5.4718	0.27481	161.77	-0.9498	5.4922	0.27313		
130	163.97	-0.9611	6.3814	0.24429	164.00	-0.9613	6.4068	0.24276	164.04	-0.9615	6.4325	0.24124		
135	166.05	-0.9705	7.3684	0.21856	166.08	-0.9706	7.3996	0.21715	166.11	-0.9708	7.4309	0.21576		
140	167.96	-0.9780	8.3860	0.19799	167.99	-0.9781	8.4231	0.19669	168.02	-0.9782	8.4604	0.19540		
145	169.73	-0.9840	9.4024	0.18158	169.76	-0.9841	9.4456	0.18037	169.78	-0.9841	9.4891	0.17918		
150	171.39	-0.9887	10.3829	0.16857	171.41	-0.9888	10.4321	0.16744	171.43	-0.9888	10.4815	0.16631		
155	172.95	-0.9924	11.2914	0.15837	172.97	-0.9925	11.3461	0.15729	172.99	-0.9925	11.4012	0.15622		
160	174.45	-0.9952	12.0924	0.15053	174.46	-0.9953	12.1520	0.14950	174.47	-0.9953	12.2121	0.14868		
165	175.88	-0.9974	12.7534	0.14474	175.89	-0.9974	12.8172	0.14374	175.90	-0.9974	12.8814	0.14275		
170	177.28	-0.9989	13.2469	0.14075	177.28	-0.9989	13.3138	0.13978	177.29	-0.9989	13.3811	0.13882		
175	178.64	-0.9997	13.5518	0.13842	178.65	-0.9997	13.6206	0.13747	178.65	-0.9997	13.6898	0.13651		
180	180.00	-1.0000	13.6550	0.13766	180.00	-1.0000	13.7244	0.13670	180.00	-1.0000	13.7943	0.13575		

2 x = 0.535					2 x = 0.536					2 x = 0.537				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.3336	5.60350	0.00	1.0000	0.3333	5.59746	0.00	1.0000	0.3330	5.59144	0.00	1.0000
5	8.66	0.9886	0.3348	5.57236	8.66	0.9886	0.3345	5.56633	8.66	0.9886	0.3342	5.56032	8.66	0.9886
10	17.30	0.9548	0.3363	5.47985	17.30	0.9547	0.3381	5.47382	17.31	0.9547	0.3378	5.46782	17.31	0.9547
15	25.91	0.8925	0.3444	5.32860	25.92	0.8994	0.3442	5.32260	25.93	0.8993	0.3439	5.31662	25.93	0.8993
20	34.49	0.8243	0.3533	5.12294	34.50	0.8241	0.3530	5.11698	34.51	0.8240	0.3527	5.11104	34.51	0.8240
25	43.01	0.7313	0.3651	4.86873	43.02	0.7311	0.3648	4.86281	43.04	0.7309	0.3646	4.85691	43.04	0.7309
30	51.45	0.6232	0.3804	4.57313	51.47	0.6223	0.3801	4.56726	51.49	0.6222	0.3799	4.56142	51.49	0.6222
35	59.81	0.5029	0.3998	4.24437	59.83	0.5026	0.3995	4.23858	59.85	0.5022	0.3992	4.23281	59.85	0.5022
40	68.04	0.3739	0.4239	3.89149	68.07	0.3734	0.4236	3.88578	68.10	0.3730	0.4234	3.88010	68.10	0.3730
45	76.14	0.2395	0.4540	3.52394	76.18	0.2389	0.4537	3.51835	76.21	0.2384	0.4534	3.51277	76.21	0.2384
50	84.08	0.1032	0.4913	3.15130	84.11	0.1026	0.4910	3.14583	84.15	0.1019	0.4907	3.14038	84.15	0.1019
55	91.81	-0.0316	0.5378	2.78281	91.85	-0.0323	0.5375	2.77749	91.89	-0.0330	0.5373	2.77220	91.89	-0.0330
60	99.30	-0.1617	0.5953	2.42706	99.35	-0.1624	0.5957	2.42192	99.39	-0.1632	0.5955	2.41680	99.39	-0.1632
65	106.52	-0.2844	0.6691	2.09156	106.57	-0.2852	0.6689	2.08663	106.62	-0.2860	0.6686	2.08172	106.62	-0.2860
70	113.42	-0.3974	0.7617	1.78239	113.47	-0.3983	0.7617	1.77771	113.52	-0.3991	0.7616	1.77303	113.52	-0.3991
75	119.95	-0.4933	0.8735	1.50397	120.01	-0.5001	0.8737	1.49955	120.06	-0.5009	0.8798	1.49514	120.06	-0.5009
80	126.08	-0.5889	1.0300	1.25881	126.14	-0.5897	1.0304	1.25469	126.19	-0.5905	1.0308	1.25057	126.19	-0.5905
85	131.77	-0.6662	1.2220	1.04757	131.83	-0.6669	1.2229	1.04375	131.89	-0.6677	1.2238	1.03996	131.89	-0.6677
90	137.01	-0.7314	1.4665	0.86916	137.06	-0.7321	1.4681	0.86567	137.12	-0.7328	1.4696	0.86220	137.12	-0.7328
95	141.77	-0.7856	1.7752	0.72113	141.83	-0.7862	1.7778	0.71797	141.89	-0.7868	1.7804	0.71482	141.89	-0.7868
100	146.08	-0.8298	2.1604	0.60012	146.14	-0.8304	2.1645	0.59727	146.19	-0.8309	2.1686	0.59443	146.19	-0.8309
105	149.35	-0.8656	2.6335	0.50229	150.01	-0.8661	2.6396	0.49974	150.06	-0.8665	2.6457	0.49720	150.06	-0.8665
110	153.42	-0.8943	3.2033	0.42383	153.47	-0.8947	3.2120	0.42155	153.52	-0.8951	3.2207	0.41927	153.52	-0.8951
115	156.52	-0.9172	3.8746	0.36118	156.57	-0.9175	3.8866	0.35914	156.62	-0.9179	3.8986	0.35710	156.62	-0.9179
120	159.30	-0.9355	4.6468	0.31126	159.35	-0.9357	4.6627	0.30942	159.39	-0.9360	4.6788	0.30759	159.39	-0.9360
125	161.81	-0.9500	5.5127	0.27147	161.85	-0.9502	5.5333	0.26981	161.89	-0.9505	5.5541	0.26816	161.89	-0.9505
130	164.08	-0.9616	6.4583	0.23972	164.11	-0.9618	6.4842	0.23822	164.15	-0.9620	6.5103	0.23672	164.15	-0.9620
135	166.14	-0.9709	7.4624	0.21437	166.18	-0.9710	7.4942	0.21299	166.21	-0.9712	7.5261	0.21162	166.21	-0.9712
140	168.04	-0.9783	8.4980	0.19413	168.07	-0.9784	8.5359	0.19285	168.10	-0.9785	8.5733	0.19159	168.10	-0.9785
145	169.81	-0.9842	9.5328	0.17799	169.83	-0.9843	9.5769	0.17680	169.85	-0.9844	9.6212	0.17562	169.85	-0.9844
150	171.45	-0.9889	10.5313	0.16519	171.47	-0.9889	10.5814	0.16408	171.49	-0.9890	10.6318	0.16297	171.49	-0.9890
155	173.01	-0.9926	11.4566	0.15516	173.02	-0.9926	11.5124	0.15411	173.04	-0.9926	11.5685	0.15306	173.04	-0.9926
160	174.49	-0.9954	12.2725	0.14746	174.50	-0.9954	12.3334	0.14645	174.51	-0.9954	12.3946	0.14545	174.51	-0.9954
165	175.91	-0.9975	13.0460	0.14177	175.92	-0.9975	13.0111	0.14079	175.93	-0.9975	13.0765	0.13982	175.93	-0.9975
170	177.30	-0.9989	13.4488	0.13786	177.30	-0.9989	13.5170	0.13690	177.31	-0.9989	13.5857	0.13596	177.31	-0.9989
175	178.66	-0.9997	13.7595	0.13557	178.66	-0.9997	13.8297	0.13463	178.66	-0.9997	13.9003	0.13369	178.66	-0.9997
180	180.00	-1.0000	13.8646	0.13482	180.00	-1.0000	13.9354	0.13398	180.00	-1.0000	14.0067	0.13295	180.00	-1.0000

2 x = 0.538					2 x = 0.539					2 x = 0.540				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.3328	5.58545	0.00	1.0000	0.3325	5.57947	0.00	1.0000	0.3323	5.57351	0.00	1.0000
5	8.67	0.9886	0.3340	5.55432	8.67	0.9886	0.3337	5.54835	8.67	0.9886	0.3334	5.54239	8.67	0.9886
10	17.32	0.9547	0.3375	5.46184	17.32	0.9546	0.3373	5.45588	17.33	0.9546	0.3370	5.44994	17.33	0.9546
15	25.94	0.8992	0.3436	5.31066	25.95	0.8991	0.3434	5.30473	25.96	0.8991	0.3431	5.29881	25.96	0.8991
20	34.53	0.8238	0.3525	5.10511	34.54	0.8237	0.3522	5.09921	34.56	0.8236	0.3519	5.09332	34.56	0.8236
25	43.06	0.7307	0.3643	4.85103	43.08	0.7305	0.3640	4.84517	43.09	0.7302	0.3637	4.83933	43.09	0.7302
30	51.51	0.6223	0.3796	4.55560	51.54	0.6220	0.3793	4.54979	51.56	0.6217	0.3790	4.54401	51.56	0.6217
35	59.88	0.5018	0.3989	4.22706	59.90	0.5014	0.3986	4.22132	59.93	0.5011	0.3984	4.21561	59.93	0.5011
40	68.13	0.3725	0.4231	3.87444	68.16	0.3720	0.4228	3.86879	68.19	0.3716	0.4225	3.86316	68.19	0.3716
45	76.24	0.2378	0.4531	3.50721	76.27	0.2373	0.4528	3.50167	76.31	0.2367	0.4526	3.49614	76.31	0.2367
50	84.19	0.1013	0.4905	3.13495	84.22	0.1007	0.4902	3.12953	84.26	0.1000	0.4899	3.12413	84.26	0.1000
55	91.93	-0.0337	0.5370	2.76691	91.97	-0.0344	0.5367	2.76165	92.01	-0.0351	0.5365	2.75640	92.01	-0.0351
60	99.44	-0.1639	0.5952	2.41170	99.48	-0.1647	0.5950	2.40661	99.52	-0.1655	0.5948	2.40154	99.52	-0.1655
65	106.66	-0.2868	0.6686	2.07682	106.71	-0.2876	0.6684	2.07194	106.76	-0.2883	0.6683	2.06707	106.76	-0.2883
70	113.57	-0.3999	0.7615	1.76837	113.62	-0.4007	0.7615	1.76373	113.67	-0.4015	0.7614	1.75910	113.67	-0.4015
75	120.11	-0.5017	0.8799	1.49075	120.17	-0.5025	0.8800	1.48638	120.22	-0.5033	0.8802	1.48201	120.22	-0.5033
80	126.25	-0.5913	1.0312	1.24648	126.30	-0.5921	1.0316	1.24239	126.36	-0.5928	1.0321	1.23832	126.36	-0.5928
85	131.94	-0.6684	1.2247	1.03617	132.00	-0.6692	1.2256	1.03240	132.06	-0.6699	1.2264	1.02864	132.06	-0.6699
90	137.18	-0.7335	1.4712	0.85873	137.24	-0.7342	1.4728	0.85529	137.29	-0.7348	1.4744	0.85185	137.29	-0.7348
95	141.94	-0.7874	1.7831	0.71168	142.00	-0.7880	1.7857	0.70855	142.06	-0.7886	1.7883	0.70545	142.06	-0.7886
100	146.25	-0.8315	2.1727	0.59161	146.30	-0.8320	2.1768	0.58880	146.36	-0.8325	2.1809	0.58599	146.36	-0.8325
105	150.11	-0.8670	2.6518	0.49467	150.17	-0.8675	2.6579	0.49215	150.22	-0.8679	2.6641	0.48964	150.22	-0.8679
110	153.57	-0.8955	3.2294	0.41701	153.62	-0.8959	3.2382	0.41475	153.67	-0.8963	3.2471	0.41251	153.67	

2 x = 0.541					2 x = 0.542					2 x = 0.543				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3320	5.56757	0.00	1.0000	0.3317	5.56165	0.00	1.0000	0.3315	5.55575		
5	8.68	0.9886	0.3332	5.53646	8.68	0.9885	0.3329	5.53054	8.68	0.9885	0.3327	5.52464		
10	17.34	0.9546	0.3368	5.44402	17.34	0.9545	0.3365	5.43812	17.35	0.9545	0.3362	5.43223		
15	25.97	0.8990	0.3428	5.29291	25.98	0.8989	0.3426	5.28703	25.99	0.8988	0.3423	5.28117		
20	34.57	0.8234	0.3516	5.08745	34.58	0.8233	0.3514	5.08161	34.60	0.8232	0.3511	5.07578		
25	43.11	0.7300	0.3635	4.83351	43.13	0.7296	0.3632	4.82770	43.14	0.7296	0.3629	4.82192		
30	51.58	0.6215	0.3788	4.53824	51.60	0.6212	0.3785	4.53249	51.62	0.6209	0.3782	4.52677		
35	59.95	0.5007	0.3981	4.20991	59.98	0.5003	0.3978	4.20423	60.00	0.5000	0.3975	4.19857		
40	68.22	0.3711	0.4222	3.85755	68.24	0.3707	0.4220	3.85196	68.27	0.3702	0.4217	3.84638		
45	76.34	0.2362	0.4523	3.49064	76.37	0.2356	0.4520	3.48515	76.40	0.2351	0.4517	3.47968		
50	84.29	0.0994	0.4896	3.11875	84.33	0.0988	0.4894	3.11339	84.37	0.0982	0.4891	3.10804		
55	92.05	-0.0358	0.5362	2.75117	92.09	-0.0365	0.5360	2.74596	92.13	-0.0372	0.5357	2.74076		
60	99.57	-0.1662	0.5946	2.39649	99.61	-0.1670	0.5944	2.39145	99.65	-0.1677	0.5941	2.38643		
65	106.81	-0.2891	0.6681	2.06223	106.85	-0.2899	0.6680	2.05739	106.90	-0.2907	0.6678	2.05257		
70	113.72	-0.4023	0.7614	1.75449	113.77	-0.4031	0.7613	1.74989	113.82	-0.4039	0.7613	1.74530		
75	120.27	-0.5041	0.8803	1.47766	120.33	-0.5049	0.8804	1.47333	120.38	-0.5057	0.8806	1.46901		
80	126.42	-0.5936	1.0325	1.23427	126.47	-0.5944	1.0329	1.23022	126.53	-0.5952	1.0333	1.22619		
85	132.12	-0.6706	1.2273	1.02490	132.17	-0.6714	1.2282	1.02116	132.23	-0.6721	1.2291	1.01744		
90	137.35	-0.7355	1.4760	0.84843	137.41	-0.7362	1.4776	0.84502	137.47	-0.7369	1.4793	0.84162		
95	142.12	-0.7893	1.7910	0.70234	142.17	-0.7899	1.7937	0.69926	142.23	-0.7905	1.7963	0.69618		
100	146.42	-0.8331	2.1851	0.58320	146.47	-0.8336	2.1893	0.58043	146.53	-0.8341	2.1935	0.57766		
105	150.27	-0.8684	2.6703	0.48714	150.33	-0.8689	2.6765	0.48465	150.38	-0.8693	2.6828	0.48218		
110	153.72	-0.8967	3.2559	0.41028	153.77	-0.8971	3.2649	0.40806	153.82	-0.8974	3.2738	0.40585		
115	156.81	-0.9192	3.9473	0.34905	156.85	-0.9195	3.9596	0.34707	156.90	-0.9198	3.9720	0.34509		
120	159.57	-0.9371	4.7439	0.30037	159.61	-0.9373	4.7604	0.29859	159.65	-0.9376	4.7770	0.29681		
125	162.05	-0.9513	5.6384	0.26165	162.09	-0.9515	5.6598	0.26004	162.13	-0.9518	5.6813	0.25844		
130	164.29	-0.9627	6.6163	0.23081	164.33	-0.9628	6.6432	0.22935	164.37	-0.9630	6.6702	0.22790		
135	166.34	-0.9717	7.6558	0.20622	166.37	-0.9718	7.6887	0.20489	166.40	-0.9720	7.7219	0.20356		
140	168.22	-0.9789	8.7286	0.18660	168.24	-0.9790	8.7679	0.18537	168.27	-0.9791	8.8075	0.18415		
145	169.95	-0.9847	9.8013	0.17098	169.98	-0.9847	9.8471	0.16984	170.00	-0.9848	9.8932	0.16871		
150	171.58	-0.9892	10.8369	0.15861	171.60	-0.9893	10.8890	0.15754	171.62	-0.9893	10.9415	0.15647		
155	173.11	-0.9928	11.7969	0.14893	173.13	-0.9928	11.8550	0.14791	173.14	-0.9929	11.9134	0.14690		
160	174.57	-0.9955	12.6438	0.14149	174.58	-0.9955	12.7071	0.14052	174.60	-0.9956	12.7708	0.13955		
165	175.97	-0.9975	13.3429	0.13600	175.98	-0.9975	13.4106	0.13506	175.99	-0.9976	13.4788	0.13842		
170	177.34	-0.9989	13.8650	0.13222	177.34	-0.9989	13.9360	0.13131	177.35	-0.9989	14.0075	0.13039		
175	178.68	-0.9997	14.1876	0.13002	178.68	-0.9997	14.2607	0.12911	178.68	-0.9997	14.3342	0.12821		
180	180.00	-1.0000	14.2968	0.12929	180.00	-1.0000	14.3705	0.12839	180.00	-1.0000	14.4447	0.12749		

2 x = 0.544					2 x = 0.545					2 x = 0.546				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3312	5.54987	0.00	1.0000	0.3310	5.54400	0.00	1.0000	0.3307	5.53816		
5	8.69	0.9885	0.3324	5.51877	8.69	0.9885	0.3321	5.51291	8.69	0.9885	0.3319	5.50707		
10	17.36	0.9545	0.3360	5.42637	17.37	0.9544	0.3357	5.42053	17.37	0.9544	0.3355	5.41470		
15	26.01	0.8988	0.3421	5.27533	26.02	0.8987	0.3418	5.26951	26.03	0.8986	0.3415	5.26370		
20	34.61	0.8230	0.3508	5.06997	34.63	0.8229	0.3506	5.06418	34.64	0.8228	0.3503	5.05841		
25	43.16	0.7294	0.3627	4.81615	43.18	0.7292	0.3624	4.81041	43.20	0.7290	0.3621	4.80468		
30	51.64	0.6206	0.3779	4.52106	51.66	0.6203	0.3777	4.51536	51.68	0.6200	0.3774	4.50969		
35	60.03	0.4996	0.3972	4.19293	60.05	0.4992	0.3970	4.18731	60.08	0.4988	0.3967	4.18170		
40	68.30	0.3697	0.4214	3.84083	68.33	0.3693	0.4211	3.83529	68.36	0.3688	0.4208	3.82977		
45	76.44	0.2345	0.4514	3.47423	76.47	0.2340	0.4512	3.46879	76.50	0.2335	0.4509	3.46337		
50	84.40	0.0975	0.4888	3.10271	84.44	0.0969	0.4886	3.09740	84.47	0.0963	0.4883	3.09211		
55	92.17	-0.0379	0.5355	2.73558	92.21	-0.0386	0.5352	2.73041	92.25	-0.0393	0.5350	2.72526		
60	99.70	-0.1685	0.5939	2.38142	99.74	-0.1692	0.5937	2.37643	99.79	-0.1700	0.5935	2.37145		
65	106.95	-0.2915	0.6676	2.04777	107.00	-0.2923	0.6675	2.04298	107.04	-0.2931	0.6673	2.03821		
70	113.87	-0.4047	0.7612	1.74074	113.93	-0.4055	0.7612	1.73618	113.98	-0.4064	0.7611	1.73164		
75	120.43	-0.5065	0.8807	1.46471	120.49	-0.5073	0.8808	1.46041	120.54	-0.5081	0.8810	1.45614		
80	126.58	-0.5960	1.0336	1.22218	126.64	-0.5968	1.0342	1.21818	126.69	-0.5975	1.0346	1.21419		
85	132.29	-0.6728	1.2300	1.01374	132.34	-0.6736	1.2309	1.01005	132.40	-0.6743	1.2318	1.00637		
90	137.52	-0.7376	1.4809	0.83823	137.58	-0.7382	1.4825	0.83486	137.64	-0.7389	1.4841	0.83150		
95	142.29	-0.7911	1.7990	0.69311	142.34	-0.7917	1.8017	0.69006	142.40	-0.7923	1.8044	0.68702		
100	146.58	-0.8347	2.1977	0.57491	146.64	-0.8352	2.2019	0.57216	146.69	-0.8357	2.2061	0.56943		
105	150.43	-0.8698	2.6890	0.47971	150.49	-0.8702	2.6954	0.47726	150.54	-0.8707	2.7017	0.47481		
110	153.87	-0.8978	3.2829	0.40364	153.93	-0.8982	3.2919	0.40145	153.98	-0.8986	3.3010	0.39927		
115	156.95	-0.9202	3.9845	0.34312	157.00	-0.9205	3.9971	0.34116	157.04	-0.9208	4.0097	0.33922		
120	159.70	-0.9379	4.7936	0.29505	159.74	-0.9381	4.8104	0.29329	159.79	-0.9384	4.8273	0.29155		
125	162.17	-0.9520	5.7029	0.25685	162.21	-0.9522	5.7247	0.25527	162.25	-0.9524	5.7465	0.25370		
130	164.40	-0.9632	6.6975	0.22646	164.44	-0.9633	6.7249	0.22503	164.47	-0.9635	6.7524	0.22360		
135	166.44	-0.9721	7.7552	0.20224	166.47	-0.9722	7.7888	0.20093	166.50	-0.9724	7.8225	0.19963		
140	168.30	-0.9792	8.8473	0.18294	168.33	-0.9793	8.8873	0.18173	168.36	-0.9794	8.9277	0.18053		
145	170.03	-0.9849	9.9395	0.16758	170.05	-0.9850	9.9862	0.16645	170.08	-0.9850	10.0332	0.16534		
150	171.64	-0.9894	10.9943	0.15541	171.66	-0.9894	11.0474	0.15436	171.68	-0.9895	11.1009	0.15331		
155	173.16	-0.9929	11.9722	0.14589	173.18	-0.9929	12.0314	0.14489	173.20	-0.9930	12.0911	0.14390		
160	174.61	-0.9956	12.8350	0.13859	174.63	-0.9956	12.89979							

$\frac{2}{x} = 0.547$
 $\frac{2}{x} = 0.548$
 $\frac{2}{x} = 0.549$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3304	5.53234	0.00	1.0000	0.3302	5.52653	0.00	1.0000	0.3299	5.52075
5	8.70	0.9885	0.3316	5.50125	8.70	0.9885	0.3314	5.48545	8.70	0.9885	0.3311	5.48967
10	17.38	0.9544	0.3352	5.40889	17.39	0.9543	0.3349	5.40311	17.39	0.9543	0.3347	5.39734
15	26.04	0.8985	0.3413	5.25792	26.05	0.8984	0.3410	5.25215	26.06	0.8984	0.3407	5.24641
20	34.65	0.8226	0.3501	5.05266	34.67	0.8225	0.3498	5.04692	34.68	0.8223	0.3495	5.04121
25	43.21	0.7288	0.3619	4.79897	43.23	0.7286	0.3616	4.79328	43.25	0.7284	0.3613	4.78760
30	51.70	0.6197	0.3771	4.50403	51.72	0.6195	0.3768	4.49840	51.74	0.6192	0.3766	4.49278
35	60.10	0.4985	0.3964	4.17612	60.13	0.4981	0.3961	4.17055	60.15	0.4977	0.3959	4.16500
40	68.39	0.3684	0.4206	3.82426	68.41	0.3679	0.4203	3.81878	68.44	0.3674	0.4200	3.81331
45	76.53	0.2329	0.4506	3.45797	76.56	0.2324	0.4503	3.45259	76.60	0.2318	0.4501	3.44722
50	84.51	0.0957	0.4880	3.08683	84.55	0.0950	0.4878	3.08157	84.58	0.0944	0.4875	3.07632
55	92.29	-0.0399	0.5347	2.72013	92.33	-0.0406	0.5344	2.71501	92.37	-0.0413	0.5342	2.70991
60	99.83	-0.1707	0.5933	2.36649	99.87	-0.1715	0.5930	2.36155	99.92	-0.1722	0.5928	2.35662
65	107.09	-0.2939	0.6672	2.03345	107.14	-0.2947	0.6670	2.02871	107.18	-0.2955	0.6669	2.02398
70	114.03	-0.4072	0.7611	1.72712	114.08	-0.4080	0.7610	1.72261	114.13	-0.4088	0.7610	1.71811
75	120.59	-0.5089	0.8811	1.45187	120.65	-0.5097	0.8812	1.44762	120.70	-0.5105	0.8814	1.44339
80	126.75	-0.5983	1.0351	1.21021	126.80	-0.5991	1.0355	1.20625	126.86	-0.5999	1.0359	1.20230
85	132.46	-0.6750	1.2327	1.00270	132.51	-0.6758	1.2337	0.99904	132.57	-0.6765	1.2346	0.99540
90	137.70	-0.7396	1.4858	0.82815	137.75	-0.7403	1.4874	0.82482	137.81	-0.7409	1.4891	0.82149
95	142.46	-0.7929	1.8071	0.68399	142.51	-0.7935	1.8099	0.68097	142.57	-0.7941	1.8126	0.67797
100	146.75	-0.8363	2.2104	0.56671	146.80	-0.8368	2.2147	0.56400	146.86	-0.8373	2.2190	0.56130
105	150.59	-0.8712	2.7081	0.47238	150.65	-0.8716	2.7145	0.46996	150.70	-0.8721	2.7209	0.46755
110	154.03	-0.8990	3.3102	0.39710	154.08	-0.8994	3.3194	0.39494	154.13	-0.8998	3.3286	0.39279
115	157.09	-0.9211	4.0224	0.33728	157.14	-0.9214	4.0351	0.33535	157.18	-0.9218	4.0479	0.33343
120	159.83	-0.9387	4.8443	0.28981	159.87	-0.9389	4.8614	0.28808	159.92	-0.9392	4.8785	0.28636
125	162.29	-0.9526	5.7686	0.25213	162.33	-0.9528	5.7907	0.25058	162.37	-0.9530	5.8130	0.24903
130	164.51	-0.9637	6.7802	0.22218	164.55	-0.9638	6.8081	0.22077	164.58	-0.9640	6.8362	0.21937
135	166.53	-0.9725	7.8565	0.19834	166.56	-0.9726	7.8907	0.19705	166.60	-0.9728	7.9251	0.19577
140	168.39	-0.9795	8.9682	0.17934	168.41	-0.9796	9.0091	0.17815	168.44	-0.9797	9.0502	0.17697
145	170.10	-0.9851	10.0805	0.16423	170.13	-0.9852	10.1281	0.16313	170.15	-0.9853	10.1760	0.16203
150	171.70	-0.9895	11.1548	0.15227	171.72	-0.9896	11.2090	0.15124	171.74	-0.9896	11.2636	0.15021
155	173.21	-0.9930	12.1511	0.14291	173.23	-0.9930	12.2115	0.14193	173.25	-0.9931	12.2723	0.14096
160	174.65	-0.9956	13.0302	0.13574	174.67	-0.9957	13.0962	0.13480	174.68	-0.9957	13.1626	0.13387
165	176.04	-0.9976	13.7562	0.13044	176.05	-0.9976	13.8267	0.12953	176.06	-0.9976	13.8978	0.132863
170	177.38	-0.9990	14.2984	0.12680	177.39	-0.9990	14.3724	0.12591	177.39	-0.9990	14.4469	0.12503
175	178.70	-0.9997	14.6335	0.12467	178.70	-0.9997	14.7096	0.12380	178.70	-0.9997	14.7863	0.12293
180	180.00	-1.0000	14.7469	0.12397	180.00	-1.0000	14.8237	0.12310	180.00	-1.0000	14.9011	0.12224

 $\frac{2}{x} = 0.550$
 $\frac{2}{x} = 0.551$
 $\frac{2}{x} = 0.552$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3297	5.51498	0.00	1.0000	0.3294	5.50923	0.00	1.0000	0.3292	5.50350
5	8.71	0.9885	0.3309	5.48391	8.71	0.9885	0.3306	5.47817	8.71	0.9885	0.3303	5.47244
10	17.40	0.9542	0.3344	5.39159	17.41	0.9542	0.3342	5.38586	17.41	0.9542	0.3339	5.38014
15	26.07	0.8983	0.3405	5.24068	26.08	0.8982	0.3402	5.23497	26.09	0.8981	0.3400	5.22928
20	34.69	0.8222	0.3493	5.03551	34.71	0.8221	0.3490	5.02983	34.72	0.8219	0.3487	5.02417
25	43.27	0.7282	0.3611	4.78195	43.28	0.7280	0.3608	4.77631	43.30	0.7278	0.3605	4.77069
30	51.77	0.6189	0.3763	4.48718	51.79	0.6186	0.3760	4.48159	51.81	0.6183	0.3758	4.47603
35	60.17	0.4974	0.3956	4.15946	60.20	0.4970	0.3953	4.15395	60.22	0.4966	0.3951	4.14845
40	68.47	0.3670	0.4197	3.80786	68.50	0.3665	0.4195	3.80243	68.53	0.3661	0.4192	3.79701
45	76.63	0.2313	0.4498	3.44187	76.66	0.2307	0.4495	3.43654	76.69	0.2302	0.4492	3.43122
50	84.62	0.0938	0.4872	3.07109	84.65	0.0932	0.4869	3.06588	84.69	0.0925	0.4867	3.06068
55	92.41	-0.0420	0.5339	2.70483	92.45	-0.0427	0.5337	2.69976	92.49	-0.0434	0.5334	2.69471
60	99.96	-0.1730	0.5926	2.35171	100.00	-0.1737	0.5924	2.34681	100.05	-0.1745	0.5922	2.34193
65	107.23	-0.2962	0.6667	2.01927	107.28	-0.2970	0.6665	2.01457	107.33	-0.2978	0.6664	2.00989
70	114.18	-0.4096	0.7609	1.71363	114.23	-0.4104	0.7609	1.70916	114.28	-0.4112	0.7608	1.70471
75	120.75	-0.5114	0.8815	1.43917	120.81	-0.5122	0.8816	1.43496	120.86	-0.5130	0.8818	1.43076
80	126.92	-0.6006	1.0364	1.19837	126.97	-0.6014	1.0368	1.19444	127.03	-0.6022	1.0372	1.19053
85	132.63	-0.6772	1.2355	0.99177	132.69	-0.6780	1.2364	0.98816	132.74	-0.6787	1.2373	0.98455
90	137.87	-0.7416	1.4907	0.81818	137.93	-0.7423	1.4924	0.81488	137.98	-0.7430	1.4940	0.81159
95	142.63	-0.7947	1.8154	0.67497	142.69	-0.7953	1.8181	0.67199	142.74	-0.7959	1.8209	0.66902
100	146.92	-0.8379	2.2233	0.55861	146.97	-0.8384	2.2276	0.55593	147.03	-0.8389	2.2320	0.55327
105	150.75	-0.8725	2.7274	0.46514	150.81	-0.8730	2.7339	0.46275	150.86	-0.8734	2.7404	0.46037
110	154.18	-0.9002	3.3379	0.39064	154.23	-0.9005	3.3473	0.38851	154.28	-0.9009	3.3567	0.38639
115	157.23	-0.9221	4.0608	0.33152	157.28	-0.9224	4.0738	0.32961	157.33	-0.9227	4.0868	0.32772
120	159.96	-0.9395	4.8958	0.28465	160.00	-0.9397	4.9132	0.28295	160.05	-0.9400	4.9307	0.28126
125	162.41	-0.9532	5.8354	0.24749	162.45	-0.9534	5.8580	0.24596	162.49	-0.9537	5.8807	0.24444
130	164.62	-0.9642	6.8644	0.21797	164.65	-0.9643	6.8929	0.21659	164.69	-0.9645	6.9215	0.21521
135	166.63	-0.9729	7.9598	0.19449	166.66	-0.9730	7.9946	0.19323	166.69	-0.9731	8.0297	0.19197
140	168.47	-0.9798	9.0916	0.17580	168.50	-0.9799	9.1332	0.17463	168.53	-0.9800	9.1751	0.17347
145	170.17	-0.9853	10.2243	0.16094	170.20	-0.9854	10.2728	0.15986	170.22	-0.9855	10.3217	0.15878
150	171.77	-0.9897	11.3185	0.14919	171.79	-0.9897	11.3739	0.14817	171.81	-0.9898	11.4296	0.14716
155	173.27	-0.9931	12.3336	0.13999	173.28	-0.9931	12.3953	0.13903	173.30	-0.9932	12.4573	0.13807
160	174.69	-0.9957	13.2294	0.13294	174.71	-0.9957	13.2967	0.13202	174.72	-0.9958	13.3645	0.13110
165	176.07	-0.9976	13.9693	0.12774	176.08	-0.9977	14.0413	0.12685	176.09	-0.9977	14.1138	0.12596
170	177.40	-0.9990	14.5219	0.12416	177.41	-0.9990	14.5974	0.12329	177.41	-0.9990	14.6734	0.12243
175	178.71	-0.9997	14.8634	0.12207	178.71	-0.9997	14.9411	0.12121	178.71	-0.9997	15.0194	0.12036
180	180.00	-1.0000	14.9790	0.12138	180.00	-1.0000	15.0574	0.12053	180.00	-1.0000	15.1364	0.11968

$x = 0.553$					$x = 0.554$					$x = 0.555$				
PSI	θ	$\cos \theta$	O	S	θ	$\cos \theta$	O	S	θ	$\cos \theta$	O	S	θ	S
0	0.00	1.0000	0.3289	5.49779	0.00	1.0000	0.3287	5.49210	0.00	1.0000	0.3284	5.48643	0.00	5.48643
5	8.72	0.9885	0.3301	5.46673	8.72	0.9884	0.3298	5.46104	8.72	0.9884	0.3296	5.45537	8.72	5.45537
10	17.42	0.9541	0.3336	5.37445	17.43	0.9541	0.3334	5.36877	17.43	0.9541	0.3331	5.36312	17.43	5.36312
15	26.10	0.8981	0.3397	5.22361	26.11	0.8980	0.3395	5.21795	26.12	0.8979	0.3392	5.21231	26.12	5.21231
20	34.73	0.8218	0.3485	5.01853	34.75	0.8217	0.3482	5.01291	34.76	0.8215	0.3480	5.00730	34.76	5.00730
25	43.32	0.7276	0.3603	4.76509	43.33	0.7274	0.3600	4.75951	43.35	0.7272	0.3597	4.75395	43.35	4.75395
30	51.83	0.6180	0.3755	4.47048	51.85	0.6177	0.3752	4.46495	51.87	0.6175	0.3750	4.45944	51.87	4.45944
35	60.25	0.4962	0.3948	4.14297	60.27	0.4959	0.3945	4.13750	60.30	0.4955	0.3942	4.13206	60.30	4.13206
40	68.56	0.3656	0.4189	3.79161	68.58	0.3651	0.4186	3.78623	68.61	0.3647	0.4184	3.78086	68.61	3.78086
45	76.72	0.2296	0.4490	3.42592	76.76	0.2291	0.4487	3.42064	76.79	0.2285	0.4484	3.41537	76.79	3.41537
50	84.73	0.0919	0.4864	3.05550	84.76	0.0913	0.4861	3.05034	84.80	0.0907	0.4859	3.04519	84.80	3.04519
55	92.53	-0.0441	0.5332	2.68967	92.57	-0.0448	0.5329	2.68465	92.61	-0.0455	0.5327	2.67965	92.61	2.67965
60	100.09	-0.1752	0.5919	2.33706	100.14	-0.1760	0.5917	2.33221	100.18	-0.1767	0.5915	2.32737	100.18	2.32737
65	107.37	-0.2986	0.6662	2.00522	107.42	-0.2994	0.6661	2.00057	107.47	-0.3002	0.6659	1.99593	107.47	1.99593
70	114.33	-0.4120	0.7608	1.70027	114.38	-0.4128	0.7607	1.69584	114.43	-0.4136	0.7607	1.69143	114.43	1.69143
75	120.91	-0.5138	0.8819	1.42658	120.97	-0.5146	0.8820	1.42241	121.02	-0.5154	0.8822	1.41826	121.02	1.41826
80	127.08	-0.6030	1.0377	1.18664	127.14	-0.6037	1.0381	1.18275	127.19	-0.6045	1.0386	1.17888	127.19	1.17888
85	132.80	-0.6794	1.2382	0.98096	132.86	-0.6802	1.2392	0.97738	132.91	-0.6809	1.2401	0.97381	132.91	0.97381
90	138.04	-0.7436	1.4957	0.80832	138.10	-0.7443	1.4974	0.80505	138.16	-0.7450	1.4991	0.80180	138.16	0.80180
95	142.80	-0.7965	1.8237	0.66606	142.86	-0.7971	1.8265	0.66311	142.91	-0.7977	1.8293	0.66017	142.91	0.66017
100	147.08	-0.8395	2.2363	0.55061	147.14	-0.8400	2.2407	0.54797	147.19	-0.8405	2.2451	0.54533	147.19	0.54533
105	150.91	-0.8739	2.7469	0.45800	150.97	-0.8743	2.7535	0.45564	151.02	-0.8748	2.7602	0.45329	151.02	0.45329
110	154.33	-0.9013	3.3661	0.38428	154.38	-0.9017	3.3756	0.38218	154.43	-0.9021	3.3852	0.38008	154.43	0.38008
115	157.37	-0.9230	4.0999	0.32584	157.42	-0.9234	4.1131	0.32396	157.47	-0.9237	4.1264	0.32210	157.47	0.32210
120	160.09	-0.9402	4.9482	0.27957	160.14	-0.9405	4.9659	0.27790	160.18	-0.9408	4.9837	0.27623	160.18	0.27623
125	162.53	-0.9539	5.9035	0.24292	162.57	-0.9541	5.9265	0.24141	162.61	-0.9543	5.9496	0.23991	162.61	0.23991
130	164.73	-0.9647	6.9503	0.21384	164.76	-0.9648	6.9792	0.21247	164.80	-0.9650	7.0084	0.21111	164.80	0.21111
135	166.72	-0.9733	8.0650	0.19072	166.76	-0.9734	8.1006	0.18947	166.79	-0.9735	8.1364	0.18823	166.79	0.18823
140	168.56	-0.9801	9.2173	0.17232	168.58	-0.9802	9.2598	0.17118	168.61	-0.9803	9.3026	0.17004	168.61	0.17004
145	170.25	-0.9855	10.3709	0.15771	170.27	-0.9856	10.4204	0.15664	170.30	-0.9857	10.4703	0.15558	170.30	0.15558
150	171.83	-0.9898	11.4856	0.14615	171.85	-0.9899	11.5421	0.14516	171.87	-0.9899	11.5989	0.14416	171.87	0.14416
155	173.32	-0.9932	12.5199	0.13712	173.33	-0.9932	12.5828	0.13617	173.35	-0.9933	12.6462	0.13523	173.35	0.13523
160	174.73	-0.9958	13.4327	0.13019	174.75	-0.9958	13.5015	0.12929	174.76	-0.9958	13.5706	0.12839	174.76	0.12839
165	176.10	-0.9977	14.1868	0.12508	176.11	-0.9977	14.2603	0.12421	176.12	-0.9977	14.3343	0.12334	176.12	0.12334
170	177.42	-0.9990	14.7500	0.12157	177.43	-0.9990	14.8271	0.12072	177.43	-0.9990	14.9048	0.11987	177.43	0.11987
175	178.72	-0.9997	15.0982	0.11932	178.72	-0.9998	15.1775	0.11868	178.72	-0.9998	15.2574	0.11784	178.72	0.11784
180	180.00	-1.0000	15.2159	0.11884	180.00	-1.0000	15.2960	0.11801	180.00	-1.0000	15.3767	0.11718	180.00	0.11718

2 x = 0.556					2 x = 0.557					2 x = 0.558				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3282	5.48077	0.00	1.0000	0.3279	5.47513	0.00	1.0000	0.3277	5.46951		
5	8.73	0.9884	0.3293	5.44972	8.73	0.9884	0.3291	5.44409	8.73	0.9884	0.3288	5.43847		
10	17.44	0.9540	0.3329	5.35748	17.45	0.9540	0.3326	5.35186	17.45	0.9540	0.3324	5.34625		
15	26.13	0.8978	0.3389	5.20670	26.14	0.8977	0.3387	5.20110	26.15	0.8977	0.3384	5.19551		
20	34.78	0.8214	0.3477	5.00171	34.79	0.8213	0.3474	4.99614	34.80	0.8211	0.3472	4.99059		
25	43.37	0.7270	0.3595	4.74840	43.39	0.7267	0.3592	4.74287	43.40	0.7265	0.3589	4.73736		
30	51.89	0.6172	0.3747	4.45395	51.91	0.6169	0.3744	4.44847	51.93	0.6166	0.3742	4.44301		
35	60.32	0.4951	0.3940	4.12663	60.35	0.4948	0.3937	4.12122	60.37	0.4944	0.3934	4.11582		
40	68.64	0.3642	0.4181	3.77551	68.67	0.3638	0.4178	3.77018	68.70	0.3633	0.4175	3.76487		
45	76.82	0.2280	0.4482	3.41012	76.85	0.2275	0.4479	3.40488	76.88	0.2269	0.4476	3.39967		
50	84.83	0.0900	0.4856	3.04006	84.87	0.0894	0.4853	3.03494	84.91	0.0888	0.4851	3.02984		
55	92.65	-0.0462	0.5324	2.67466	92.69	-0.0469	0.5322	2.66968	92.73	-0.0476	0.5319	2.66472		
60	100.22	-0.1775	0.5913	2.32255	100.27	-0.1782	0.5911	2.31775	100.31	-0.1790	0.5908	2.31295		
65	107.52	-0.3010	0.6657	1.99130	107.56	-0.3018	0.6656	1.98669	107.61	-0.3025	0.6654	1.98210		
70	114.48	-0.4144	0.7606	1.68703	114.53	-0.4152	0.7606	1.68265	114.58	-0.4160	0.7605	1.67828		
75	121.07	-0.5162	0.8823	1.41412	121.13	-0.5170	0.8824	1.40999	121.18	-0.5178	0.8826	1.40587		
80	127.25	-0.6053	1.0390	1.17502	127.31	-0.6061	1.0394	1.17118	127.36	-0.6068	1.0399	1.16735		
85	132.97	-0.6816	1.2410	0.97026	133.03	-0.6824	1.2420	0.96672	133.09	-0.6831	1.2429	0.96319		
90	138.22	-0.7457	1.5008	0.79856	138.27	-0.7463	1.5024	0.79533	138.33	-0.7470	1.5041	0.79211		
95	142.97	-0.7983	1.8321	0.65724	143.03	-0.7989	1.8349	0.65433	143.09	-0.7995	1.8377	0.65143		
100	147.25	-0.8410	2.2496	0.54271	147.31	-0.8416	2.2540	0.54010	147.36	-0.8421	2.2585	0.53750		
105	151.07	-0.8753	2.7668	0.45095	151.13	-0.8757	2.7735	0.44862	151.18	-0.8762	2.7802	0.44630		
110	154.48	-0.9025	3.3948	0.37800	154.53	-0.9028	3.4044	0.37593	154.58	-0.9032	3.4141	0.37386		
115	157.52	-0.9240	4.1397	0.32024	157.56	-0.9243	4.1531	0.31839	157.61	-0.9246	4.1666	0.31656		
120	160.22	-0.9410	5.0016	0.27457	160.27	-0.9413	5.0196	0.27292	160.31	-0.9415	5.0377	0.27127		
125	162.65	-0.9545	5.9729	0.23842	162.69	-0.9547	5.9963	0.23694	162.73	-0.9549	6.0198	0.23546		
130	164.83	-0.9652	7.0377	0.20977	164.87	-0.9653	7.0673	0.20842	164.91	-0.9655	7.0970	0.20709		
135	166.82	-0.9737	8.1724	0.18700	166.85	-0.9738	8.2086	0.18578	166.88	-0.9739	8.2451	0.18456		
140	168.64	-0.9804	9.3456	0.16890	168.67	-0.9805	9.3889	0.16778	168.70	-0.9806	9.4325	0.16666		
145	170.32	-0.9858	10.5205	0.15453	170.35	-0.9858	10.5711	0.15349	170.37	-0.9859	10.6219	0.15245		
150	171.89	-0.9900	11.6562	0.14318	171.91	-0.9901	11.7138	0.14220	171.93	-0.9901	11.7718	0.14122		
155	173.37	-0.9933	12.7100	0.13430	173.39	-0.9933	12.7742	0.13337	173.40	-0.9934	12.8398	0.13245		
160	174.78	-0.9958	13.6403	0.12750	174.79	-0.9959	13.7105	0.12661	174.80	-0.9959	13.7813	0.12573		
165	176.13	-0.9977	14.4088	0.12248	176.14	-0.9977	14.4839	0.12162	176.15	-0.9977	14.5595	0.12077		
170	177.44	-0.9990	14.9830	0.11903	177.45	-0.9990	15.0617	0.11819	177.45	-0.9990	15.1410	0.11736		
175	178.73	-0.9998	15.3378	0.11702	178.73	-0.9998	15.4189	0.11619	178.73	-0.9998	15.5004	0.11537		
180	180.00	-1.0000	15.4579	0.11635	180.00	-1.0000	15.5397	0.11553	180.00	-1.0000	15.6221	0.11472		

$\frac{2}{x} = 0.553$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3274	5.46391
5	8.74	0.9884	0.3286	5.43288
10	17.46	0.9539	0.3321	5.34067
15	26.16	0.8976	0.3382	5.18995
20	34.82	0.8210	0.3462	4.98506
25	43.42	0.7257	0.3579	4.73186
30	51.95	0.6163	0.3739	4.43756
35	60.39	0.4940	0.3932	4.11044
40	68.72	0.3623	0.4173	3.75957
45	76.92	0.2264	0.4473	3.39447
50	84.94	0.0882	0.4848	3.02476
55	92.77	-0.0463	0.5317	2.65978
60	100.35	-0.1797	0.5906	2.30818
65	107.66	-0.3033	0.6653	1.97751
70	114.63	-0.4168	0.7605	1.67392
75	121.24	-0.5186	0.8827	1.40177
80	127.42	-0.6076	1.0403	1.16353
85	133.14	-0.6838	1.2438	0.95967
90	138.39	-0.7477	1.5058	0.78891
95	143.14	-0.8011	1.8406	0.64853
100	147.42	-0.8426	2.2630	0.53490
105	151.24	-0.8766	2.7869	0.44399
110	154.63	-0.9036	3.4238	0.37181
115	157.66	-0.9249	4.1801	0.31473
120	160.35	-0.9418	5.0559	0.26964
125	162.77	-0.9551	6.0435	0.23400
130	164.94	-0.9657	7.1269	0.20576
135	166.92	-0.9740	8.2818	0.18335
140	168.72	-0.9807	9.4764	0.16554
145	170.39	-0.9860	10.6732	0.15141
150	171.95	-0.9902	11.8830	0.14025
155	173.42	-0.9934	12.9041	0.13153
160	174.82	-0.9959	13.8522	0.12485
165	176.16	-0.9978	14.6356	0.11992
170	177.46	-0.9990	15.2208	0.11654
175	178.74	-0.9998	15.8226	0.11456
180	180.00	-1.0000	15.7050	0.11391

 $\frac{2}{x} = 0.560$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3272	5.45833
8.74	0.9884	0.3283	5.42730
17.47	0.9539	0.3313	5.33510
26.17	0.8975	0.3379	5.18440
34.83	0.8209	0.3467	4.97954
43.44	0.7261	0.3584	4.72639
51.97	0.6160	0.3736	4.43214
60.42	0.4937	0.3929	4.10508
68.75	0.3624	0.4170	3.75429
76.95	0.2258	0.4471	3.38928
84.98	0.0875	0.4845	3.01969
92.81	-0.0490	0.5314	2.65485
100.40	-0.1805	0.5904	2.30341
107.70	-0.3041	0.6651	1.97295
114.68	-0.4176	0.7604	1.66958
121.29	-0.5194	0.8829	1.39768
127.47	-0.6084	1.0408	1.15972
133.20	-0.6846	1.2448	0.95616
138.45	-0.7483	1.5076	0.78571
143.20	-0.8007	1.8434	0.64565
147.47	-0.8431	2.2675	0.53232
151.29	-0.8771	2.7937	0.44169
154.66	-0.9040	3.4336	0.36976
157.70	-0.9252	4.1938	0.31291
160.40	-0.9420	5.0742	0.26801
162.81	-0.9553	6.0673	0.23253
164.98	-0.9658	7.1570	0.20444
166.95	-0.9742	8.3187	0.18215
168.75	-0.9808	9.5206	0.16444
170.42	-0.9860	10.7248	0.15039
171.97	-0.9902	11.8890	0.13929
173.44	-0.9934	12.9627	0.13062
174.83	-0.9959	13.9239	0.12398
176.17	-0.9978	14.7122	0.11908
177.47	-0.9990	15.3013	0.11571
178.74	-0.9998	15.6654	0.11375
180.00	-1.0000	15.7885	0.11310

 $\frac{2}{x} = 0.561$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3269	5.45276
8.74	0.9884	0.3281	5.42173
17.47	0.9539	0.3316	5.32955
26.16	0.8974	0.3377	5.17887
34.84	0.8207	0.3464	4.97404
43.45	0.7259	0.3582	4.72093
51.99	0.6158	0.3734	4.42673
60.44	0.4933	0.3926	4.09874
68.78	0.3620	0.4167	3.74902
76.98	0.2253	0.4468	3.38411
85.01	0.0869	0.4843	3.01464
92.85	-0.0497	0.5312	2.64994
100.44	-0.1812	0.5902	2.29866
107.75	-0.3049	0.6650	1.96839
114.74	-0.4184	0.7604	1.66525
121.34	-0.5202	0.8830	1.39361
127.53	-0.6092	1.0412	1.15592
133.26	-0.6853	1.2457	0.95267
138.50	-0.7490	1.5093	0.78253
143.26	-0.8013	1.8463	0.64278
147.53	-0.8437	2.2720	0.52975
151.34	-0.8775	2.8055	0.43940
154.74	-0.9043	3.4435	0.36773
157.75	-0.9256	4.2075	0.31109
160.44	-0.9423	5.0926	0.26640
162.85	-0.9555	6.0913	0.23108
165.01	-0.9660	7.1873	0.20313
166.98	-0.9743	8.3559	0.18095
168.78	-0.9809	9.5651	0.16334
170.44	-0.9861	10.7767	0.14936
171.99	-0.9903	11.9482	0.13833
173.45	-0.9935	13.0357	0.12971
174.84	-0.9960	13.9960	0.12311
176.18	-0.9978	14.7894	0.11824
177.47	-0.9990	15.3822	0.11490
178.74	-0.9998	15.7487	0.11294
180.00	-1.0000	15.8727	0.11230

 $\frac{2}{x} = 0.562$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.3267	5.44721
5	8.75	0.9884	0.3278	5.41619
10	17.48	0.9538	0.3314	5.32402
15	26.19	0.8974	0.3374	5.17336
20	34.86	0.8206	0.3462	4.96856
25	43.47	0.7257	0.3579	4.71548
30	52.01	0.6155	0.3731	4.42134
35	60.47	0.4929	0.3924	4.09441
40	68.81	0.3615	0.4165	3.74377
45	77.01	0.2247	0.4465	3.37896
50	85.05	0.0863	0.4840	3.00950
55	92.89	-0.0503	0.5309	2.64504
60	100.48	-0.1820	0.5900	2.29393
65	107.80	-0.3057	0.6648	1.95365
70	114.73	-0.4192	0.7604	1.66093
75	121.40	-0.5209	0.8831	1.38954
80	127.58	-0.6039	1.0417	1.15214
85	133.32	-0.6860	1.2467	0.94918
90	138.56	-0.7497	1.5110	0.77936
95	143.32	-0.8019	1.8492	0.63992
100	147.58	-0.8442	2.2765	0.52719
105	151.40	-0.8779	2.8074	0.43712
110	154.79	-0.9047	3.4534	0.36570
115	157.80	-0.9259	4.2212	0.30929
120	160.48	-0.9425	5.1112	0.26479
125	162.89	-0.9557	6.1154	0.22954
130	165.05	-0.9661	7.2177	0.20102
135	167.01	-0.9744	8.3934	0.17975
140	168.81	-0.9810	9.6099	0.16224
145	170.47	-0.9862	10.8290	0.14835
150	172.01	-0.9903	12.0078	0.13738
155	173.47	-0.9935	13.1022	0.12801
160	174.86	-0.9960	14.0686	0.12225
165	176.19	-0.9978	14.8672	0.11741
170	177.48	-0.9990	15.4638	0.11409
175	178.75	-0.9998	15.8326	0.11215
180	180.00	-1.0000	15.9574	0.11151

 $\frac{2}{x} = 0.563$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.3264	5.44168
8.75	0.9884	0.3275	5.41066
17.49	0.9538	0.3311	5.31850
26.20	0.8973	0.3372	5.16787
34.87	0.8204	0.3459	4.96309
43.49	0.7255	0.3576	4.71006
52.03	0.6152	0.3728	4.41596
60.49	0.4926	0.3921	4.08810
68.84	0.3610	0.4162	3.73854
77.04	0.2242	0.4463	3.37382
85.08	0.0857	0.4838	3.00458
92.93	-0.0510	0.5307	2.64016
100.53	-0.1827	0.5898	2.28921
107.85	-0.3065	0.6647	1.95933
114.84	-0.4200	0.7603	1.65663
121.45	-0.5217	0.8833	1.38549
127.64	-0.6107	1.0421	1.14837
133.37	-0.6867	1.2476	0.94571
138.62	-0.7503	1.5127	0.77620
143.37	-0.8025	1.8521	0.63707
147.64	-0.8447	2.2811	0.52464
151.45	-0.8784	2.8143	0.43485
154.84	-0.9051	3.4633	0.36368
157.85	-0.9262	4.2351	0.30750
160.53	-0.9428	5.1298	0.26318
162.93	-0.9559	6.1397	0.22820
165.08	-0.9663	7.2484	0.20052
167.04	-0.9745	8.4310	0.17658
168.84	-0.9811	9.6550	0.16115
170.49	-0.9863	10.8816	0.14734
172.03	-0.9904	12.0679	0.13643
173.49	-0.9935	13.1692	0.12791
174.87	-0.9960	14.1418	0.12139
176.20	-0.9978	14.9454	0.11658
177.49	-0.9990	15.5459	0.11328
178.75	-0.9998	15.9171	0.11135
180.00	-1.0000	16.0427	0.11072

 $\frac{2}{x} = 0.564$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3262	5.43617
8.75	0.9884	0.3273	5.40515
17.49	0.9538	0.3309	5.31300
26.21	0.8972	0.3369	5.16529
34.88	0.8203	0.3456	4.95765
43.50	0.7253	0.3574	4.70465
52.06	0.6149	0.3726	4.41061
60.52	0.4922	0.3918	4.08380
68.86	0.3606	0.4159	3.73332
77.08	0.2237	0.4460	3.36870
85.12	0.0851	0.4835	2.99957
92.97	-0.0517	0.5304	2.63529
100.57	-0.1834	0.5895	2.28451
107.89	-0.3072	0.6645	1.95481
114.89	-0.4208	0.7603	1.65234
121.50	-0.5225	0.8834	1.38146
127.70	-0.6115	1.0426	1.14461
133.43	-0.6875	1.2486	0.94225
138.68	-0.7510	1.5145	0.77305
143.43	-0.8031	1.8550	0.63473
147.70	-0.8452	2.2857	0.52210
151.50	-0.8788	2.8212	0.43259
154.89	-0.9055	3.4733	0.36167
157.89	-0.9265	4.2490	0.30571
160.57	-0.9431	5.1486	0.26159
162.97	-0.9561	6.1641	0.22677
165.12	-0.9665	7.2793	0.19923
167.08	-0.9747	8.4690	0.17740
168.86	-0.9812	9.7004	0.16007
170.52	-0.9863	10.9346	0.14634
172.06	-0.9904	12.1283	0.13549
173.50	-0.9936	13.2366	0.12702
174.88	-0.9960	14.2155	0.12054
176.21	-0.9978	15.0243	0.11576
177.49	-0.9990	15.6287	0.11248
178.75	-0.9998	16.0023	0.11056
180.00	-1.0000	16.1281	0.10993

x = 0.565					x = 0.566					x = 0.567				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3259	5.43067	0.00	1.0000	0.3257	5.42519	0.00	1.0000	0.3254	5.41973		
5	8.76	0.9883	0.3271	5.39966	8.76	0.9883	0.3268	5.39419	8.76	0.9883	0.3266	5.38873		
10	17.50	0.9537	0.3306	5.30752	17.51	0.9537	0.3304	5.30206	17.51	0.9536	0.3301	5.29662		
15	26.22	0.8971	0.3367	5.15693	26.23	0.8970	0.3364	5.15149	26.24	0.8970	0.3362	5.14606		
20	34.90	0.8202	0.3454	4.95221	34.91	0.8200	0.3451	4.94680	34.92	0.8199	0.3449	4.94140		
25	43.52	0.7251	0.3571	4.69926	43.54	0.7249	0.3569	4.69388	43.56	0.7247	0.3566	4.68852		
30	52.08	0.6146	0.3723	4.40526	52.10	0.6143	0.3721	4.39994	52.12	0.6141	0.3718	4.39463		
35	60.54	0.4918	0.3916	4.07852	60.56	0.4915	0.3913	4.07326	60.59	0.4911	0.3910	4.06802		
40	68.89	0.3601	0.4157	3.72812	68.92	0.3597	0.4154	3.72294	68.95	0.3592	0.4151	3.71777		
45	77.11	0.2231	0.4457	3.36359	77.14	0.2226	0.4454	3.35850	77.17	0.2220	0.4452	3.35343		
50	85.16	0.0844	0.4832	2.99458	85.19	0.0838	0.4830	2.98960	85.23	0.0832	0.4827	2.98464		
55	93.00	-0.0524	0.5302	2.63043	93.04	-0.0531	0.5299	2.62559	93.08	-0.0538	0.5297	2.62077		
60	100.61	-0.1842	0.5893	2.27982	100.66	-0.1849	0.5891	2.27514	100.70	-0.1857	0.5889	2.27048		
65	107.94	-0.3080	0.6643	1.95031	107.99	-0.3088	0.6642	1.94583	108.03	-0.3096	0.6640	1.94136		
70	114.94	-0.4216	0.7602	1.64806	114.99	-0.4224	0.7602	1.64380	115.04	-0.4232	0.7601	1.63954		
75	121.56	-0.5233	0.8836	1.37743	121.61	-0.5241	0.8837	1.37342	121.66	-0.5249	0.8839	1.36942		
80	127.75	-0.6122	1.0430	1.14086	127.81	-0.6130	1.0435	1.13713	127.86	-0.6138	1.0440	1.13340		
85	133.49	-0.6882	1.2495	0.93880	133.54	-0.6889	1.2505	0.93537	133.60	-0.6896	1.2515	0.93194		
90	138.73	-0.7517	1.5162	0.76991	138.79	-0.7523	1.5179	0.76678	138.85	-0.7530	1.5197	0.76367		
95	143.49	-0.8037	1.8579	0.63140	143.54	-0.8043	1.8608	0.62858	143.60	-0.8049	1.8638	0.62578		
100	147.75	-0.8457	2.2903	0.51957	147.81	-0.8463	2.2949	0.51705	147.86	-0.8468	2.2996	0.51455		
105	151.56	-0.8793	2.8281	0.43034	151.61	-0.8797	2.8351	0.42810	151.66	-0.8802	2.8421	0.42587		
110	154.94	-0.9058	3.4834	0.35967	154.99	-0.9062	3.4935	0.35768	155.04	-0.9066	3.5037	0.35570		
115	157.94	-0.9268	4.2631	0.30393	157.99	-0.9271	4.2772	0.30216	158.03	-0.9274	4.2913	0.30040		
120	160.61	-0.9433	5.1674	0.26000	160.66	-0.9436	5.1864	0.25843	160.70	-0.9438	5.2055	0.25686		
125	163.00	-0.9563	6.1887	0.22535	163.04	-0.9565	6.2135	0.22393	163.08	-0.9567	6.2384	0.22253		
130	165.16	-0.9666	7.3104	0.19795	165.19	-0.9668	7.3416	0.19667	165.23	-0.9669	7.3731	0.19540		
135	167.11	-0.9748	8.5072	0.17623	167.14	-0.9749	8.5456	0.17507	167.17	-0.9750	8.5843	0.17391		
140	168.89	-0.9813	9.7461	0.15900	168.92	-0.9814	9.7921	0.15793	168.95	-0.9815	9.8385	0.15687		
145	170.54	-0.9864	10.9880	0.14534	170.56	-0.9865	11.0417	0.14435	170.59	-0.9865	11.0958	0.14336		
150	172.08	-0.9905	12.1892	0.13456	172.10	-0.9905	12.2505	0.13363	172.12	-0.9905	12.3122	0.13270		
155	173.52	-0.9936	13.3045	0.12614	173.54	-0.9936	13.3729	0.12526	173.56	-0.9937	13.4418	0.12439		
160	174.90	-0.9960	14.2896	0.11970	174.91	-0.9961	14.3644	0.11886	174.92	-0.9961	14.4396	0.11802		
165	176.22	-0.9978	15.1037	0.11495	176.23	-0.9978	15.1837	0.11413	176.24	-0.9978	15.2642	0.11333		
170	177.50	-0.9990	15.7120	0.11168	177.51	-0.9991	15.7959	0.11089	177.51	-0.9991	15.8804	0.11011		
175	178.76	-0.9998	16.0880	0.10978	178.76	-0.9998	16.1744	0.10900	178.76	-0.9998	16.2613	0.10822		
180	180.00	-1.0000	16.2152	0.10915	180.00	-1.0000	16.3024	0.10838	180.00	-1.0000	16.3902	0.10760		

x = 0.568					x = 0.569					x = 0.570				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3252	5.41429	0.00	1.0000	0.3249	5.40886	0.00	1.0000	0.3247	5.40345		
5	8.77	0.9883	0.3263	5.38329	8.77	0.9883	0.3261	5.37786	8.77	0.9883	0.3258	5.37246		
10	17.52	0.9536	0.3299	5.29119	17.53	0.9536	0.3296	5.28578	17.53	0.9535	0.3294	5.28038		
15	26.25	0.8969	0.3359	5.14065	26.26	0.8968	0.3357	5.13526	26.27	0.8967	0.3354	5.12988		
20	34.94	0.8198	0.3446	4.93602	34.95	0.8196	0.3444	4.93066	34.96	0.8195	0.3441	4.92531		
25	43.57	0.7245	0.3564	4.68318	43.59	0.7243	0.3561	4.67786	43.61	0.7241	0.3558	4.67255		
30	52.14	0.6138	0.3715	4.38934	52.16	0.6135	0.3713	4.38405	52.18	0.6132	0.3710	4.37880		
35	60.61	0.4907	0.3908	4.06271	60.64	0.4903	0.3905	4.05757	60.66	0.4900	0.3902	4.05238		
40	68.98	0.3588	0.4149	3.71261	69.00	0.3583	0.4146	3.70748	69.03	0.3579	0.4143	3.70235		
45	77.20	0.2215	0.4449	3.34837	77.23	0.2210	0.4446	3.34332	77.27	0.2204	0.4444	3.33829		
50	85.26	0.0826	0.4824	2.97970	85.30	0.0820	0.4822	2.97477	85.33	0.0813	0.4819	2.96985		
55	93.12	-0.0545	0.5294	2.61596	93.16	-0.0552	0.5292	2.61116	93.20	-0.0559	0.5289	2.60638		
60	100.74	-0.1864	0.5887	2.26583	100.79	-0.1872	0.5885	2.26120	100.83	-0.1879	0.5883	2.25657		
65	108.08	-0.3104	0.6639	1.93690	108.13	-0.3112	0.6637	1.93245	108.18	-0.3119	0.6636	1.92802		
70	115.09	-0.4240	0.7601	1.63531	115.14	-0.4248	0.7600	1.63108	115.19	-0.4256	0.7600	1.62687		
75	121.72	-0.5257	0.8840	1.36543	121.77	-0.5265	0.8841	1.36146	121.82	-0.5273	0.8843	1.35749		
80	127.92	-0.6146	1.0444	1.12969	127.98	-0.6153	1.0449	1.12599	128.03	-0.6161	1.0453	1.12231		
85	133.66	-0.6904	1.2524	0.92853	133.72	-0.6911	1.2534	0.92513	133.77	-0.6918	1.2544	0.92174		
90	138.91	-0.7537	1.5215	0.76056	138.97	-0.7543	1.5232	0.75747	139.02	-0.7550	1.5250	0.75438		
95	143.66	-0.8055	1.8667	0.62298	143.72	-0.8061	1.8697	0.62019	143.77	-0.8067	1.8726	0.61742		
100	147.92	-0.8473	2.3042	0.51205	147.98	-0.8478	2.3089	0.50956	148.03	-0.8483	2.3136	0.50708		
105	151.72	-0.8806	2.8492	0.42364	151.77	-0.8811	2.8563	0.42143	151.82	-0.8815	2.8634	0.41923		
110	155.09	-0.9070	3.5139	0.35373	155.14	-0.9073	3.5242	0.35177	155.19	-0.9077	3.5345	0.34981		
115	158.08	-0.9277	4.3056	0.29865	158.13	-0.9280	4.3200	0.29691	158.18	-0.9283	4.3344	0.29517		
120	160.74	-0.9441	5.2247	0.25530	160.79	-0.9443	5.2441	0.25374	160.83	-0.9446	5.2635	0.25219		
125	163.12	-0.9569	6.2634	0.22113	163.16	-0.9571	6.2886	0.21973	163.20	-0.9573	6.3140	0.21835		
130	165.26	-0.9671	7.4048	0.19413	165.30	-0.9673	7.4367	0.19288	165.33	-0.9674	7.4688	0.19162		
135	167.20	-0.9752	8.6232	0.17276	167.23	-0.9753	8.6625	0.17161	167.27	-0.9754	8.7019	0.17048		
140	168.98	-0.9815	9.8851	0.15581	169.00	-0.9816	9.9321	0.15476	169.03	-0.9817	9.9793	0.15371		
145	170.61	-0.9866	11.1503	0.14238	170.64	-0.9867	11.2051	0.14140	170.66	-0.9867	11.2604	0.14044		
150	172.14	-0.9906	12.3744	0.13179	172.16	-0.9906	12.4370	0.13087	172.18	-0.9907	12.5000	0.12997		
155	173.57	-0.9937	13.5112	0.12352	173.59	-0.9937	13.5810	0.12265	173.61	-0.9938	13.6514	0.12180		
160	174.94	-0.9961	14.5154	0.11719	174.95	-0.9961	14.5917	0.11						

$$x = 0.571$$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3244	5.39806
5	8.78	0.9883	0.3256	5.36707
10	17.54	0.9535	0.3291	5.27500
15	26.28	0.8967	0.3352	5.12453
20	34.98	0.8194	0.3439	4.91999
25	43.62	0.7239	0.3556	4.66726
30	52.20	0.6129	0.3708	4.37356
35	60.68	0.4896	0.3900	4.04719
40	69.06	0.3574	0.4141	3.69725
45	77.30	0.2199	0.4441	3.33328
50	85.37	0.0807	0.4817	2.96495
55	93.24	-0.0566	0.5287	2.60162
60	100.87	-0.1887	0.5880	2.25197
65	108.22	-0.3127	0.6634	1.92361
70	115.24	-0.4264	0.7599	1.62267
75	121.88	-0.5281	0.8844	1.35354
80	128.09	-0.6169	1.0458	1.11863
85	133.83	-0.6925	1.2554	0.91836
90	139.08	-0.7556	1.5268	0.75131
95	143.83	-0.8073	1.8756	0.61465
100	146.09	-0.8489	2.3184	0.50461
105	151.88	-0.8813	2.8706	0.41703
110	155.24	-0.9081	3.5449	0.34787
115	158.22	-0.9286	4.3489	0.29344
120	160.87	-0.9448	5.2831	0.25086
125	163.24	-0.9575	6.3395	0.21697
130	165.37	-0.9676	7.5011	0.19038
135	167.30	-0.9755	8.7417	0.16934
140	169.06	-0.9818	10.0259	0.15267
145	170.68	-0.9868	11.3160	0.13947
150	172.20	-0.9907	12.5635	0.12906
155	173.62	-0.9938	13.7223	0.12094
160	174.98	-0.9962	14.7460	0.11473
165	176.28	-0.9979	15.5922	0.11015
170	177.54	-0.9991	16.2246	0.10701
175	178.78	-0.9998	16.6156	0.10517
180	180.00	-1.0000	16.7478	0.10457

$$x = 0.572$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3242	5.39268
8.78	0.9883	0.3254	5.36170
17.55	0.9535	0.3289	5.25964
26.29	0.8966	0.3349	5.11919
34.99	0.8192	0.3436	4.91467
43.64	0.7237	0.3553	4.66198
52.22	0.6126	0.3705	4.36833
60.71	0.4892	0.3897	4.04203
69.09	0.3569	0.4138	3.69216
77.33	0.2193	0.4438	3.32828
85.41	0.0801	0.4814	2.96006
93.28	-0.0572	0.5285	2.59586
100.92	-0.1894	0.5878	2.24738
108.27	-0.3135	0.6633	1.91920
115.29	-0.4272	0.7599	1.61848
121.93	-0.5289	0.8846	1.34960
128.14	-0.6176	1.0463	1.11497
133.89	-0.6933	1.2563	0.91499
139.14	-0.7563	1.5285	0.74825
143.89	-0.8079	1.8786	0.61190
148.14	-0.8484	2.3201	0.50215
151.93	-0.8824	2.8778	0.41485
155.29	-0.9084	3.5553	0.34593
158.27	-0.9289	4.3635	0.29173
160.92	-0.9451	5.3028	0.24913
163.26	-0.9577	6.3652	0.21560
165.41	-0.9677	7.5336	0.18914
167.33	-0.9756	8.7817	0.16822
169.09	-0.9819	10.0749	0.15154
170.71	-0.9869	11.3720	0.13851
172.22	-0.9908	12.6274	0.12817
173.64	-0.9938	13.7936	0.12009
174.99	-0.9962	14.8240	0.11392
176.29	-0.9979	15.6756	0.10937
177.55	-0.9991	16.3122	0.10625
178.78	-0.9998	16.7057	0.10442
180.00	-1.0000	16.8389	0.10382

$$x = 0.573$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3239	5.38732
8.78	0.9883	0.3251	5.35634
17.55	0.9534	0.3286	5.26430
26.30	0.8965	0.3347	5.11385
35.00	0.8191	0.3434	4.90937
43.66	0.7235	0.3551	4.65672
52.24	0.6124	0.3702	4.36312
60.73	0.4889	0.3894	4.03688
69.12	0.3565	0.4135	3.68708
77.36	0.2188	0.4436	3.32330
85.44	0.0795	0.4811	2.95519
93.32	-0.0579	0.5282	2.59212
100.96	-0.1902	0.5876	2.24280
108.32	-0.3143	0.6631	1.91481
115.34	-0.4280	0.7599	1.61431
121.98	-0.5297	0.8847	1.34568
128.20	-0.6184	1.0467	1.11132
133.95	-0.6940	1.2573	0.91163
139.20	-0.7570	1.5303	0.74520
143.95	-0.8085	1.8816	0.60915
148.20	-0.8499	2.3279	0.49970
151.98	-0.8828	2.8850	0.41267
155.34	-0.9088	3.5658	0.34400
158.32	-0.9292	4.3732	0.29001
160.96	-0.9453	5.3226	0.24760
163.32	-0.9579	6.3911	0.21423
165.44	-0.9679	7.5664	0.18791
167.36	-0.9758	8.8220	0.16710
169.12	-0.9820	10.1231	0.15061
170.73	-0.9869	11.4284	0.13756
172.24	-0.9908	12.6918	0.12728
173.66	-0.9939	13.8655	0.11925
175.00	-0.9962	14.9025	0.11311
176.30	-0.9979	15.7597	0.10859
177.55	-0.9991	16.4044	0.10549
178.78	-0.9998	16.7965	0.10368
180.00	-1.0000	16.9306	0.10308

$$x = 0.574$$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3237	5.38198
5	8.79	0.9883	0.3249	5.35100
10	17.56	0.9534	0.3284	5.25897
15	26.31	0.8964	0.3344	5.10855
20	35.02	0.8190	0.3431	4.90409
25	43.67	0.7233	0.3548	4.65148
30	52.26	0.6121	0.3700	4.35793
35	60.76	0.4885	0.3892	4.03174
40	69.14	0.3560	0.4133	3.68202
45	77.39	0.2183	0.4433	3.31833
50	85.48	0.0789	0.4809	2.95033
55	93.36	-0.0586	0.5280	2.58740
60	101.01	-0.1909	0.5874	2.23823
65	108.37	-0.3151	0.6630	1.91043
70	115.39	-0.4288	0.7598	1.61015
75	122.04	-0.5305	0.8849	1.34176
80	128.26	-0.6192	1.0472	1.10768
85	134.00	-0.6947	1.2583	0.90828
90	139.26	-0.7576	1.5321	0.74216
95	144.00	-0.8090	1.8847	0.60642
100	148.26	-0.8504	2.3327	0.49726
105	152.04	-0.8833	2.8923	0.41051
110	155.39	-0.9092	3.5764	0.34208
115	158.37	-0.9296	4.3929	0.28831
120	161.01	-0.9455	5.3425	0.24609
125	163.36	-0.9581	6.4171	0.21288
130	165.48	-0.9680	7.5993	0.18669
135	167.39	-0.9759	8.8625	0.16599
140	169.14	-0.9821	10.1717	0.14959
145	170.76	-0.9870	11.4852	0.13662
150	172.26	-0.9909	12.7566	0.12639
155	173.67	-0.9939	13.9379	0.11841
160	175.02	-0.9962	14.9816	0.11231
165	176.31	-0.9979	15.8444	0.10782
170	177.56	-0.9991	16.4893	0.10474
175	178.79	-0.9998	16.8880	0.10293
180	180.00	-1.0000	17.0229	0.10234

$$x = 0.575$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3235	5.37665
8.79	0.9883	0.3246	5.34568
17.57	0.9534	0.3281	5.25366
26.32	0.8963	0.3341	5.10326
35.03	0.8188	0.3429	4.89883
43.69	0.7231	0.3546	4.64625
52.28	0.6118	0.3697	4.35275
60.78	0.4881	0.3889	4.02662
69.17	0.3556	0.4130	3.67698
77.42	0.2177	0.4431	3.31338
85.51	0.0782	0.4806	2.94549
93.40	-0.0593	0.5277	2.58269
101.05	-0.1916	0.5872	2.23368
108.41	-0.3159	0.6628	1.90607
115.44	-0.4296	0.7598	1.60600
122.09	-0.5313	0.8850	1.33786
128.31	-0.6199	1.0477	1.10405
134.06	-0.6954	1.2593	0.90495
139.31	-0.7583	1.5339	0.73913
144.06	-0.8096	1.8877	0.60369
148.31	-0.8509	2.3375	0.49483
152.09	-0.8837	2.8996	0.40835
155.44	-0.9096	3.5870	0.34017
158.41	-0.9299	4.4078	0.28662
161.05	-0.9458	5.3626	0.24458
163.40	-0.9583	6.4433	0.21153
165.51	-0.9682	7.6325	0.18547
167.42	-0.9760	8.9034	0.16488
169.17	-0.9822	10.2207	0.14858
170.78	-0.9871	11.5424	0.13568
172.28	-0.9909	12.8219	0.12551
173.69	-0.9939	14.0108	0.11758
175.03	-0.9962	15.0613	0.11152
176.32	-0.9979	15.9297	0.10705
177.57	-0.9991	16.5788	0.10399
178.79	-0.9998	16.9802	0.10220
180.00	-1.0000	17.1160	0.10161

$$x = 0.576$$

θ	$\cos \theta$	g	S^2
0.00	1.0000	0.3232	5.37134
8.79	0.9882	0.3244	5.34037
17.57	0.9533	0.3279	5.24836
26.33	0.8963	0.3339	5.09798
35.04	0.8187	0.3426	4.89358
43.71	0.7229	0.3543	4.64104
52.30	0.6115	0.3695	4.34759
60.81	0.4878	0.3887	4.02152
69.20	0.3551	0.4127	3.67195
77.46	0.2172	0.4428	3.30844
85.55	0.0776	0.4804	2.94066
93.44	-0.0600	0.5275	2.57799
101.09	-0.1924	0.5870	2.22914
108.46	-0.3166	0.6627	1.90171
115.49	-0.4304	0.7597	1.60186
122.15	-0.5321	0.8852	1.33397
128.37	-0.6207	1.0481	1.10043
134.12	-0.6961	1.2603	0.90163
139.37	-0.7589	1.5357	0.73611
144.12	-0.8102	1.8907	0.60098
148.37	-0.8514	2.3424	0.49241
152.15	-0.8841	2.9069	0.40620
155.49	-0.9099	3.5977	0.33827
158.46	-0.9302	4.4227	0.28493
161.09	-0.9460	5.3827	0.24308
163.44	-0.9585	6.4696	0.21019
165.55	-0.9684	7.6559	0.18426
167.46	-0.9761	8.9445	0.16378
169.20	-0.9823	10.2699	0.14757
170.81	-0.9872	11.6000	0.13474
172.30	-0.9910	12.8877	0.12463
173.71	-0.9940	14.0842	0.11675
175.04	-0.9963	15.1415	0.11073
176.33	-0.9979	16.0157	0.10629
177.57	-0.9991	16.6690	0.10324
178.79	-0.9998	17.0730	0.10146
180.00	-1.0000	17.2097	0.10088

x = 0.577					x = 0.578					x = 0.579				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3230	5.36605	0.00	1.0000	0.3227	5.36077	0.00	1.0000	0.3225	5.35551		
5	8.80	0.9882	0.3241	5.33508	8.80	0.9882	0.3239	5.32981	8.80	0.9882	0.3237	5.32455		
10	17.58	0.9533	0.3277	5.24309	17.59	0.9533	0.3274	5.23782	17.59	0.9532	0.3272	5.23258		
15	26.34	0.8962	0.3337	5.09272	26.35	0.8961	0.3334	5.08748	26.36	0.8960	0.3332	5.08225		
20	35.06	0.8186	0.3424	4.88835	35.07	0.8184	0.3421	4.88313	35.08	0.8183	0.3419	4.87793		
25	43.72	0.7227	0.3541	4.63585	43.74	0.7225	0.3538	4.63067	43.76	0.7223	0.3536	4.62551		
30	52.32	0.6112	0.3692	4.34244	52.34	0.6109	0.3689	4.33731	52.36	0.6107	0.3687	4.33219		
35	60.83	0.4874	0.3884	4.01643	60.85	0.4870	0.3881	4.01136	60.88	0.4867	0.3879	4.00630		
40	69.23	0.3547	0.4125	3.66694	69.25	0.3542	0.4122	3.66194	69.28	0.3538	0.4119	3.65695		
45	77.49	0.2166	0.4425	3.30352	77.52	0.2161	0.4423	3.29861	77.55	0.2156	0.4420	3.29371		
50	85.58	0.0770	0.4801	2.93585	85.62	0.0764	0.4798	2.93105	85.65	0.0758	0.4796	2.92626		
55	93.48	-0.0607	0.5272	2.57331	93.52	-0.0614	0.5270	2.56864	93.56	-0.0621	0.5267	2.56399		
60	101.14	-0.1931	0.5868	2.22462	101.18	-0.1939	0.5865	2.22010	101.22	-0.1946	0.5863	2.21561		
65	108.51	-0.3174	0.6625	1.89737	108.55	-0.3182	0.6623	1.89305	108.60	-0.3190	0.6622	1.88873		
70	115.54	-0.4312	0.7597	1.59774	115.60	-0.4320	0.7596	1.59363	115.65	-0.4328	0.7596	1.58953		
75	122.20	-0.5329	0.8853	1.33009	122.25	-0.5337	0.8855	1.32622	122.31	-0.5344	0.8856	1.32237		
80	128.42	-0.6215	1.0486	1.09682	128.48	-0.6222	1.0491	1.09323	128.53	-0.6230	1.0495	1.08964		
85	134.18	-0.6969	1.2613	0.89831	134.23	-0.6976	1.2623	0.89501	134.29	-0.6983	1.2633	0.89172		
90	139.43	-0.7596	1.5376	0.73310	139.49	-0.7603	1.5394	0.73010	139.55	-0.7609	1.5412	0.72711		
95	144.16	-0.8108	1.8938	0.59827	144.23	-0.8114	1.8969	0.59558	144.29	-0.8120	1.8999	0.59290		
100	148.42	-0.8519	2.3472	0.49000	148.48	-0.8524	2.3521	0.48759	148.54	-0.8530	2.3570	0.48520		
105	152.20	-0.8846	2.9143	0.40406	152.25	-0.8850	2.9217	0.40193	152.31	-0.8854	2.9292	0.39981		
110	155.54	-0.9103	3.6084	0.33637	155.60	-0.9106	3.6192	0.33449	155.65	-0.9110	3.6301	0.33261		
115	158.51	-0.9305	4.4378	0.28325	158.55	-0.9308	4.4529	0.28158	158.60	-0.9311	4.4681	0.27992		
120	161.14	-0.9463	5.4030	0.24159	161.18	-0.9465	5.4235	0.24010	161.22	-0.9468	5.4440	0.23862		
125	163.48	-0.9587	6.4962	0.20885	163.52	-0.9589	6.5229	0.20752	163.56	-0.9591	6.5497	0.20620		
130	165.58	-0.9685	7.6995	0.18306	165.62	-0.9687	7.7333	0.18185	165.65	-0.9688	7.7674	0.18067		
135	167.49	-0.9763	8.9858	0.16269	167.52	-0.9764	9.0275	0.16180	167.55	-0.9765	9.0695	0.16052		
140	169.23	-0.9824	10.3196	0.14656	169.25	-0.9825	10.3695	0.14557	169.28	-0.9826	10.4198	0.14457		
145	170.83	-0.9872	11.6580	0.13381	170.85	-0.9873	11.7164	0.13289	170.88	-0.9874	11.7753	0.13197		
150	172.32	-0.9910	12.9540	0.12376	172.34	-0.9911	13.0207	0.12290	172.36	-0.9911	13.0879	0.12204		
155	173.72	-0.9940	14.1582	0.11593	173.74	-0.9940	14.2327	0.11511	173.76	-0.9941	14.3077	0.11430		
160	175.06	-0.9963	15.2224	0.10994	175.07	-0.9963	15.3038	0.10916	175.08	-0.9963	15.3858	0.10839		
165	176.34	-0.9980	16.1022	0.10553	176.35	-0.9980	16.1894	0.10478	176.36	-0.9980	16.2772	0.10403		
170	177.58	-0.9991	16.7599	0.10250	177.59	-0.9991	16.8114	0.10177	177.59	-0.9991	16.9436	0.10104		
175	178.80	-0.9998	17.1665	0.10074	178.80	-0.9998	17.2607	0.10001	178.80	-0.9998	17.3556	0.09929		
180	180.00	-1.0000	17.3041	0.10016	180.00	-1.0000	17.3992	0.09944	180.00	-1.0000	17.4951	0.09872		

x = 0.580					x = 0.581					x = 0.582				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3223	5.35027	0.00	1.0000	0.3220	5.34504	0.00	1.0000	0.3218	5.33983		
5	8.81	0.9882	0.3234	5.31931	8.81	0.9882	0.3232	5.31409	8.81	0.9882	0.3229	5.30868		
10	17.60	0.9532	0.3269	5.22735	17.61	0.9532	0.3267	5.22213	17.61	0.9531	0.3265	5.21694		
15	26.37	0.8960	0.3329	5.07704	26.38	0.8959	0.3327	5.07185	26.39	0.8958	0.3324	5.06675		
20	35.10	0.8182	0.3416	4.87275	35.11	0.8180	0.3414	4.86758	35.12	0.8179	0.3411	4.86243		
25	43.78	0.7221	0.3533	4.62036	43.79	0.7219	0.3531	4.61523	43.81	0.7217	0.3528	4.61011		
30	52.38	0.6104	0.3684	4.32709	52.40	0.6101	0.3682	4.32201	52.42	0.6098	0.3679	4.31694		
35	60.90	0.4863	0.3876	4.00126	60.93	0.4859	0.3874	3.99624	60.95	0.4856	0.3871	3.99122		
40	69.31	0.3533	0.4117	3.65198	69.34	0.3529	0.4114	3.64703	69.37	0.3524	0.4111	3.64209		
45	77.56	0.2150	0.4417	3.28883	77.61	0.2145	0.4415	3.28397	77.65	0.2140	0.4412	3.27912		
50	85.69	0.0751	0.4793	2.92149	85.73	0.0745	0.4791	2.91673	85.76	0.0739	0.4788	2.91199		
55	93.60	-0.0627	0.5265	2.55935	93.64	-0.0634	0.5263	2.55472	93.68	-0.0641	0.5260	2.55011		
60	101.27	-0.1954	0.5861	2.21112	101.31	-0.1961	0.5859	2.20655	101.35	-0.1968	0.5857	2.20219		
65	108.65	-0.3197	0.6620	1.88444	108.69	-0.3205	0.6619	1.88014	108.74	-0.3213	0.6617	1.87587		
70	115.70	-0.4336	0.7596	1.58544	115.75	-0.4344	0.7595	1.58137	115.80	-0.4352	0.7595	1.57730		
75	122.36	-0.5352	0.8858	1.31853	122.41	-0.5360	0.8859	1.31469	122.47	-0.5368	0.8861	1.31087		
80	128.59	-0.6238	1.0500	1.08607	128.65	-0.6245	1.0505	1.08251	128.70	-0.6253	1.0510	1.07896		
85	134.35	-0.6990	1.2643	0.88944	134.41	-0.6997	1.2653	0.88517	134.46	-0.7004	1.2663	0.88191		
90	139.60	-0.7616	1.5430	0.72814	139.66	-0.7622	1.5449	0.72117	139.72	-0.7629	1.5467	0.71821		
95	144.35	-0.8126	1.9030	0.59022	144.41	-0.8132	1.9061	0.58756	144.46	-0.8137	1.9093	0.58490		
100	148.59	-0.8535	2.3620	0.48282	148.65	-0.8540	2.3669	0.48044	148.70	-0.8545	2.3719	0.47808		
105	152.36	-0.8859	2.9370	0.39770	152.41	-0.8863	2.9442	0.39559	152.47	-0.8867	2.9518	0.39350		
110	155.70	-0.9114	3.6410	0.33074	155.75	-0.9117	3.6520	0.32888	155.80	-0.9121	3.6630	0.32703		
115	158.65	-0.9314	4.4834	0.27827	158.69	-0.9317	4.4988	0.27662	158.74	-0.9320	4.5143	0.27498		
120	161.27	-0.9470	5.4647	0.23715	161.31	-0.9473	5.4855	0.23569	161.35	-0.9475	5.5065	0.23423		
125	163.60	-0.9593	6.5768	0.20489	163.64	-0.9595	6.6040	0.20358	163.68	-0.9597	6.6314	0.20228		
130	165.69	-0.9690	7.8017	0.17949	165.73	-0.9691	7.8362	0.17831	165.76	-0.9693	7.8710	0.17714		
135	167.58	-0.9766	9.1117	0.15944	167.61	-0.9767	9.1543	0.15837	167.65	-0.9768	9.1971	0.15731		
140	169.31	-0.9826	10.4705	0.14359	169.34	-0.9827	10.5215	0.14261	169.37	-0.9828	10.5729	0.14163		
145	170.90	-0.9874	11.8345	0.13105	170.93	-0.9875	11.8942	0.13014	170.95	-0.9875	11.9543	0.12924		
150	172.38	-0.9912	13.1555	0.12118	172.40	-0.9912	13.2237	0.12033	172.42	-0.9913	13.2924	0.11949		
155	173.78	-0.9941	14.3833	0.11349	173.79	-0.9941	14.4594	0.11269	173.81	-0.9942	14.5361	0.11189		
160	175.10	-0.9963	15.4685	0										

2 x = 0.583					2 x = 0.584					2 x = 0.585				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3215	5.33463	0.00	1.0000	0.3213	5.32945	0.00	1.0000	0.3211	5.32428		
5	8.82	0.9882	0.3227	5.30368	8.82	0.9882	0.3225	5.29851	8.82	0.9882	0.3222	5.29335		
10	17.62	0.9531	0.3262	5.21175	17.63	0.9531	0.3260	5.20659	17.63	0.9530	0.3257	5.20144		
15	26.40	0.8957	0.3322	5.06150	26.41	0.8957	0.3320	5.05636	26.42	0.8956	0.3317	5.05122		
20	35.14	0.8178	0.3409	4.85729	35.15	0.8176	0.3406	4.85217	35.16	0.8175	0.3404	4.84707		
25	43.83	0.7215	0.3526	4.60501	43.84	0.7212	0.3523	4.59992	43.86	0.7210	0.3521	4.59485		
30	52.44	0.6095	0.3677	4.31188	52.46	0.6093	0.3674	4.30684	52.48	0.6090	0.3672	4.30182		
35	60.97	0.4852	0.3868	3.98623	61.00	0.4849	0.3866	3.98125	61.02	0.4845	0.3863	3.97628		
40	69.39	0.3520	0.4103	3.63717	69.42	0.3515	0.4106	3.63226	69.45	0.3511	0.4104	3.62736		
45	77.68	0.2134	0.4409	3.27428	77.71	0.2129	0.4407	3.26946	77.74	0.2123	0.4404	3.26465		
50	85.80	0.0733	0.4785	2.90726	85.83	0.0727	0.4783	2.90254	85.87	0.0721	0.4780	2.89784		
55	93.72	-0.0648	0.5258	2.54551	93.76	-0.0655	0.5255	2.54092	93.79	-0.0662	0.5253	2.53635		
60	101.40	-0.1976	0.5855	2.19774	101.44	-0.1983	0.5853	2.19331	101.48	-0.1991	0.5851	2.18889		
65	108.79	-0.3221	0.6616	1.87160	108.84	-0.3229	0.6614	1.86735	108.88	-0.3236	0.6613	1.86311		
70	115.85	-0.4360	0.7594	1.57325	115.90	-0.4368	0.7594	1.56921	115.95	-0.4376	0.7594	1.56519		
75	122.52	-0.5376	0.8862	1.30706	122.57	-0.5384	0.8864	1.30327	122.63	-0.5392	0.8865	1.29948		
80	128.76	-0.6260	1.0514	1.07542	128.82	-0.6268	1.0519	1.07189	128.87	-0.6276	1.0524	1.06837		
85	134.52	-0.7012	1.2673	0.87855	134.58	-0.7019	1.2683	0.87542	134.64	-0.7026	1.2693	0.87219		
90	139.78	-0.7635	1.5486	0.71520	139.84	-0.7642	1.5504	0.71233	139.89	-0.7649	1.5523	0.70940		
95	144.52	-0.8143	1.9124	0.58226	144.58	-0.8149	1.9155	0.57962	144.64	-0.8155	1.9187	0.57599		
100	148.78	-0.8550	2.3769	0.47572	148.82	-0.8555	2.3819	0.47338	148.87	-0.8560	2.3870	0.47104		
105	152.52	-0.8872	2.8594	0.39141	152.57	-0.8876	2.9670	0.38994	152.63	-0.8880	2.9747	0.38727		
110	155.85	-0.9125	3.3741	0.32519	155.90	-0.9128	3.6853	0.32335	155.95	-0.9132	3.6965	0.32153		
115	158.79	-0.9323	4.0298	0.27335	158.84	-0.9326	4.5455	0.27173	158.88	-0.9328	4.5613	0.27011		
120	161.40	-0.9477	5.5275	0.23279	161.44	-0.9480	5.5487	0.23134	161.48	-0.9482	5.5701	0.22991		
125	163.72	-0.9599	6.6590	0.20098	163.76	-0.9601	6.6868	0.19970	163.79	-0.9603	6.7147	0.19842		
130	165.80	-0.9694	7.9060	0.17597	165.83	-0.9696	7.9412	0.17482	165.87	-0.9697	7.9767	0.17366		
135	167.66	-0.9770	9.2402	0.15625	167.71	-0.9771	9.2837	0.15520	167.74	-0.9772	9.3274	0.15415		
140	169.39	-0.9829	10.6246	0.14066	169.42	-0.9830	10.6768	0.13970	169.45	-0.9831	10.7292	0.13874		
145	170.97	-0.9876	12.0148	0.12834	171.00	-0.9877	12.0758	0.12745	171.02	-0.9877	12.1372	0.12656		
150	172.44	-0.9913	13.3615	0.11865	172.46	-0.9914	13.4312	0.11782	172.48	-0.9914	13.5013	0.11699		
155	173.83	-0.9942	14.6134	0.11110	173.84	-0.9942	14.6912	0.11031	173.86	-0.9943	14.7636	0.10952		
160	175.14	-0.9964	15.7200	0.10533	175.15	-0.9964	15.8051	0.10457	175.16	-0.9964	15.8908	0.10383		
165	176.40	-0.9980	16.6351	0.10108	176.41	-0.9980	16.7262	0.10035	176.42	-0.9980	16.8180	0.09963		
170	177.62	-0.9991	17.3192	0.09816	177.63	-0.9991	17.4149	0.09746	177.63	-0.9991	17.5113	0.09675		
175	178.82	-0.9998	17.7423	0.09646	178.82	-0.9998	17.8408	0.09577	178.82	-0.9998	17.9400	0.09507		
180	180.00	-1.0000	17.6855	0.09590	180.00	-1.0000	17.9849	0.09521	180.00	-1.0000	18.0851	0.09452		

2 x = 0.586					2 x = 0.587					2 x = 0.588				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3208	5.31913	0.00	1.0000	0.3206	5.31400	0.00	1.0000	0.3203	5.30888		
5	8.83	0.9882	0.3220	5.28820	8.83	0.9882	0.3217	5.28307	8.83	0.9881	0.3215	5.27796		
10	17.64	0.9530	0.3255	5.19630	17.65	0.9530	0.3253	5.19118	17.65	0.9529	0.3250	5.18608		
15	26.43	0.8955	0.3315	5.04611	26.44	0.8954	0.3312	5.04101	26.45	0.8953	0.3310	5.03592		
20	35.18	0.8174	0.3401	4.84198	35.19	0.8172	0.3399	4.83690	35.20	0.8171	0.3397	4.83184		
25	43.88	0.7208	0.3518	4.59990	43.89	0.7206	0.3516	4.59476	43.91	0.7204	0.3513	4.58973		
30	52.50	0.6087	0.3669	4.29681	52.52	0.6084	0.3667	4.29181	52.54	0.6081	0.3664	4.28683		
35	61.04	0.4841	0.3861	3.97133	61.07	0.4838	0.3858	3.96639	61.09	0.4834	0.3856	3.96147		
40	69.48	0.3506	0.4101	3.62248	69.50	0.3501	0.4098	3.61761	69.53	0.3497	0.4096	3.61276		
45	77.77	0.2118	0.4402	3.25906	77.80	0.2113	0.4399	3.25508	77.83	0.2107	0.4396	3.25031		
50	85.90	0.0714	0.4778	2.89315	85.94	0.0708	0.4775	2.88848	85.97	0.0702	0.4773	2.88382		
55	93.83	-0.0669	0.5250	2.53179	93.87	-0.0676	0.5248	2.52724	93.91	-0.0682	0.5246	2.52271		
60	101.53	-0.1998	0.5848	2.19448	101.57	-0.2005	0.5846	2.19009	101.61	-0.2013	0.5844	2.18571		
65	108.93	-0.3244	0.6611	1.85889	108.98	-0.3252	0.6610	1.85467	109.02	-0.3260	0.6608	1.85047		
70	116.00	-0.4384	0.7593	1.56117	116.05	-0.4392	0.7593	1.55717	116.10	-0.4400	0.7592	1.55317		
75	122.68	-0.5400	0.8867	1.29571	122.74	-0.5408	0.8868	1.29194	122.79	-0.5416	0.8870	1.28819		
80	128.93	-0.6283	1.0529	1.06487	128.98	-0.6291	1.0534	1.06137	129.04	-0.6299	1.0539	1.05789		
85	134.69	-0.7033	1.2703	0.86897	134.75	-0.7040	1.2714	0.86577	134.81	-0.7047	1.2724	0.86257		
90	139.95	-0.7655	1.5542	0.70648	140.01	-0.7662	1.5561	0.70358	140.07	-0.7668	1.5579	0.70068		
95	144.69	-0.8161	1.9219	0.57438	144.75	-0.8167	1.9251	0.57177	144.81	-0.8172	1.9283	0.56917		
100	148.93	-0.8565	2.3920	0.46871	148.98	-0.8570	2.3971	0.46640	149.04	-0.8575	2.4023	0.46409		
105	152.68	-0.8885	2.8925	0.38521	152.74	-0.8889	2.9902	0.38316	152.79	-0.8893	2.9980	0.38112		
110	156.00	-0.9135	3.3708	0.31971	156.05	-0.9139	3.7192	0.31790	156.10	-0.9143	3.7306	0.31610		
115	158.93	-0.9331	4.5771	0.26850	158.98	-0.9334	4.5931	0.26690	159.02	-0.9337	4.6091	0.26531		
120	161.53	-0.9485	5.5916	0.22848	161.57	-0.9487	5.6132	0.22706	161.61	-0.9489	5.6349	0.22565		
125	163.83	-0.9605	6.7428	0.19714	163.87	-0.9607	6.7712	0.19587	163.91	-0.9608	6.7997	0.19461		
130	165.90	-0.9699	8.0124	0.17252	165.94	-0.9700	8.0483	0.17138	165.97	-0.9702	8.0845	0.17024		
135	167.77	-0.9773	9.3714	0.15311	167.80	-0.9774	9.4158	0.15208	167.83	-0.9775	9.4604	0.15105		
140	169.48	-0.9832	10.7821	0.13778	169.50	-0.9833	10.8353	0.13684	169.53	-0.9834	10.8889	0.13589		
145	171.04	-0.9878	12.1991	0.12568	171.07	-0.9879	12.2614	0.12480	171.09	-0.9879	12.3241	0.12393		
150	172.50	-0.9915	13.5720	0.11616	172.52	-0.9915	13.6432	0.11534	172.54	-0.9915	13.7149	0.11453		
155	173.88	-0.9943	14.8485	0.10875	173.89	-0.9943	14.9281	0.10797	173.91	-0.9944				

x = 0.589					x = 0.590					x = 0.591				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3201	5.30378	0.00	1.0000	0.3199	5.29869	0.00	1.0000	0.3196	5.29362		
5	8.84	0.9881	0.3213	5.27286	8.84	0.9881	0.3210	5.26777	8.84	0.9881	0.3208	5.26271		
10	17.66	0.9529	0.3248	5.18099	17.67	0.9528	0.3245	5.17592	17.67	0.9528	0.3243	5.17086		
15	26.46	0.8953	0.3308	5.03085	26.47	0.8952	0.3305	5.02580	26.48	0.8951	0.3303	5.02076		
20	35.22	0.8170	0.3394	4.82680	35.23	0.8168	0.3392	4.82177	35.24	0.8167	0.3389	4.81675		
25	43.93	0.7202	0.3511	4.57472	43.94	0.7200	0.3508	4.56973	43.96	0.7198	0.3506	4.56475		
30	52.57	0.6079	0.3662	4.28187	52.58	0.6076	0.3659	4.27692	52.61	0.6073	0.3657	4.27198		
35	61.12	0.4830	0.3853	3.95656	61.14	0.4827	0.3850	3.95167	61.16	0.4823	0.3848	3.94679		
40	69.56	0.3492	0.4093	3.60792	69.59	0.3488	0.4091	3.60310	69.61	0.3483	0.4088	3.59829		
45	77.87	0.2102	0.4394	3.24556	77.90	0.2097	0.4391	3.24082	77.93	0.2091	0.4389	3.23610		
50	86.01	0.0696	0.4770	2.87917	86.04	0.0690	0.4768	2.87454	86.08	0.0684	0.4765	2.86992		
55	93.95	-0.0689	0.5243	2.51818	93.99	-0.0696	0.5241	2.51368	94.03	-0.0703	0.5238	2.50918		
60	101.85	-0.2020	0.5842	2.17134	101.70	-0.2028	0.5840	2.16698	101.74	-0.2035	0.5838	2.16264		
65	109.07	-0.3268	0.6607	1.84628	109.12	-0.3275	0.6605	1.84210	109.17	-0.3283	0.6604	1.83794		
70	116.15	-0.4408	0.7592	1.54919	116.20	-0.4415	0.7592	1.54522	116.25	-0.4423	0.7591	1.54127		
75	122.84	-0.5423	0.8871	1.28445	122.90	-0.5431	0.8873	1.28072	122.95	-0.5439	0.8875	1.27700		
80	129.10	-0.6306	1.0543	1.05441	129.15	-0.6314	1.0548	1.05095	129.21	-0.6321	1.0553	1.04749		
85	134.07	-0.7055	1.2734	0.85938	134.02	-0.7062	1.2744	0.85621	134.06	-0.7069	1.2755	0.85304		
90	140.13	-0.7675	1.5598	0.69779	140.18	-0.7681	1.5617	0.69491	140.24	-0.7688	1.5636	0.69205		
95	144.87	-0.8178	1.9315	0.56658	144.92	-0.8184	1.9347	0.56401	144.98	-0.8190	1.9380	0.56144		
100	149.10	-0.8580	2.4074	0.46179	149.15	-0.8585	2.4126	0.45950	149.21	-0.8590	2.4178	0.45721		
105	152.84	-0.8898	3.0059	0.37908	152.90	-0.8902	3.0138	0.37706	152.95	-0.8906	3.0217	0.37504		
110	156.15	-0.9146	3.7421	0.31430	156.20	-0.9150	3.7536	0.31252	156.25	-0.9153	3.7653	0.31074		
115	159.07	-0.9340	4.6253	0.26373	159.12	-0.9343	4.6415	0.26215	159.17	-0.9346	4.6579	0.26058		
120	161.65	-0.9492	5.6568	0.22425	161.70	-0.9494	5.6789	0.22285	161.74	-0.9497	5.7011	0.22146		
125	163.95	-0.9610	6.8284	0.19336	163.99	-0.9612	6.8572	0.19211	164.03	-0.9614	6.8863	0.19087		
130	166.01	-0.9703	8.1210	0.16912	166.04	-0.9705	8.1577	0.16799	166.08	-0.9706	8.1946	0.16688		
135	167.87	-0.9777	9.5054	0.15002	167.90	-0.9778	9.5507	0.14901	167.93	-0.9779	9.5963	0.14800		
140	169.56	-0.9834	10.9429	0.13496	169.59	-0.9835	10.9973	0.13403	169.61	-0.9836	11.0521	0.13310		
145	171.12	-0.9880	12.3873	0.12307	171.14	-0.9881	12.4510	0.12220	171.16	-0.9881	12.5151	0.12135		
150	172.57	-0.9916	13.7872	0.11372	172.59	-0.9916	13.8600	0.11291	172.61	-0.9917	13.9333	0.11211		
155	173.93	-0.9944	15.0890	0.10644	173.94	-0.9944	15.1703	0.10568	173.96	-0.9944	15.2523	0.10492		
160	175.22	-0.9965	16.2401	0.10088	175.23	-0.9965	16.3291	0.10015	175.24	-0.9966	16.4187	0.09943		
165	176.46	-0.9981	17.1922	0.09679	176.47	-0.9981	17.2875	0.09609	176.48	-0.9981	17.3835	0.09539		
170	177.66	-0.9992	17.9041	0.09398	177.67	-0.9992	18.0042	0.09330	177.67	-0.9992	18.1050	0.09262		
175	178.84	-0.9998	18.3444	0.09234	178.84	-0.9998	18.4474	0.09167	178.84	-0.9998	18.5512	0.09100		
180	180.00	-1.0000	18.4934	0.09181	180.00	-1.0000	18.5974	0.09114	180.00	-1.0000	18.7022	0.09047		

x = 0.592					x = 0.593					x = 0.594				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3194	5.28857	0.00	1.0000	0.3192	5.28352	0.00	1.0000	0.3189	5.27850		
5	8.85	0.9881	0.3206	5.25765	8.85	0.9881	0.3203	5.25262	8.85	0.9881	0.3201	5.24759		
10	17.68	0.9528	0.3241	5.16582	17.68	0.9527	0.3238	5.16079	17.69	0.9527	0.3236	5.15578		
15	26.49	0.8950	0.3300	5.01573	26.50	0.8950	0.3298	5.01072	26.51	0.8949	0.3296	5.00573		
20	35.26	0.8166	0.3387	4.81175	35.27	0.8164	0.3384	4.80677	35.28	0.8163	0.3382	4.80180		
25	43.98	0.7196	0.3503	4.55979	43.99	0.7194	0.3501	4.55484	44.01	0.7192	0.3498	4.54990		
30	52.63	0.6070	0.3654	4.26706	52.65	0.6067	0.3652	4.26216	52.67	0.6065	0.3649	4.25727		
35	61.19	0.4819	0.3845	3.94192	61.21	0.4816	0.3843	3.93707	61.24	0.4812	0.3840	3.93224		
40	69.64	0.3479	0.4086	3.59350	69.67	0.3474	0.4083	3.58871	69.70	0.3470	0.4080	3.58395		
45	77.96	0.2066	0.4386	3.23139	77.99	0.2061	0.4383	3.22669	78.02	0.2075	0.4381	3.22201		
50	86.11	0.0678	0.4762	2.86531	86.15	0.0671	0.4760	2.86072	86.19	0.0665	0.4757	2.85614		
55	94.07	-0.0710	0.5236	2.50470	94.11	-0.0717	0.5234	2.50023	94.15	-0.0723	0.5231	2.49578		
60	101.78	-0.2042	0.5836	2.15831	101.83	-0.2050	0.5834	2.15399	101.87	-0.2057	0.5832	2.14968		
65	109.21	-0.3291	0.6602	1.83378	109.26	-0.3299	0.6601	1.82964	109.31	-0.3306	0.6599	1.82551		
70	116.30	-0.4431	0.7591	1.53732	116.35	-0.4439	0.7590	1.53339	116.41	-0.4447	0.7590	1.52946		
75	123.00	-0.5447	0.8876	1.27329	123.06	-0.5455	0.8878	1.26959	123.11	-0.5463	0.8879	1.26591		
80	129.26	-0.6329	1.0558	1.04405	129.32	-0.6337	1.0563	1.04062	129.38	-0.6344	1.0568	1.03720		
85	135.04	-0.7076	1.2765	0.84988	135.10	-0.7083	1.2776	0.84674	135.16	-0.7090	1.2786	0.84360		
90	140.30	-0.7694	1.5656	0.68919	140.36	-0.7701	1.5675	0.68634	140.42	-0.7707	1.5694	0.68350		
95	145.04	-0.8195	1.9412	0.55888	145.10	-0.8201	1.9445	0.55633	145.16	-0.8207	1.9478	0.55378		
100	149.26	-0.8595	2.4230	0.45494	149.32	-0.8600	2.4292	0.45267	149.38	-0.8605	2.4335	0.45042		
105	153.00	-0.8910	3.0297	0.37303	153.06	-0.8915	3.0377	0.37103	153.11	-0.8919	3.0458	0.36904		
110	156.30	-0.9157	3.7769	0.30897	156.35	-0.9160	3.7887	0.30720	156.41	-0.9164	3.8005	0.30545		
115	159.21	-0.9349	4.6743	0.25902	159.26	-0.9352	4.6909	0.25746	159.31	-0.9355	4.7075	0.25591		
120	161.78	-0.9499	5.7234	0.22007	161.83	-0.9501	5.7458	0.21869	161.87	-0.9504	5.7684	0.21732		
125	164.07	-0.9616	6.9156	0.18964	164.11	-0.9618	6.9451	0.18841	164.15	-0.9620	6.9748	0.18719		
130	166.11	-0.9708	8.2318	0.16577	166.15	-0.9709	8.2693	0.16467	166.19	-0.9711	8.3070	0.16357		
135	167.96	-0.9780	9.6422	0.14699	167.99	-0.9781	9.6895	0.14599	168.02	-0.9782	9.7351	0.14499		
140	169.64	-0.9837	11.1073	0.13218	169.67	-0.9838	11.1628	0.13126	169.70	-0.9839	11.2188	0.13035		
145	171.19	-0.9882	12.5797	0.12049	171.21	-0.9883	12.6448	0.11965	171.24	-0.9883	12.7104	0.11881		
150	172.63	-0.9917	14.0072	0.11131	172.65	-0.9918	14.0816	0.11052	172.67	-0.9918	14.1566	0.10974		
155	173.98	-0.9945	15.3348	0.10417	173.99	-0.9945	15.4180	0.10342	174.01	-0.9945	15.5018	0.10268		
160	175.26	-0.9966	16											

$$x = 0.595$$

$$x = 0.596$$

$$x = 0.597$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3187	5.27349	0.00	1.0000	0.3185	5.26849	0.00	1.0000	0.3182	5.26351
5	8.85	0.9881	0.3190	5.24208	8.86	0.9881	0.3190	5.23759	8.86	0.9881	0.3194	5.23261
10	17.70	0.9527	0.3234	5.15075	17.70	0.9526	0.3231	5.14580	17.71	0.9526	0.3229	5.14083
15	26.52	0.8948	0.3293	5.00075	26.53	0.8947	0.3291	4.99578	26.54	0.8947	0.3288	4.99083
20	35.30	0.8102	0.3380	4.79305	35.31	0.8100	0.3377	4.79191	35.32	0.8159	0.3375	4.78698
25	44.03	0.7190	0.3496	4.54498	44.04	0.7188	0.3493	4.54007	44.06	0.7186	0.3491	4.53518
30	52.69	0.6062	0.3647	4.26239	52.71	0.6059	0.3644	4.24753	52.73	0.6056	0.3642	4.24268
35	61.26	0.4808	0.3838	3.92741	61.28	0.4805	0.3835	3.92261	61.31	0.4801	0.3833	3.91781
40	69.72	0.3465	0.4078	3.57919	69.75	0.3461	0.4075	3.57445	69.78	0.3456	0.4073	3.56973
45	78.05	0.2070	0.4378	3.21734	78.09	0.2064	0.4376	3.21268	78.12	0.2059	0.4373	3.20804
50	86.22	0.0659	0.4755	2.85157	86.26	0.0653	0.4752	2.84702	86.29	0.0647	0.4750	2.84247
55	94.19	-0.0730	0.5229	2.49133	94.23	-0.0737	0.5226	2.48690	94.27	-0.0744	0.5224	2.48248
60	101.91	-0.2064	0.5830	2.14538	101.96	-0.2072	0.5827	2.14110	102.00	-0.2079	0.5825	2.13683
65	109.35	-0.3314	0.6598	1.82139	109.40	-0.3322	0.6596	1.81729	109.45	-0.3330	0.6595	1.81319
70	116.46	-0.4455	0.7530	1.52555	116.51	-0.4463	0.7589	1.52165	116.56	-0.4471	0.7589	1.51776
75	123.17	-0.5471	0.8881	1.26223	123.22	-0.5479	0.8882	1.25857	123.27	-0.5486	0.8884	1.25491
80	129.43	-0.6352	1.0573	1.03379	129.49	-0.6359	1.0578	1.03038	129.55	-0.6367	1.0583	1.02699
85	135.21	-0.7097	1.2797	0.84048	135.27	-0.7104	1.2807	0.83736	135.33	-0.7111	1.2818	0.83425
90	140.48	-0.7714	1.5713	0.68067	140.53	-0.7720	1.5733	0.67785	140.59	-0.7727	1.5752	0.67504
95	145.21	-0.8213	1.9511	0.55125	145.27	-0.8219	1.9544	0.54873	145.33	-0.8224	1.9577	0.54621
100	149.43	-0.8610	2.4388	0.44817	149.49	-0.8615	2.4441	0.44593	149.55	-0.8620	2.4495	0.44370
105	153.17	-0.8923	3.0539	0.36706	153.22	-0.8927	3.0621	0.36508	153.27	-0.8932	3.0703	0.36312
110	156.46	-0.9168	3.8124	0.30970	156.51	-0.9171	3.8244	0.30196	156.56	-0.9175	3.8364	0.30023
115	159.35	-0.9358	4.7243	0.25837	159.40	-0.9361	4.7412	0.25280	159.45	-0.9364	4.7581	0.25131
120	161.91	-0.9506	5.7912	0.21596	161.96	-0.9508	5.8141	0.21460	162.00	-0.9511	5.8372	0.21325
125	164.19	-0.9622	7.0046	0.18597	164.23	-0.9623	7.0347	0.18476	164.27	-0.9625	7.0650	0.18355
130	166.22	-0.9712	8.3450	0.16248	166.26	-0.9714	8.3833	0.16139	166.29	-0.9715	8.4218	0.16031
135	168.05	-0.9783	9.7820	0.14401	168.09	-0.9785	9.8292	0.14302	168.12	-0.9786	9.8768	0.13924
140	169.72	-0.9840	11.2752	0.12945	169.75	-0.9840	11.3320	0.12855	169.78	-0.9841	11.3892	0.12765
145	171.26	-0.9884	12.7764	0.11797	171.28	-0.9884	12.8430	0.11714	171.31	-0.9885	12.9100	0.11631
150	172.69	-0.9919	14.2321	0.10895	172.71	-0.9919	14.3092	0.10818	172.73	-0.9920	14.3849	0.10740
155	174.03	-0.9946	15.5863	0.10194	174.04	-0.9946	15.6713	0.10121	174.06	-0.9946	15.7571	0.10048
160	175.30	-0.9966	16.7841	0.09659	175.31	-0.9967	16.8711	0.09589	175.32	-0.9967	16.9709	0.09519
165	176.52	-0.9982	17.7750	0.09265	176.53	-0.9982	17.8747	0.09197	176.54	-0.9982	17.9752	0.09130
170	177.70	-0.9992	18.7161	0.08995	177.70	-0.9992	18.6208	0.08929	177.71	-0.9992	18.7263	0.08854
175	178.85	-0.9998	18.9744	0.08838	178.86	-0.9998	19.0823	0.08773	178.86	-0.9998	19.1909	0.08708
180	180.00	-1.0000	19.1236	0.08786	180.00	-1.0000	19.2384	0.08721	180.00	-1.0000	19.3482	0.08657

$$x = 0.598$$

$$x = 0.599$$

$$x = 0.600$$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3180	5.25854	0.00	1.0000	0.3178	5.25359	0.00	1.0000	0.3175	5.24866
5	8.86	0.9881	0.3192	5.22765	8.87	0.9880	0.3189	5.22270	8.87	0.9880	0.3187	5.21777
10	17.72	0.9526	0.3227	5.13588	17.72	0.9525	0.3224	5.13094	17.73	0.9525	0.3222	5.12601
15	26.55	0.8946	0.3286	4.98589	26.56	0.8945	0.3284	4.98097	26.57	0.8944	0.3281	4.97607
20	35.34	0.8158	0.3372	4.78207	35.35	0.8156	0.3370	4.77717	35.36	0.8155	0.3368	4.77229
25	44.08	0.7184	0.3489	4.53030	44.09	0.7182	0.3486	4.52544	44.11	0.7180	0.3484	4.52059
30	52.75	0.6053	0.3639	4.23784	52.77	0.6051	0.3637	4.23302	52.79	0.6048	0.3634	4.22822
35	61.33	0.4796	0.3830	3.91303	61.35	0.4794	0.3828	3.90827	61.38	0.4790	0.3825	3.90352
40	69.81	0.3452	0.4070	3.56501	69.83	0.3447	0.4068	3.56032	69.86	0.3443	0.4065	3.55563
45	78.15	0.2054	0.4371	3.20341	78.18	0.2048	0.4368	3.19879	78.21	0.2043	0.4366	3.19419
50	86.33	0.0641	0.4747	2.83795	86.36	0.0635	0.4745	2.83343	86.40	0.0628	0.4742	2.82893
55	94.31	-0.0751	0.5222	2.47808	94.34	-0.0758	0.5219	2.47368	94.38	-0.0764	0.5217	2.46930
60	102.04	-0.2087	0.5823	2.13257	102.09	-0.2094	0.5821	2.12833	102.13	-0.2101	0.5819	2.12409
65	109.50	-0.3337	0.6593	1.80911	109.54	-0.3345	0.6592	1.80504	109.59	-0.3353	0.6590	1.80098
70	116.61	-0.4479	0.7588	1.51388	116.66	-0.4487	0.7588	1.51001	116.71	-0.4495	0.7588	1.50616
75	123.33	-0.5494	0.8886	1.25127	123.38	-0.5502	0.8887	1.24764	123.43	-0.5510	0.8889	1.24402
80	129.60	-0.6374	1.0588	1.02361	129.66	-0.6382	1.0593	1.02024	129.71	-0.6390	1.0598	1.01688
85	135.39	-0.7119	1.2828	0.83116	135.44	-0.7126	1.2839	0.82807	135.50	-0.7133	1.2850	0.82499
90	140.65	-0.7733	1.5772	0.68224	140.71	-0.7740	1.5792	0.66945	140.77	-0.7746	1.5811	0.66667
95	145.39	-0.8230	1.9610	0.54371	145.44	-0.8236	1.9644	0.54121	145.50	-0.8241	1.9678	0.53872
100	149.60	-0.8625	2.4549	0.44148	149.66	-0.8630	2.4603	0.43927	149.71	-0.8635	2.4657	0.43706
105	153.33	-0.8936	3.0765	0.36116	153.38	-0.8940	3.0868	0.35921	153.43	-0.8944	3.0951	0.35726
110	156.61	-0.9178	3.8485	0.29851	156.66	-0.9182	3.8607	0.29679	156.71	-0.9185	3.8729	0.29508
115	159.50	-0.9366	4.7752	0.24980	159.54	-0.9369	4.7924	0.24828	159.59	-0.9372	4.8097	0.24678
120	162.04	-0.9513	5.8604	0.21191	162.09	-0.9515	5.8837	0.21057	162.13	-0.9518	5.9073	0.20924
125	164.31	-0.9627	7.0955	0.18236	164.34	-0.9629	7.1262	0.18117	164.38	-0.9631	7.1571	0.17999
130	166.33	-0.9717	8.4606	0.15924	166.36	-0.9718	8.4997	0.15817	166.40	-0.9719	8.5390	0.17871
135	168.15	-0.9787	9.9248	0.14107	168.18	-0.9788	9.9731	0.14010	168.21	-0.9789	10.0217	0.13944
140	169.81	-0.9842	11.4468	0.12676	169.83	-0.9843	11.5049	0.12588	169.86	-0.9844	11.5634	0.12500
145	171.33	-0.9886	12.9775	0.11549	171.35	-0.9886	13.0456	0.11467	171.38	-0.9887	13.1141	0.11386
150	172.75	-0.9920	14.4621	0.10664	172.77	-0.9920	14.5399	0.10587	172.79	-0.9921	14.6183	0.10511
155	174.08	-0.9947	15.8434	0.09975	174.09	-0.9947	15.9305	0.09903	174.11	-0.9947	16.0182	0.09832
160	175.34	-0.9967	17.0654	0.09450	175.35	-0.9967	17.1607	0.09381	175.36	-0.9967	17.2566	0.09313
165	176.55	-0.9982	18.0765	0.09064	176.56	-0.9982	18.1786	0.08997	176.57	-0.9982	18.2814	0.08932
170	177.72	-0.9992	18.8327	0.08799	177.72	-0.9992	18.9399	0.08735	177.73	-0.9992	19.0479	0.08670
175	178.86	-0.9998	19.3004	0.08645	178.87	-0.9998	19.4108	0.08581	178.87	-0.9998	19.5220	0.08518
180	180.00	-1.0000	19.4587	0.08594	180.00	-1.0000	19.5702	0.08531	180.00	-1.0000	19.6825	0.08468

x = 0.601					x = 0.602					x = 0.603				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3173	5.24373	0.00	1.0000	0.3171	5.23883	0.00	1.0000	0.3169	5.23393		
5	9.87	0.9880	0.3185	5.21285	9.88	0.9880	0.3182	5.20795	9.88	0.9880	0.3180	5.20306		
10	17.74	0.9525	0.3220	5.12111	17.74	0.9524	0.3217	5.11621	17.75	0.9524	0.3215	5.11133		
15	26.57	0.8944	0.3279	4.97118	26.58	0.8943	0.3277	4.96630	26.59	0.8942	0.3274	4.96143		
20	35.38	0.8154	0.3365	4.76742	35.39	0.8152	0.3363	4.76257	35.40	0.8151	0.3360	4.75773		
25	44.13	0.7178	0.3481	4.51576	44.14	0.7176	0.3479	4.51094	44.16	0.7174	0.3476	4.50613		
30	52.81	0.6045	0.3637	4.22343	52.83	0.6042	0.3629	4.21865	52.85	0.6040	0.3627	4.21388		
35	61.40	0.4787	0.3823	3.89878	61.43	0.4783	0.3820	3.89405	61.45	0.4779	0.3818	3.88934		
40	69.89	0.3438	0.4063	3.55096	69.92	0.3434	0.4060	3.54630	69.94	0.3429	0.4057	3.54166		
45	78.24	0.2038	0.4363	3.18960	78.27	0.2032	0.4360	3.18502	78.30	0.2027	0.4358	3.18046		
50	86.43	0.0622	0.4740	2.82444	86.47	0.0616	0.4737	2.81996	86.50	0.0610	0.4735	2.81550		
55	94.42	-0.0771	0.5214	2.46494	94.46	-0.0778	0.5212	2.46058	94.50	-0.0785	0.5210	2.45624		
60	102.17	-0.2109	0.5817	2.11987	102.22	-0.2116	0.5815	2.11556	102.26	-0.2123	0.5813	2.11146		
65	109.64	-0.3361	0.6589	1.79693	109.68	-0.3368	0.6587	1.79289	109.73	-0.3376	0.6586	1.78886		
70	116.76	-0.4503	0.7587	1.50231	116.81	-0.4510	0.7587	1.49848	116.86	-0.4518	0.7587	1.49465		
75	123.49	-0.5518	0.8890	1.24040	123.54	-0.5526	0.8892	1.23680	123.60	-0.5533	0.8894	1.23321		
80	129.77	-0.6397	1.0603	1.01353	129.83	-0.6405	1.0608	1.01019	129.88	-0.6412	1.0613	1.00686		
85	135.56	-0.7140	1.2860	0.82192	135.62	-0.7147	1.2871	0.81886	135.68	-0.7154	1.2882	0.81582		
90	140.83	-0.7752	1.5831	0.66389	140.89	-0.7759	1.5851	0.66113	140.94	-0.7765	1.5871	0.65837		
95	145.56	-0.8247	1.9711	0.53625	145.62	-0.8253	1.9745	0.53378	145.68	-0.8259	1.9780	0.53132		
100	149.77	-0.8640	2.4711	0.43487	149.83	-0.8645	2.4766	0.43268	149.88	-0.8650	2.4821	0.43050		
105	153.49	-0.8948	3.1035	0.35533	153.54	-0.8953	3.1119	0.35340	153.60	-0.8957	3.1204	0.35149		
110	156.76	-0.9189	3.8852	0.29338	156.81	-0.9192	3.8976	0.29169	156.86	-0.9196	3.9101	0.29000		
115	159.64	-0.9375	4.8271	0.24528	159.68	-0.9378	4.8446	0.24379	159.73	-0.9381	4.8622	0.24231		
120	162.17	-0.9520	5.9309	0.20792	162.22	-0.9522	5.9548	0.20660	162.26	-0.9524	5.9788	0.20529		
125	164.42	-0.9633	7.1882	0.17881	164.46	-0.9635	7.2195	0.17764	164.50	-0.9636	7.2511	0.17647		
130	166.43	-0.9721	8.5787	0.15505	166.47	-0.9722	8.6186	0.15500	166.50	-0.9724	8.6588	0.15395		
135	168.24	-0.9790	10.0707	0.13818	168.27	-0.9791	10.1200	0.13723	168.30	-0.9792	10.1697	0.13629		
140	169.89	-0.9845	11.6223	0.12412	169.92	-0.9846	11.6816	0.12325	169.94	-0.9846	11.7414	0.12239		
145	171.40	-0.9889	13.1832	0.11305	171.43	-0.9888	13.2527	0.11225	171.45	-0.9889	13.3228	0.11145		
150	172.81	-0.9921	14.6374	0.10436	172.83	-0.9922	14.7770	0.10361	172.85	-0.9922	14.8572	0.10286		
155	174.13	-0.9947	16.1065	0.09750	174.14	-0.9948	16.1956	0.09690	174.16	-0.9948	16.2853	0.09619		
160	175.38	-0.9967	17.5333	0.09245	175.39	-0.9968	17.4508	0.09178	175.40	-0.9968	17.5490	0.09111		
165	176.57	-0.9982	18.9850	0.08866	176.58	-0.9982	18.4895	0.08801	176.59	-0.9982	18.5947	0.08737		
170	177.74	-0.9992	19.1567	0.08607	177.74	-0.9992	19.2664	0.08543	177.75	-0.9992	19.3770	0.08460		
175	178.87	-0.9998	19.6341	0.08455	178.88	-0.9998	19.7470	0.08393	178.88	-0.9998	19.8609	0.08331		
180	180.00	-1.0000	19.7956	0.08405	180.00	-1.0000	19.8097	0.08343	180.00	-1.0000	20.0246	0.08282		

x = 0.604					x = 0.605					x = 0.606				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3166	5.22905	0.00	1.0000	0.3164	5.22419	0.00	1.0000	0.3162	5.21934		
5	8.88	0.9880	0.3178	5.19818	8.89	0.9880	0.3175	5.19332	8.89	0.9880	0.3173	5.18847		
10	17.76	0.9524	0.3213	5.10647	17.76	0.9523	0.3210	5.10161	17.77	0.9523	0.3208	5.09678		
15	26.60	0.8941	0.3272	4.96569	26.61	0.8940	0.3270	4.96175	26.62	0.8940	0.3267	4.95693		
20	35.42	0.8150	0.3358	4.75291	35.43	0.8148	0.3356	4.74810	35.44	0.8147	0.3353	4.74330		
25	44.17	0.7172	0.3474	4.50134	44.19	0.7170	0.3472	4.49656	44.21	0.7168	0.3469	4.49180		
30	52.87	0.6037	0.3624	4.20913	52.89	0.6034	0.3622	4.20440	52.91	0.6031	0.3619	4.19968		
35	61.47	0.4776	0.3815	3.89464	61.50	0.4772	0.3813	3.89096	61.52	0.4769	0.3810	3.88729		
40	69.97	0.3425	0.4055	3.53702	70.00	0.3421	0.4052	3.53241	70.03	0.3416	0.4050	3.52780		
45	78.34	0.2022	0.4355	3.17591	78.37	0.2016	0.4353	3.17137	78.40	0.2011	0.4350	3.16685		
50	86.54	0.0604	0.4732	2.81105	86.57	0.0598	0.4730	2.80661	86.61	0.0592	0.4727	2.80218		
55	94.54	-0.0792	0.5207	2.45190	94.58	-0.0798	0.5205	2.44758	94.62	-0.0805	0.5203	2.44328		
60	102.30	-0.2131	0.5811	2.10727	102.35	-0.2138	0.5809	2.10310	102.39	-0.2146	0.5807	2.09893		
65	109.78	-0.3384	0.6585	1.78485	109.82	-0.3391	0.6583	1.78085	109.87	-0.3399	0.6582	1.77685		
70	116.91	-0.4526	0.7586	1.49084	116.96	-0.4534	0.7586	1.48704	117.01	-0.4542	0.7586	1.48325		
75	123.65	-0.5541	0.8895	1.22963	123.70	-0.5549	0.8897	1.22606	123.76	-0.5557	0.8899	1.22250		
80	129.94	-0.6420	1.0618	1.00354	130.00	-0.6427	1.0623	1.00023	130.05	-0.6435	1.0628	0.99693		
85	135.73	-0.7161	1.2893	0.82128	135.79	-0.7168	1.2903	0.80975	135.85	-0.7175	1.2914	0.80673		
90	141.00	-0.7772	1.5891	0.66563	141.06	-0.7778	1.5911	0.65289	141.12	-0.7785	1.5931	0.65016		
95	145.73	-0.8264	1.9814	0.52886	145.79	-0.8270	1.9848	0.52642	145.85	-0.8276	1.9883	0.52399		
100	149.94	-0.8655	2.4877	0.42833	150.00	-0.8660	2.4932	0.42617	150.05	-0.8665	2.4988	0.42402		
105	153.65	-0.8961	3.1289	0.34958	153.70	-0.8965	3.1375	0.34767	153.76	-0.8969	3.1461	0.34578		
110	156.91	-0.9199	3.9226	0.28833	156.96	-0.9203	3.9352	0.28666	157.01	-0.9206	3.9479	0.28499		
115	159.78	-0.9384	4.8799	0.24083	159.82	-0.9386	4.8977	0.23936	159.87	-0.9389	4.9157	0.23790		
120	162.30	-0.9527	6.0029	0.20398	162.35	-0.9529	6.0272	0.20269	162.39	-0.9531	6.0517	0.20139		
125	164.54	-0.9638	7.2829	0.17531	164.58	-0.9640	7.3149	0.17416	164.62	-0.9642	7.3471	0.17301		
130	166.54	-0.9725	8.6993	0.15291	166.57	-0.9727	8.7400	0.15188	166.61	-0.9728	8.7811	0.15085		
135	168.34	-0.9793	10.2198	0.13535	168.37	-0.9795	10.2702	0.13441	168.40	-0.9796	10.3210	0.13348		
140	169.97	-0.9847	11.8017	0.12153	170.00	-0.9848	11.8624	0.12067	170.03	-0.9849	11.9235	0.11982		
145	171.47	-0.9889	13.3935	0.11065	171.50	-0.9890	13.4646	0.10986	171.52	-0.9891	13.5363	0.10908		
150	172.87	-0.9923	14.9380	0.10212	172.89	-0.9923	15.0195	0.10139	172.91	-0.9923	15.1016	0.10065		
155	174.17	-0.9948	16.3757	0.09549	174.19	-0.9949	16.4668	0.09480	174.21	-0.9949	16.5587	0		

x = 0.607					x = 0.608					x = 0.609				
FSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3159	5.21450	0.00	1.0000	0.3157	5.20968	0.00	1.0000	0.3155	5.20488		
5	8.89	0.9880	0.3171	5.18364	8.90	0.9880	0.3169	5.17882	8.90	0.9880	0.3166	5.17402		
10	17.78	0.9523	0.3206	5.09195	17.78	0.9522	0.3203	5.08715	17.79	0.9522	0.3201	5.08235		
15	26.63	0.8939	0.3265	4.94212	26.64	0.8938	0.3263	4.93733	26.65	0.8937	0.3260	4.93255		
20	35.45	0.8146	0.3351	4.73852	35.47	0.8144	0.3349	4.73375	35.48	0.8143	0.3346	4.72899		
25	44.22	0.7166	0.3467	4.48705	44.24	0.7164	0.3464	4.48231	44.26	0.7162	0.3462	4.47759		
30	52.93	0.6028	0.3617	4.19497	52.95	0.6026	0.3615	4.19027	52.97	0.6023	0.3612	4.18559		
35	61.54	0.4765	0.3808	3.87063	61.57	0.4761	0.3805	3.86599	61.59	0.4758	0.3803	3.86136		
40	70.05	0.3412	0.4047	3.52321	70.08	0.3407	0.4045	3.51863	70.11	0.3403	0.4042	3.51406		
45	78.43	0.2006	0.4348	3.16234	78.46	0.2000	0.4345	3.15784	78.49	0.1995	0.4343	3.15335		
50	86.64	0.0586	0.4725	2.79777	86.68	0.0579	0.4722	2.79336	86.71	0.0573	0.4720	2.78897		
55	94.66	-0.0812	0.5200	2.43898	94.70	-0.0819	0.5198	2.43470	94.74	-0.0826	0.5195	2.43043		
60	102.43	-0.2153	0.5805	2.09478	102.48	-0.2160	0.5803	2.09064	102.52	-0.2168	0.5800	2.08651		
65	109.92	-0.3407	0.6580	1.77287	109.97	-0.3415	0.6579	1.76890	110.01	-0.3422	0.6577	1.76494		
70	117.06	-0.4550	0.7585	1.47947	117.11	-0.4558	0.7585	1.47570	117.17	-0.4566	0.7584	1.47194		
75	123.81	-0.5565	0.8900	1.21895	123.87	-0.5573	0.8902	1.21541	123.92	-0.5580	0.8904	1.21188		
80	130.11	-0.6442	1.0633	0.99363	130.17	-0.6450	1.0638	0.99035	130.22	-0.6458	1.0643	0.98708		
85	135.91	-0.7182	1.2975	0.80372	135.97	-0.7189	1.2936	0.80071	136.02	-0.7196	1.2947	0.79772		
90	141.18	-0.7791	1.5952	0.64745	141.24	-0.7797	1.5972	0.64474	141.30	-0.7804	1.5992	0.64204		
95	145.91	-0.8281	1.9918	0.52156	145.97	-0.8287	1.9952	0.51914	146.02	-0.8293	1.9987	0.51673		
100	150.11	-0.8670	2.5044	0.42187	150.17	-0.8675	2.5101	0.41973	150.22	-0.8680	2.5158	0.41760		
105	153.81	-0.8974	3.1547	0.34389	153.87	-0.8978	3.1635	0.34201	153.92	-0.8982	3.1722	0.34014		
110	157.06	-0.9209	3.9607	0.28334	157.11	-0.9213	3.9735	0.28169	157.17	-0.9216	3.9865	0.28005		
115	159.92	-0.9392	4.9338	0.23644	159.97	-0.9395	4.9520	0.23500	160.01	-0.9398	4.9703	0.23355		
120	162.43	-0.9534	6.0763	0.20011	162.48	-0.9536	6.1011	0.19883	162.52	-0.9538	6.1261	0.19756		
125	164.66	-0.9644	7.3795	0.17187	164.70	-0.9645	7.4122	0.17073	164.74	-0.9647	7.4451	0.16960		
130	166.64	-0.9729	8.8225	0.14983	166.68	-0.9731	8.8641	0.14861	166.71	-0.9732	8.9061	0.14780		
135	168.43	-0.9797	10.3722	0.13256	168.46	-0.9798	10.4238	0.13164	168.49	-0.9799	10.4757	0.13072		
140	170.05	-0.9850	11.9851	0.11898	170.08	-0.9850	12.0472	0.11814	170.11	-0.9851	12.1097	0.11730		
145	171.54	-0.9891	13.6086	0.10830	171.57	-0.9892	13.6814	0.10752	171.59	-0.9892	13.7547	0.10675		
150	172.93	-0.9924	15.1843	0.09993	172.95	-0.9924	15.2676	0.09920	172.97	-0.9925	15.3516	0.09848		
155	174.22	-0.9949	16.6512	0.09347	174.24	-0.9950	16.7445	0.09274	174.26	-0.9950	16.8385	0.09206		
160	175.45	-0.9969	17.9495	0.08846	175.47	-0.9969	18.0516	0.08781	175.48	-0.9969	18.1545	0.08717		
165	176.63	-0.9983	19.0241	0.08482	176.64	-0.9983	19.1335	0.08419	176.65	-0.9983	19.2438	0.08351		
170	177.78	-0.9992	19.8279	0.08232	177.78	-0.9993	19.9429	0.08171	177.79	-0.9993	20.0587	0.08111		
175	178.89	-0.9998	20.3252	0.08097	178.90	-0.9998	20.4436	0.08027	178.90	-0.9998	20.5629	0.07967		
180	180.00	-1.0000	20.4935	0.08039	180.00	-1.0000	20.6131	0.07979	180.00	-1.0000	20.7336	0.07920		

x = 0.610					x = 0.611					x = 0.612				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3153	5.20008	0.00	1.0000	0.3150	5.19530	0.00	1.0000	0.3148	5.19054		
5	8.90	0.9880	0.3164	5.16923	8.91	0.9879	0.3162	5.16445	8.91	0.9879	0.3159	5.15969		
10	17.79	0.9522	0.3199	5.07757	17.80	0.9521	0.3196	5.07280	17.81	0.9521	0.3194	5.06805		
15	26.66	0.8937	0.3258	4.92779	26.67	0.8936	0.3256	4.92304	26.68	0.8935	0.3253	4.91830		
20	35.49	0.8142	0.3344	4.72425	35.51	0.8141	0.3342	4.71953	35.52	0.8139	0.3339	4.71481		
25	44.27	0.7160	0.3460	4.47288	44.29	0.7158	0.3457	4.46818	44.31	0.7156	0.3455	4.46350		
30	52.99	0.6020	0.3610	4.18092	53.01	0.6017	0.3607	4.17626	53.03	0.6014	0.3605	4.17162		
35	61.61	0.4754	0.3805	3.85874	61.64	0.4750	0.3798	3.85214	61.66	0.4747	0.3795	3.84755		
40	70.13	0.3398	0.4040	3.50951	70.16	0.3394	0.4037	3.50497	70.19	0.3389	0.4035	3.50044		
45	78.52	0.1990	0.4340	3.14888	78.55	0.1984	0.4338	3.14441	78.58	0.1979	0.4335	3.13996		
50	86.75	0.0567	0.4717	2.78460	86.78	0.0561	0.4715	2.78023	86.82	0.0555	0.4712	2.77588		
55	94.78	-0.0832	0.5193	2.42617	94.81	-0.0839	0.5191	2.42192	94.85	-0.0846	0.5188	2.41768		
60	102.56	-0.2175	0.5798	2.08239	102.61	-0.2182	0.5796	2.07829	102.65	-0.2190	0.5794	2.07419		
65	110.06	-0.3430	0.6576	1.76099	110.11	-0.3438	0.6574	1.75705	110.15	-0.3445	0.6573	1.75313		
70	117.22	-0.4574	0.7584	1.46819	117.27	-0.4581	0.7584	1.46445	117.32	-0.4589	0.7583	1.46072		
75	123.97	-0.5588	0.8905	1.20836	124.03	-0.5596	0.8907	1.20485	124.08	-0.5604	0.8909	1.20135		
80	130.28	-0.6465	1.0649	0.98382	130.33	-0.6473	1.0654	0.98056	130.39	-0.6480	1.0659	0.97732		
85	136.08	-0.7203	1.2958	0.79474	136.14	-0.7210	1.2969	0.79176	136.20	-0.7217	1.2980	0.78880		
90	141.35	-0.7810	1.6013	0.63934	141.41	-0.7817	1.6033	0.63666	141.47	-0.7823	1.6054	0.63399		
95	146.08	-0.8298	2.0023	0.51433	146.14	-0.8304	2.0058	0.51194	146.20	-0.8310	2.0094	0.50956		
100	150.28	-0.8684	2.5215	0.41548	150.33	-0.8689	2.5272	0.41337	150.39	-0.8694	2.5330	0.41127		
105	153.97	-0.8986	3.1810	0.33829	154.03	-0.8990	3.1899	0.33642	154.08	-0.8994	3.1988	0.33457		
110	157.22	-0.9220	3.9995	0.27841	157.27	-0.9223	4.0125	0.27678	157.32	-0.9227	4.0257	0.27516		
115	160.06	-0.9401	4.9887	0.23212	160.11	-0.9403	5.0072	0.23069	160.15	-0.9406	5.0259	0.22927		
120	162.56	-0.9540	6.1513	0.19629	162.61	-0.9543	6.1766	0.19503	162.65	-0.9545	6.2021	0.19378		
125	164.78	-0.9649	7.4782	0.16848	164.81	-0.9651	7.5116	0.16736	164.85	-0.9653	7.5452	0.16625		
130	166.75	-0.9734	8.9484	0.14679	166.78	-0.9735	8.9909	0.14579	166.82	-0.9737	9.0338	0.14490		
135	168.52	-0.9800	10.5281	0.12981	168.55	-0.9801	10.5808	0.12891	168.58	-0.9802	10.6339	0.12801		
140	170.13	-0.9852	12.1727	0.11647	170.16	-0.9853	12.2362	0.11565	170.19	-0.9854	12.3002	0.11483		
145	171.61	-0.9893	13.8287	0.10599	171.64	-0.9894	13.9032	0.10522	171.66	-0.9894	13.9782	0.10447		
150	172.99	-0.9925	15.4363	0.09777	173.01	-0.9926	15.5216	0.09706	173.03	-0.9926	15.6075	0.09635		
155	174.27	-0.9950	16.9332	0.09139	174.29	-0.9950	17.0287	0.09072	174.31	-0.9951	17.1249	0.09005		
160	175.49	-0.9969												

2 x = 0.613					2 x = 0.614					2 x = 0.615				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3146	5.18579	0.00	1.0000	0.3144	5.18105	0.00	1.0000	0.3141	5.17632		
5	8.91	0.9879	0.3157	5.15494	8.92	0.9879	0.3155	5.15021	8.92	0.9879	0.3153	5.14548		
10	17.81	0.9521	0.3192	5.06331	17.82	0.9520	0.3190	5.05859	17.83	0.9520	0.3187	5.05387		
15	26.69	0.8934	0.3251	4.91358	26.70	0.8934	0.3249	4.90887	26.71	0.8933	0.3247	4.90417		
20	35.53	0.8138	0.3337	4.71011	35.55	0.8137	0.3335	4.70543	35.56	0.8135	0.3332	4.70075		
25	44.32	0.7154	0.3453	4.45883	44.34	0.7152	0.3450	4.45417	44.36	0.7150	0.3448	4.44953		
30	53.05	0.6012	0.3602	4.16699	53.07	0.6009	0.3600	4.16238	53.09	0.6006	0.3598	4.15778		
35	61.68	0.4743	0.3793	3.84297	61.71	0.4740	0.3790	3.83840	61.73	0.4736	0.3788	3.83385		
40	70.22	0.3385	0.4032	3.49593	70.24	0.3380	0.4030	3.49143	70.27	0.3376	0.4027	3.48694		
45	78.62	0.1974	0.4333	3.13553	78.65	0.1969	0.4330	3.13110	78.68	0.1963	0.4328	3.12669		
50	86.85	0.0549	0.4710	2.77154	86.89	0.0543	0.4707	2.76721	86.92	0.0537	0.4705	2.76289		
55	94.89	-0.0853	0.5186	2.41346	94.93	-0.0860	0.5184	2.40924	94.97	-0.0866	0.5181	2.40504		
60	102.69	-0.2197	0.5792	2.07011	102.73	-0.2204	0.5790	2.06603	102.78	-0.2212	0.5788	2.06191		
65	110.20	-0.3453	0.6571	1.74921	110.25	-0.3461	0.6570	1.74531	110.30	-0.3469	0.6568	1.74141		
70	117.37	-0.4597	0.7583	1.45700	117.42	-0.4605	0.7583	1.45329	117.47	-0.4613	0.7582	1.44959		
75	124.14	-0.5612	0.8910	1.19786	124.19	-0.5619	0.8912	1.19438	124.24	-0.5627	0.8914	1.19091		
80	130.45	-0.6488	1.0664	0.97409	130.50	-0.6495	1.0659	0.97086	130.56	-0.6503	1.0675	0.96765		
85	136.26	-0.7225	1.2991	0.78584	136.32	-0.7232	1.3003	0.78290	136.37	-0.7239	1.3014	0.77996		
90	141.53	-0.7829	1.6075	0.63132	141.59	-0.7836	1.6096	0.62868	141.65	-0.7842	1.6116	0.62602		
95	146.26	-0.8315	2.0129	0.50718	146.32	-0.8321	2.0165	0.50481	146.37	-0.8327	2.0201	0.50246		
100	150.45	-0.8699	2.5388	0.40917	150.50	-0.8704	2.5446	0.40708	150.56	-0.8709	2.5505	0.40500		
105	154.14	-0.8998	3.2077	0.33273	154.19	-0.9002	3.2167	0.33090	154.24	-0.9007	3.2258	0.32907		
110	157.37	-0.9230	4.0389	0.27355	157.42	-0.9233	4.0523	0.27195	157.47	-0.9237	4.0657	0.27035		
115	160.20	-0.9409	5.0447	0.22785	160.25	-0.9412	5.0636	0.22645	160.30	-0.9414	5.0826	0.22504		
120	162.69	-0.9547	6.2277	0.19253	162.73	-0.9549	6.2536	0.19129	162.78	-0.9552	6.2796	0.19006		
125	164.89	-0.9654	7.5790	0.16514	164.93	-0.9656	7.6131	0.16404	164.97	-0.9658	7.6475	0.16295		
130	166.85	-0.9738	9.0770	0.14381	166.89	-0.9739	9.1205	0.14282	166.92	-0.9741	9.1644	0.14184		
135	168.62	-0.9803	10.6874	0.12711	168.65	-0.9804	10.7413	0.12622	168.68	-0.9805	10.7957	0.12534		
140	170.22	-0.9855	12.3646	0.11401	170.24	-0.9855	12.4296	0.11320	170.27	-0.9856	12.4950	0.11239		
145	171.68	-0.9895	14.0539	0.10371	171.71	-0.9895	14.1301	0.10296	171.73	-0.9896	14.2070	0.10222		
150	173.05	-0.9925	15.6942	0.09565	173.07	-0.9927	15.7815	0.09495	173.09	-0.9927	15.8695	0.09426		
155	174.32	-0.9951	17.2219	0.08939	174.34	-0.9951	17.3196	0.08873	174.36	-0.9952	17.4181	0.08808		
160	175.53	-0.9970	18.5743	0.08462	175.55	-0.9970	18.6813	0.08399	175.56	-0.9970	18.7892	0.08337		
165	176.65	-0.9983	19.6939	0.08112	176.70	-0.9983	19.8087	0.08051	176.71	-0.9984	19.9243	0.07991		
170	177.81	-0.9993	20.5316	0.07872	177.82	-0.9993	20.6521	0.07813	177.83	-0.9993	20.7737	0.07754		
175	178.91	-0.9998	21.0498	0.07732	178.92	-0.9998	21.1740	0.07674	178.92	-0.9998	21.2992	0.07616		
180	180.00	-1.0000	21.2253	0.07686	180.00	-1.0000	21.3507	0.07628	180.00	-1.0000	21.4771	0.07571		

2 x = 0.616					2 x = 0.617					2 x = 0.618				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3139	5.17161	0.00	1.0000	0.3137	5.16692	0.00	1.0000	0.3135	5.16223		
5	8.92	0.9879	0.3150	5.14078	8.93	0.9879	0.3148	5.13608	8.93	0.9879	0.3146	5.13140		
10	17.83	0.9520	0.3185	5.04918	17.84	0.9519	0.3183	5.04449	17.85	0.9519	0.3181	5.03982		
15	26.72	0.8932	0.3244	4.89949	26.73	0.8931	0.3242	4.89482	26.74	0.8931	0.3240	4.89017		
20	35.57	0.8134	0.3330	4.69609	35.58	0.8133	0.3328	4.69145	35.60	0.8131	0.3325	4.68681		
25	44.37	0.7148	0.3445	4.44490	44.39	0.7146	0.3443	4.44029	44.40	0.7144	0.3441	4.43568		
30	53.11	0.6003	0.3595	4.15319	53.13	0.6001	0.3593	4.14861	53.15	0.5998	0.3590	4.14405		
35	61.75	0.4732	0.3785	3.82931	61.78	0.4729	0.3783	3.82479	61.80	0.4725	0.3781	3.82027		
40	70.30	0.3371	0.4025	3.48246	70.33	0.3367	0.4022	3.47800	70.35	0.3362	0.4020	3.47355		
45	78.71	0.1958	0.4325	3.12229	78.74	0.1953	0.4323	3.11791	78.77	0.1947	0.4320	3.11353		
50	86.96	0.0531	0.4702	2.75859	86.99	0.0525	0.4700	2.75429	87.03	0.0518	0.4697	2.75001		
55	95.01	-0.0873	0.5179	2.40085	95.05	-0.0880	0.5177	2.39667	95.09	-0.0887	0.5174	2.39251		
60	102.82	-0.2219	0.5786	2.05792	102.86	-0.2226	0.5784	2.05388	102.91	-0.2234	0.5782	2.04985		
65	110.34	-0.3476	0.6567	1.73753	110.39	-0.3484	0.6565	1.73365	110.44	-0.3492	0.6564	1.72979		
70	117.52	-0.4621	0.7582	1.44591	117.57	-0.4629	0.7582	1.44223	117.62	-0.4636	0.7581	1.43856		
75	124.30	-0.5635	0.8915	1.18745	124.35	-0.5643	0.8917	1.18399	124.41	-0.5651	0.8919	1.18055		
80	130.62	-0.6510	1.0680	0.96444	130.67	-0.6518	1.0685	0.96124	130.73	-0.6525	1.0690	0.95806		
85	136.43	-0.7246	1.3025	0.77703	136.49	-0.7253	1.3036	0.77411	136.55	-0.7260	1.3048	0.77120		
90	141.71	-0.7849	1.6137	0.62338	141.77	-0.7855	1.6158	0.62074	141.83	-0.7861	1.6180	0.61812		
95	146.43	-0.8332	2.0237	0.50011	146.49	-0.8338	2.0274	0.49776	146.55	-0.8344	2.0310	0.49543		
100	150.62	-0.8714	2.5563	0.40292	150.67	-0.8719	2.5622	0.40086	150.73	-0.8723	2.5682	0.39880		
105	154.30	-0.9011	3.2349	0.32725	154.35	-0.9015	3.2441	0.32544	154.41	-0.9019	3.2533	0.32364		
110	157.52	-0.9240	4.0791	0.26876	157.57	-0.9244	4.0927	0.26717	157.62	-0.9247	4.1064	0.26560		
115	160.34	-0.9417	5.1031	0.22365	160.39	-0.9420	5.1211	0.22226	160.44	-0.9423	5.1405	0.22088		
120	162.82	-0.9554	6.3058	0.18883	162.86	-0.9556	6.3522	0.18761	162.91	-0.9558	6.3587	0.18639		
125	165.01	-0.9660	7.6820	0.16186	165.05	-0.9661	7.7169	0.16077	165.09	-0.9663	7.7519	0.15970		
130	166.96	-0.9742	9.2085	0.14087	166.99	-0.9743	9.2530	0.13990	167.03	-0.9745	9.2979	0.13894		
135	168.71	-0.9806	10.8504	0.12446	168.74	-0.9808	10.9055	0.12358	168.77	-0.9809	10.9611	0.12271		
140	170.30	-0.9857	12.5610	0.11159	170.33	-0.9858	12.6274	0.11079	170.35	-0.9859	12.6944	0.11000		
145	171.75	-0.9897	14.2844	0.10148	171.78	-0.9897	14.3624	0.10074	171.80	-0.9898	14.4411	0.10001		
150	173.11	-0.9928	15.9582	0.09357	173.13	-0.9928	16.0476	0.09288	173.15	-0.9929	16.1378	0.09220		
155	174.37	-0.9952	17.5174	0.08743	174.39	-0.9952	17.6175	0.08678	174.40	-0.995				

x = 0.619					x = 0.620					x = 0.621				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3132	5.15756	0.00	1.0000	0.3130	5.15291	0.00	1.0000	0.3128	5.14826		
5	8.93	0.9879	0.3144	5.12674	8.94	0.9879	0.3141	5.12208	8.94	0.9879	0.3139	5.11744		
10	17.85	0.9518	0.3178	5.03516	17.86	0.9518	0.3176	5.03052	17.87	0.9518	0.3174	5.02589		
15	26.75	0.8930	0.3237	4.88552	26.76	0.8929	0.3235	4.88089	26.77	0.8928	0.3233	4.87628		
20	35.61	0.8130	0.3323	4.68219	35.62	0.8129	0.3321	4.67759	35.64	0.8127	0.3318	4.67299		
25	44.42	0.7142	0.3438	4.43109	44.44	0.7140	0.3436	4.42652	44.45	0.7138	0.3434	4.42195		
30	53.17	0.5995	0.3588	4.13950	53.18	0.5992	0.3586	4.13496	53.20	0.5990	0.3583	4.13043		
35	61.83	0.4722	0.3778	3.81577	61.85	0.4718	0.3776	3.81128	61.87	0.4714	0.3773	3.80681		
40	70.38	0.3358	0.4017	3.46911	70.41	0.3353	0.4015	3.46468	70.43	0.3349	0.4013	3.46026		
45	78.80	0.1942	0.4318	3.10917	78.83	0.1937	0.4315	3.10482	78.86	0.1931	0.4313	3.10048		
50	87.06	0.0512	0.4695	2.74574	87.10	0.0506	0.4693	2.74148	87.13	0.0500	0.4690	2.73724		
55	95.13	-0.0894	0.5172	2.38835	95.17	-0.0900	0.5170	2.38421	95.20	-0.0907	0.5167	2.38007		
60	102.95	-0.2241	0.5760	2.04583	102.99	-0.2248	0.5778	2.04183	103.04	-0.2256	0.5776	2.03783		
65	110.48	-0.3499	0.6563	1.72594	110.53	-0.3507	0.6561	1.72209	110.58	-0.3515	0.6560	1.71826		
70	117.67	-0.4644	0.7581	1.43490	117.72	-0.4652	0.7581	1.43125	117.77	-0.4660	0.7580	1.42762		
75	124.46	-0.5658	0.8920	1.17712	124.51	-0.5666	0.8922	1.17370	124.57	-0.5674	0.8924	1.17028		
80	130.79	-0.6533	1.0696	0.95488	130.84	-0.6540	1.0701	0.95171	130.90	-0.6548	1.0706	0.94855		
85	136.61	-0.7267	1.3059	0.76630	136.67	-0.7274	1.3070	0.76540	136.72	-0.7281	1.3082	0.76252		
90	141.88	-0.7868	1.6201	0.61551	141.94	-0.7874	1.6222	0.61290	142.00	-0.7880	1.6244	0.61030		
95	146.61	-0.8349	2.0347	0.49310	146.67	-0.8355	2.0384	0.49079	146.72	-0.8360	2.0421	0.48848		
100	150.79	-0.8728	2.5742	0.39675	150.84	-0.8733	2.5802	0.39471	150.90	-0.8738	2.5862	0.39268		
105	154.46	-0.9023	3.2626	0.32184	154.51	-0.9027	3.2719	0.32006	154.57	-0.9031	3.2812	0.31828		
110	157.67	-0.9250	4.1201	0.26403	157.72	-0.9254	4.1330	0.26246	157.77	-0.9257	4.1476	0.26091		
115	160.48	-0.9425	5.1600	0.21950	160.53	-0.9428	5.1797	0.21814	160.58	-0.9431	5.1995	0.21677		
120	162.95	-0.9560	6.3855	0.18518	162.99	-0.9563	6.4124	0.18398	163.04	-0.9565	6.4395	0.18278		
125	165.13	-0.9665	7.7873	0.15862	165.17	-0.9667	7.8229	0.15755	165.20	-0.9668	7.8587	0.15650		
130	167.06	-0.9746	9.3430	0.13798	167.10	-0.9748	9.3885	0.13702	167.13	-0.9749	9.4343	0.13608		
135	168.80	-0.9810	11.0711	0.12185	168.83	-0.9811	11.0735	0.12099	168.86	-0.9812	11.1304	0.12013		
140	170.38	-0.9859	12.7619	0.10921	170.41	-0.9860	12.8239	0.10842	170.43	-0.9861	12.8985	0.10764		
145	171.83	-0.9898	14.5203	0.09929	171.85	-0.9899	14.6002	0.09856	171.87	-0.9900	14.6807	0.09784		
150	173.17	-0.9929	16.2286	0.09152	173.18	-0.9929	16.3201	0.09085	173.20	-0.9930	16.4126	0.09018		
155	174.42	-0.9953	17.8201	0.08550	174.44	-0.9953	17.9226	0.08486	174.45	-0.9953	18.0260	0.08423		
160	175.61	-0.9971	19.2295	0.08091	175.62	-0.9971	19.3418	0.08031	175.64	-0.9971	19.4550	0.07971		
165	176.75	-0.9984	20.3965	0.07755	176.76	-0.9984	20.5169	0.07696	176.77	-0.9984	20.6384	0.07636		
170	177.85	-0.9993	21.2698	0.07524	177.86	-0.9993	21.3963	0.07467	177.87	-0.9993	21.5239	0.07411		
175	178.93	-0.9998	21.8101	0.07390	178.94	-0.9998	21.9405	0.07334	178.94	-0.9998	22.0719	0.07279		
180	180.00	-1.0000	21.9930	0.07346	180.00	-1.0000	22.1247	0.07290	180.00	-1.0000	22.2574	0.07235		

x = 0.622					x = 0.623					x = 0.624				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3126	5.14363	0.00	1.0000	0.3123	5.13902	0.00	1.0000	0.3121	5.13441		
5	8.94	0.9878	0.3137	5.11282	8.94	0.9878	0.3135	5.10820	8.95	0.9878	0.3133	5.10360		
10	17.87	0.9517	0.3172	5.02127	17.88	0.9517	0.3169	5.01666	17.88	0.9517	0.3167	5.01207		
15	26.78	0.8928	0.3241	4.87157	26.79	0.8927	0.3238	4.86709	26.80	0.8926	0.3236	4.86251		
20	35.65	0.8126	0.3316	4.66841	35.66	0.8125	0.3314	4.66384	35.67	0.8123	0.3312	4.65929		
25	44.47	0.7136	0.3431	4.41740	44.49	0.7134	0.3429	4.41287	44.50	0.7132	0.3427	4.40834		
30	53.22	0.5987	0.3581	4.12592	53.24	0.5984	0.3578	4.12142	53.26	0.5981	0.3576	4.11693		
35	61.90	0.4711	0.3771	3.80234	61.92	0.4707	0.3768	3.79789	61.94	0.4704	0.3766	3.79345		
40	70.46	0.3345	0.4010	3.45586	70.49	0.3340	0.4008	3.45147	70.51	0.3336	0.4005	3.44709		
45	78.90	0.1926	0.4310	3.09615	78.93	0.1921	0.4308	3.09183	78.96	0.1915	0.4305	3.08753		
50	87.17	0.0494	0.4688	2.73300	87.20	0.0488	0.4685	2.72876	87.24	0.0482	0.4683	2.72457		
55	95.24	-0.0914	0.5165	2.37595	95.28	-0.0921	0.5163	2.37184	95.32	-0.0927	0.5160	2.36774		
60	103.08	-0.2263	0.5774	2.03385	103.12	-0.2270	0.5772	2.02987	103.17	-0.2278	0.5770	2.02591		
65	110.62	-0.3522	0.6558	1.71444	110.67	-0.3530	0.6557	1.71063	110.72	-0.3538	0.6555	1.70683		
70	117.83	-0.4668	0.7580	1.42399	117.88	-0.4676	0.7580	1.42037	117.93	-0.4684	0.7579	1.41676		
75	124.62	-0.5682	0.8926	1.16688	124.68	-0.5689	0.8927	1.16349	124.73	-0.5697	0.8929	1.16010		
80	130.96	-0.6555	1.0712	0.94540	131.02	-0.6563	1.0717	0.94226	131.07	-0.6570	1.0722	0.93912		
85	136.78	-0.7288	1.3093	0.75954	136.84	-0.7295	1.3105	0.75677	136.90	-0.7302	1.3116	0.75391		
90	142.06	-0.7887	1.6265	0.60772	142.12	-0.7893	1.6287	0.60514	142.18	-0.7899	1.6308	0.60256		
95	146.78	-0.8366	2.0458	0.48618	146.84	-0.8372	2.0495	0.48388	146.90	-0.8377	2.0533	0.48160		
100	150.96	-0.8743	2.5923	0.39065	151.02	-0.8747	2.5984	0.38863	151.07	-0.8752	2.6045	0.38662		
105	154.62	-0.9035	3.2907	0.31650	154.68	-0.9039	3.3002	0.31473	154.73	-0.9043	3.3097	0.31297		
110	157.83	-0.9260	4.1618	0.25936	157.88	-0.9264	4.1759	0.25781	157.93	-0.9267	4.1901	0.25628		
115	160.62	-0.9434	5.2135	0.21542	160.67	-0.9436	5.2395	0.21407	160.72	-0.9439	5.2597	0.21272		
120	163.08	-0.9567	6.4668	0.18159	163.12	-0.9569	6.4944	0.18040	163.17	-0.9571	6.5221	0.17922		
125	165.24	-0.9670	7.8948	0.15544	165.28	-0.9672	7.9312	0.15439	165.32	-0.9674	7.9678	0.15335		
130	167.17	-0.9750	9.4805	0.13513	167.20	-0.9752	9.5271	0.13420	167.24	-0.9753	9.5739	0.13325		
135	168.90	-0.9813	11.1876	0.11928	168.93	-0.9814	11.2454	0.11844	168.96	-0.9815	11.3035	0.11760		
140	170.46	-0.9862	12.9676	0.10687	170.49	-0.9863	13.0372	0.10610	170.51	-0.9863	13.1074	0.10533		
145	171.90	-0.9900	14.7619	0.09713	171.92	-0.9901	14.8437	0.09642	171.94	-0.9901	14.9262	0.09571		
150	173.22	-0.9930	16.5055	0.08951	173.24	-0.9931	16.5992	0.08885	173.26	-0.9931	16.6938	0.08819		
155	174.47	-0.9953	18.1302	0.08361	174.49	-0.9954	18.2352	0.08298	174.50	-0.9954	18.3411	0.08236		
160	175.65	-0.9971	19.5692	0.07911	175.66	-0.9971	19.1							

x = 0.625					x = 0.626					x = 0.627				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3119	5.12982	0.00	1.0000	0.3117	5.12524	0.00	1.0000	0.3115	5.12068		
5	8.95	0.9878	0.3130	5.09901	8.95	0.9878	0.3128	5.09444	8.96	0.9878	0.3126	5.08988		
10	17.89	0.9516	0.3165	5.00749	17.90	0.9516	0.3163	5.00293	17.90	0.9516	0.3161	4.99837		
15	26.81	0.8925	0.3224	4.85795	26.82	0.8925	0.3222	4.85339	26.83	0.8924	0.3219	4.84866		
20	35.69	0.8122	0.3309	4.65475	35.70	0.8121	0.3307	4.65022	35.71	0.8119	0.3305	4.64570		
25	44.52	0.7130	0.3424	4.40383	44.53	0.7128	0.3422	4.39933	44.55	0.7126	0.3420	4.39484		
30	53.28	0.5979	0.3574	4.11246	53.30	0.5976	0.3571	4.10800	53.32	0.5973	0.3569	4.10355		
35	61.97	0.4700	0.3764	3.78903	61.99	0.4696	0.3761	3.78461	62.01	0.4693	0.3759	3.78021		
40	70.54	0.3331	0.4003	3.44273	70.57	0.3327	0.4000	3.43837	70.60	0.3322	0.3998	3.43403		
45	78.99	0.1910	0.4303	3.08324	79.42	0.1905	0.4300	3.07896	79.05	0.1900	0.4298	3.07469		
50	87.27	0.0476	0.4680	2.72037	87.31	0.0470	0.4678	2.71618	87.34	0.0464	0.4675	2.71200		
55	95.36	-0.0934	0.5158	2.36365	95.40	-0.0941	0.5156	2.35957	95.44	-0.0948	0.5153	2.35551		
60	103.21	-0.2285	0.5768	2.02195	103.25	-0.2292	0.5766	2.01801	103.29	-0.2300	0.5764	2.01408		
65	110.77	-0.3546	0.6554	1.70304	110.81	-0.3553	0.6552	1.69926	110.86	-0.3561	0.6551	1.69548		
70	117.98	-0.4691	0.7579	1.41316	118.03	-0.4699	0.7579	1.40957	118.08	-0.4707	0.7579	1.40599		
75	124.79	-0.5705	0.8931	1.15672	124.84	-0.5713	0.8933	1.15336	124.89	-0.5721	0.8934	1.15000		
80	131.13	-0.6578	1.0728	0.93600	131.19	-0.6585	1.0733	0.93288	131.24	-0.6592	1.0739	0.92978		
85	136.96	-0.7309	1.3128	0.75106	137.02	-0.7316	1.3139	0.74822	137.08	-0.7323	1.3151	0.74539		
90	142.24	-0.7906	1.6330	0.60000	142.30	-0.7912	1.6352	0.59744	142.36	-0.7918	1.6374	0.59490		
95	146.96	-0.8383	2.0570	0.47932	147.02	-0.8388	2.0608	0.47705	147.08	-0.8394	2.0646	0.47479		
100	151.13	-0.8757	2.6107	0.38462	151.19	-0.8762	2.6169	0.38262	151.24	-0.8767	2.6231	0.38063		
105	154.79	-0.9047	3.3193	0.31122	154.84	-0.9051	3.3290	0.30948	154.89	-0.9055	3.3387	0.30774		
110	157.96	-0.9270	4.2044	0.25475	158.03	-0.9274	4.2187	0.25322	158.08	-0.9277	4.2332	0.25171		
115	160.77	-0.9442	5.2801	0.21139	160.81	-0.9445	5.3006	0.21006	160.86	-0.9447	5.3212	0.20873		
120	163.21	-0.9574	6.5500	0.17805	163.25	-0.9576	6.5781	0.17688	163.29	-0.9578	6.6064	0.17571		
125	165.36	-0.9675	8.0047	0.15231	165.40	-0.9677	8.0419	0.15127	165.44	-0.9679	8.0794	0.15024		
130	167.27	-0.9754	9.6212	0.13233	167.31	-0.9756	9.6688	0.13141	167.34	-0.9757	9.7167	0.13049		
135	168.99	-0.9816	11.3622	0.11676	169.02	-0.9817	11.4212	0.11593	169.05	-0.9818	11.4808	0.11510		
140	170.54	-0.9864	13.1781	0.10457	170.57	-0.9865	13.2494	0.10381	170.60	-0.9866	13.3213	0.10306		
145	171.97	-0.9902	15.0093	0.09501	171.99	-0.9902	15.0931	0.09431	172.01	-0.9903	15.1775	0.09362		
150	173.28	-0.9931	16.7891	0.08754	173.30	-0.9932	16.8851	0.08689	173.32	-0.9932	16.9820	0.08624		
155	174.52	-0.9954	18.4478	0.08175	174.55	-0.9955	18.5554	0.08113	174.55	-0.9955	18.6639	0.08053		
160	175.69	-0.9972	19.9172	0.07734	175.70	-0.9972	20.0351	0.07676	175.71	-0.9972	20.1540	0.07618		
165	176.81	-0.9984	21.1341	0.07411	176.82	-0.9985	21.2605	0.07354	176.83	-0.9985	21.3881	0.07299		
170	177.89	-0.9993	22.0448	0.07189	177.90	-0.9993	22.1777	0.07135	177.90	-0.9993	22.3118	0.07080		
175	178.95	-0.9998	22.6084	0.07050	178.95	-0.9998	22.7453	0.07006	178.96	-0.9998	22.8834	0.06953		
180	180.00	-1.0000	22.7992	0.07018	180.00	-1.0000	22.9375	0.06964	180.00	-1.0000	23.0769	0.06911		

x = 0.628					x = 0.629					x = 0.630				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3112	5.11613	0.00	1.0000	0.3110	5.11159	0.00	1.0000	0.3108	5.10706		
5	8.96	0.9878	0.3124	5.08533	8.96	0.9878	0.3122	5.08079	8.97	0.9878	0.3119	5.07627		
10	17.91	0.9515	0.3158	4.99383	17.92	0.9515	0.3156	4.98931	17.92	0.9515	0.3154	4.98479		
15	26.84	0.8923	0.3217	4.84433	26.85	0.8922	0.3215	4.83982	26.85	0.8922	0.3213	4.83532		
20	35.73	0.8118	0.3302	4.64120	35.74	0.8117	0.3300	4.63671	35.75	0.8116	0.3298	4.63223		
25	44.57	0.7124	0.3417	4.39037	44.58	0.7122	0.3415	4.38590	44.60	0.7120	0.3413	4.38145		
30	53.34	0.5970	0.3567	4.09911	53.36	0.5967	0.3564	4.09469	53.38	0.5965	0.3562	4.09027		
35	62.04	0.4689	0.3756	3.77582	62.06	0.4686	0.3754	3.77145	62.08	0.4682	0.3752	3.76708		
40	70.62	0.3318	0.3995	3.42970	70.65	0.3313	0.3993	3.42533	70.68	0.3309	0.3990	3.42108		
45	79.08	0.1894	0.4295	3.07043	79.11	0.1889	0.4293	3.06619	79.14	0.1884	0.4290	3.06195		
50	87.38	0.0458	0.4673	2.70783	87.41	0.0451	0.4671	2.70368	87.45	0.0445	0.4668	2.69953		
55	95.46	-0.0935	0.5151	2.35245	95.52	-0.0961	0.5149	2.34740	95.56	-0.0968	0.5146	2.34337		
60	103.34	-0.2307	0.5762	2.01015	103.38	-0.2314	0.5760	2.00624	103.42	-0.2321	0.5757	2.00234		
65	110.91	-0.3569	0.6549	1.69172	110.95	-0.3576	0.6546	1.68797	111.00	-0.3584	0.6547	1.68423		
70	118.13	-0.4715	0.7578	1.40242	118.18	-0.4723	0.7578	1.39886	118.23	-0.4731	0.7578	1.39531		
75	124.95	-0.5728	0.8936	1.14665	125.00	-0.5736	0.8938	1.14331	125.06	-0.5744	0.8940	1.13998		
80	131.30	-0.6600	1.0744	0.92668	131.36	-0.6607	1.0749	0.92359	131.41	-0.6615	1.0755	0.92051		
85	137.13	-0.7329	1.3163	0.74256	137.19	-0.7336	1.3174	0.73975	137.25	-0.7343	1.3186	0.73694		
90	142.42	-0.7925	1.6396	0.59236	142.48	-0.7931	1.6418	0.58992	142.54	-0.7937	1.6440	0.58730		
95	147.13	-0.8399	2.0685	0.47253	147.19	-0.8405	2.0723	0.47029	147.25	-0.8411	2.0762	0.46805		
100	151.30	-0.8771	2.6294	0.37865	151.36	-0.8776	2.6357	0.37668	151.41	-0.8781	2.6420	0.37471		
105	154.95	-0.9059	3.3484	0.30601	155.00	-0.9063	3.3583	0.30428	155.06	-0.9067	3.3681	0.30257		
110	158.13	-0.9280	4.2477	0.25020	158.18	-0.9284	4.2624	0.24870	158.23	-0.9287	4.2771	0.24720		
115	160.91	-0.9450	5.3420	0.20741	160.95	-0.9453	5.3629	0.20610	161.00	-0.9455	5.3839	0.20480		
120	163.34	-0.9580	6.6349	0.17456	163.38	-0.9582	6.6636	0.17341	163.42	-0.9584	6.6925	0.17226		
125	165.48	-0.9680	8.1171	0.14922	165.52	-0.9682	8.1551	0.14820	165.56	-0.9684	8.1934	0.14719		
130	167.38	-0.9758	9.7650	0.12958	167.41	-0.9760	9.8137	0.12867	167.45	-0.9761	9.8628	0.12777		
135	169.08	-0.9819	11.5408	0.11428	169.11	-0.9820	11.6013	0.11346	169.14	-0.9821	11.6622	0.11255		
140	170.62	-0.9866	13.3937	0.10231	170.65	-0.9867	13.4667	0.10156	170.68	-0.9868	13.5403	0.10082		
145	172.04	-0.9904	15.2627	0.09293	172.06	-0.9904	15.3485	0.09224	172.08	-0.9905	15.4350	0.09156		
150	173.34	-0.9933	17.0796	0.08560	173.36	-0.9933	17.1780	0.08496	173.38	-0.9933	17.2772	0.08433		
155	174.57	-0.9955	18.7733	0.07992	174.58	-0.9955	18.8836	0.07932	174.60	-0.9956	18.9948	0.07872		
160	175.73	-0.9972	20.2738	0.07560	175.74	-0.9972	20.3947</							

$x = 0.631$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3106	5.10255
5	8.97	0.9878	0.3117	5.07176
10	17.93	0.9514	0.3152	4.98029
15	26.86	0.8921	0.3210	4.83083
20	35.76	0.8114	0.3296	4.62776
25	44.62	0.7118	0.3411	4.37702
30	53.40	0.5962	0.3560	4.08587
35	62.11	0.4679	0.3749	3.76273
40	70.70	0.3305	0.3988	3.41678
45	79.17	0.1878	0.4288	3.05773
50	87.48	-0.0439	0.4666	2.69540
55	95.59	-0.0975	0.5144	2.33935
60	103.47	-0.2329	0.5755	1.99845
65	111.05	-0.3592	0.6545	1.68050
70	118.28	-0.4738	0.7577	1.39177
75	125.11	-0.5752	0.8941	1.13666
80	131.47	-0.6622	1.0760	0.91744
85	137.31	-0.7350	1.3198	0.73414
90	142.59	-0.7944	1.6462	0.59479
95	147.31	-0.8416	2.0820	0.46582
100	151.47	-0.8786	2.6484	0.37275
105	155.11	-0.9071	3.3781	0.30086
110	158.28	-0.9290	4.2919	0.24571
115	161.05	-0.9458	5.4051	0.20350
120	163.47	-0.9587	6.7216	0.17112
125	165.59	-0.9686	8.2320	0.14618
130	167.48	-0.9762	9.9122	0.12687
135	169.17	-0.9822	11.7236	0.11184
140	170.70	-0.9869	13.6144	0.10009
145	172.11	-0.9905	15.5222	0.09088
150	173.40	-0.9934	17.3773	0.08370
155	174.62	-0.9956	19.1069	0.07813
160	175.76	-0.9973	20.6394	0.07390
165	176.86	-0.9985	21.9089	0.07079
170	177.93	-0.9993	22.8591	0.06867
175	178.97	-0.9998	23.4473	0.06743
180	180.00	-1.0000	23.6463	0.06702

 $x = 0.632$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3104	5.09805
8.97	0.9878	0.3115	5.06726
17.93	0.9514	0.3150	4.97580
26.87	0.8920	0.3208	4.82636
35.78	0.8113	0.3293	4.62331
44.63	0.7116	0.3408	4.37259
53.42	0.5959	0.3557	4.08149
62.13	0.4675	0.3747	3.75839
70.73	0.3300	0.3986	3.41250
79.20	0.1873	0.4286	3.05352
87.52	0.0433	0.4663	2.69128
95.63	-0.0982	0.5142	2.33533
103.51	-0.2336	0.5753	1.99457
111.10	-0.3599	0.6544	1.67678
118.33	-0.4746	0.7577	1.38824
125.17	-0.5759	0.8943	1.13335
131.53	-0.6630	1.0766	0.91437
137.37	-0.7357	1.3210	0.73135
142.65	-0.7950	1.6485	0.58228
147.37	-0.8422	2.0839	0.46359
151.53	-0.8790	2.6548	0.37080
155.17	-0.9075	3.3881	0.29916
158.33	-0.9294	4.3069	0.24423
161.10	-0.9461	5.4264	0.20220
163.51	-0.9589	6.7509	0.16999
165.63	-0.9687	8.2709	0.14518
167.52	-0.9764	9.9621	0.12598
169.20	-0.9823	11.7856	0.11103
170.73	-0.9869	13.6892	0.09935
172.13	-0.9906	15.6101	0.09021
173.42	-0.9934	17.4782	0.08307
174.63	-0.9956	19.2199	0.07754
175.78	-0.9973	20.7633	0.07333
176.87	-0.9985	22.0418	0.07025
177.93	-0.9994	22.9989	0.06814
178.97	-0.9998	23.5912	0.06691
180.00	-1.0000	23.7917	0.06651

 $x = 0.633$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3102	5.09356
8.98	0.9878	0.3113	5.06278
17.94	0.9514	0.3147	4.97133
26.88	0.8919	0.3206	4.82190
35.79	0.8112	0.3291	4.61887
44.65	0.7114	0.3406	4.36818
53.44	0.5956	0.3555	4.07711
62.15	0.4671	0.3744	3.75406
70.76	0.3296	0.3983	3.40823
79.23	0.1868	0.4283	3.04932
87.55	0.0427	0.4661	2.68717
95.67	-0.0988	0.5139	2.33133
103.55	-0.2343	0.5751	1.99070
111.14	-0.3607	0.6542	1.67307
118.39	-0.4754	0.7577	1.38471
125.22	-0.5767	0.8945	1.13005
131.58	-0.6637	1.0771	0.91132
137.43	-0.7364	1.3222	0.72856
142.71	-0.7956	1.6507	0.57978
147.43	-0.8427	2.0818	0.46138
151.58	-0.8795	2.6612	0.36885
155.22	-0.9079	3.3982	0.29746
158.39	-0.9297	4.3219	0.24275
161.14	-0.9463	5.4479	0.20091
163.55	-0.9591	6.7805	0.16886
165.67	-0.9689	8.3101	0.14418
167.55	-0.9765	10.0123	0.12509
169.23	-0.9824	11.8480	0.11024
170.76	-0.9870	13.7646	0.09863
172.15	-0.9906	15.6988	0.08954
173.44	-0.9935	17.5799	0.08245
174.65	-0.9956	19.3339	0.07695
175.79	-0.9973	20.8882	0.07278
176.88	-0.9985	22.1759	0.06971
177.94	-0.9994	23.1398	0.06762
178.98	-0.9998	23.7363	0.06640
180.00	-1.0000	23.9383	0.06599

 $x = 0.634$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3099	5.08909
5	8.98	0.9877	0.3111	5.05831
10	17.95	0.9513	0.3145	4.96686
15	26.89	0.8919	0.3204	4.81745
20	35.80	0.8110	0.3289	4.61444
25	44.66	0.7112	0.3404	4.36378
30	53.46	0.5954	0.3553	4.07275
35	62.17	0.4668	0.3742	3.74974
40	70.78	0.3291	0.3981	3.40397
45	79.27	0.1863	0.4281	3.04513
50	87.59	0.0421	0.4658	2.68307
55	95.71	-0.0995	0.5137	2.32734
60	103.60	-0.2351	0.5749	1.98604
65	111.19	-0.3615	0.6541	1.66936
70	118.44	-0.4762	0.7576	1.38120
75	125.27	-0.5775	0.8947	1.12675
80	131.64	-0.6645	1.0777	0.90827
85	137.49	-0.7371	1.3234	0.72579
90	142.77	-0.7962	1.6529	0.57729
95	147.49	-0.8433	2.0918	0.45917
100	151.64	-0.8800	2.6677	0.36692
105	155.27	-0.9083	3.4083	0.29577
110	158.44	-0.9300	4.3370	0.24128
115	161.19	-0.9466	5.4696	0.19963
120	163.60	-0.9593	6.8102	0.16773
125	165.71	-0.9691	8.3495	0.14319
130	167.59	-0.9766	10.0629	0.12421
135	169.27	-0.9825	11.9109	0.10944
140	170.78	-0.9871	13.8406	0.09790
145	172.17	-0.9907	15.7882	0.08888
150	173.46	-0.9935	17.6824	0.08183
155	174.66	-0.9957	19.4488	0.07637
160	175.80	-0.9973	21.0142	0.07222
165	176.89	-0.9985	22.3111	0.06918
170	177.95	-0.9994	23.2819	0.06710
175	178.98	-0.9998	23.8827	0.06588
180	180.00	-1.0000	24.0861	0.06549

 $x = 0.635$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3097	5.08463
8.98	0.9877	0.3109	5.05385
17.95	0.9513	0.3143	4.96241
26.90	0.8918	0.3202	4.81301
35.82	0.8109	0.3287	4.61003
44.68	0.7110	0.3401	4.35939
53.48	0.5951	0.3550	4.06839
62.20	0.4664	0.3740	3.74543
70.81	0.3287	0.3978	3.39972
79.30	0.1857	0.4278	3.04096
87.62	0.0415	0.4656	2.67898
95.75	-0.1002	0.5135	2.32336
103.64	-0.2358	0.5747	1.98299
111.24	-0.3622	0.6539	1.66567
118.49	-0.4770	0.7576	1.37770
125.33	-0.5783	0.8948	1.12347
131.70	-0.6652	1.0782	0.90523
137.55	-0.7378	1.3246	0.72302
142.83	-0.7969	1.6552	0.57480
147.55	-0.8438	2.0957	0.45697
151.70	-0.8805	2.6742	0.36499
155.33	-0.9087	3.4185	0.29409
158.49	-0.9303	4.3522	0.23982
161.24	-0.9469	5.4914	0.19836
163.64	-0.9595	6.8402	0.16662
165.75	-0.9692	8.3893	0.14221
167.62	-0.9768	10.1139	0.12333
169.30	-0.9826	11.9743	0.10865
170.81	-0.9872	13.9172	0.09718
172.20	-0.9907	15.8783	0.08821
173.48	-0.9935	17.7858	0.08121
174.68	-0.9957	19.5647	0.07579
175.82	-0.9973	21.1413	0.07167
176.90	-0.9985	22.4474	0.06865
177.95	-0.9994	23.4252	0.06658
178.98	-0.9998	24.0303	0.06538
180.00	-1.0000	24.2352	0.06498

 $x = 0.636$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3095	5.08018
8.99	0.9877	0.3106	5.04940
17.96	0.9513	0.3141	4.95797
26.91	0.8917	0.3199	4.80859
35.83	0.8108	0.3284	4.60562
44.70	0.7108	0.3399	4.35501
53.50	0.5948	0.3548	4.06405
62.22	0.4661	0.3737	3.74114
70.84	0.3282	0.3976	3.39548
79.33	0.1852	0.4276	3.03679
87.66	0.0409	0.4654	2.67490
95.79	-0.1009	0.5133	2.31939
103.68	-0.2365	0.5745	1.97915
111.28	-0.3630	0.6538	1.66199
118.54	-0.4777	0.7576	1.37420
125.38	-0.5790	0.8950	1.12019
131.76	-0.6660	1.0788	0.90220
137.60	-0.7385	1.3258	0.72026
142.89	-0.7975	1.6575	0.57233
147.60	-0.8444	2.0997	0.45478
151.76	-0.8809	2.6808	0.36306
155.38	-0.9091	3.4287	0.29241
158.54	-0.9307	4.3676	0.23836
161.28	-0.9471	5.5133	0.19709
163.68	-0.9597	6.8704	0.16550
165.79	-0.9694	8.4294	0.14123
167.66	-0.9769	10.1553	0.12246
169.33	-0.9827	12.0382	0.10786
170.84	-0.9872	13.9944	0.09617
172.22	-0.9908	15.9691	0.08756
173.50	-0.9936	17.8901	0.08060
174.70	-0.9957	19.6816	0.07521
175.83	-0.9974	21.2694	0.07112
176.91	-0.9985	22.5849	0.06812
177.96	-0.9994	23.5697	0.06607
178.99	-0.9998	24.1792	0.06487
180.00	-1.0000	24.4154	0.06418

x = 0.637					x = 0.638					x = 0.639				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3093	5.07574	0.00	1.0000	0.3091	5.07131	0.00	1.0000	0.3089	5.06690		
5	8.99	0.9877	0.3104	5.04496	8.99	0.9877	0.3102	5.04054	9.00	0.9877	0.3100	5.03613		
10	17.97	0.9512	0.3139	4.95355	17.97	0.9512	0.3136	4.94913	17.98	0.9512	0.3134	4.94473		
15	26.92	0.8916	0.3197	4.80417	26.93	0.8916	0.3195	4.79977	26.94	0.8915	0.3193	4.79538		
20	35.84	0.8106	0.3282	4.60123	35.85	0.8105	0.3280	4.59685	35.87	0.8104	0.3278	4.59248		
25	44.71	0.7106	0.3397	4.35065	44.73	0.7104	0.3395	4.34630	44.74	0.7102	0.3392	4.34196		
30	53.52	0.5945	0.3546	4.05973	53.54	0.5943	0.3543	4.05541	53.56	0.5940	0.3541	4.05111		
35	62.24	0.4657	0.3735	3.73686	62.27	0.4653	0.3733	3.73258	62.29	0.4650	0.3730	3.72832		
40	70.87	0.3278	0.3974	3.39125	70.89	0.3273	0.3971	3.38704	70.92	0.3269	0.3969	3.38284		
45	79.36	0.1847	0.4273	3.03263	79.39	0.1841	0.4271	3.02849	79.42	0.1836	0.4269	3.02436		
50	87.69	0.0403	0.4651	2.67083	87.73	0.0397	0.4649	2.66678	87.76	0.0391	0.4646	2.66273		
55	95.83	-0.1015	0.5130	2.31543	95.87	-0.1022	0.5128	2.31148	95.91	-0.1029	0.5126	2.30754		
60	103.77	-0.3737	0.5743	1.97532	103.77	-0.3730	0.5741	1.97150	103.81	-0.3737	0.5739	1.96769		
65	111.33	-0.3638	0.6537	1.65832	111.38	-0.3645	0.6535	1.65465	111.43	-0.3653	0.6534	1.65100		
70	118.59	-0.4785	0.7575	1.37072	118.64	-0.4793	0.7575	1.36724	118.69	-0.4801	0.7575	1.36377		
75	125.44	-0.5798	0.8952	1.11692	125.49	-0.5806	0.8954	1.11366	125.55	-0.5814	0.8956	1.11041		
80	131.81	-0.6667	1.0793	0.89918	131.87	-0.6674	1.0799	0.89617	131.93	-0.6682	1.0805	0.89316		
85	137.66	-0.7392	1.3270	0.71751	137.72	-0.7399	1.3282	0.71477	137.78	-0.7406	1.3294	0.71203		
90	142.95	-0.7981	1.6598	0.56986	143.01	-0.7987	1.6621	0.56740	143.07	-0.7994	1.6644	0.56494		
95	147.66	-0.8449	2.1037	0.45259	147.72	-0.8455	2.1077	0.45041	147.78	-0.8460	2.1117	0.44824		
100	151.81	-0.8814	2.6874	0.36115	151.87	-0.8819	2.6940	0.35924	151.93	-0.8824	2.7006	0.35734		
105	155.44	-0.9095	3.4390	0.29074	155.49	-0.9099	3.4494	0.28908	155.55	-0.9103	3.4598	0.28743		
110	158.59	-0.9310	4.3830	0.23391	158.64	-0.9313	4.3985	0.23347	158.69	-0.9316	4.4141	0.23403		
115	161.33	-0.9474	5.5354	0.19582	161.38	-0.9476	5.5577	0.19457	161.43	-0.9479	5.5801	0.19331		
120	163.72	-0.9599	6.9009	0.16440	163.77	-0.9601	6.9315	0.16330	163.81	-0.9603	6.9624	0.16220		
125	165.83	-0.9696	8.4697	0.14025	165.87	-0.9697	8.5104	0.13928	165.91	-0.9699	8.5514	0.13831		
130	167.69	-0.9770	10.2171	0.12159	167.73	-0.9771	10.2693	0.12072	167.76	-0.9773	10.3219	0.11986		
135	169.36	-0.9828	12.1026	0.10708	169.39	-0.9829	12.1676	0.10630	169.42	-0.9830	12.2330	0.10553		
140	170.87	-0.9873	14.0723	0.09576	170.89	-0.9874	14.1507	0.09505	170.92	-0.9875	14.2299	0.09435		
145	172.24	-0.9909	16.0607	0.08690	172.27	-0.9909	16.1531	0.08625	172.29	-0.9910	16.2462	0.08560		
150	173.52	-0.9936	17.9952	0.07999	173.54	-0.9936	18.1012	0.07939	173.56	-0.9937	18.2081	0.07878		
155	174.71	-0.9957	19.7994	0.07464	174.73	-0.9958	19.9183	0.07407	174.74	-0.9958	20.0361	0.07351		
160	175.84	-0.9974	21.3986	0.07058	175.85	-0.9974	21.5289	0.07003	175.87	-0.9974	21.6603	0.06950		
165	176.92	-0.9986	22.7235	0.06760	176.93	-0.9986	22.8633	0.06707	176.94	-0.9986	23.0044	0.06656		
170	177.97	-0.9994	23.7154	0.06556	177.97	-0.9994	23.8624	0.06505	177.98	-0.9994	24.0107	0.06455		
175	178.99	-0.9998	24.3294	0.06437	178.99	-0.9998	24.4808	0.06387	179.00	-0.9998	24.6335	0.06337		
180	180.00	-1.0000	24.5372	0.06398	180.00	-1.0000	24.6902	0.06348	180.00	-1.0000	24.8444	0.06299		

x = 0.640					x = 0.641					x = 0.642				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3086	5.06250	0.00	1.0000	0.3084	5.05811	0.00	1.0000	0.3082	5.05374		
5	9.00	0.9877	0.3098	5.03173	9.00	0.9877	0.3096	5.02735	9.00	0.9877	0.3093	5.02297		
10	17.99	0.9511	0.3132	4.94034	17.99	0.9511	0.3130	4.93596	18.00	0.9511	0.3128	4.93160		
15	26.95	0.8914	0.3191	4.79101	26.96	0.8913	0.3188	4.78665	26.97	0.8913	0.3186	4.78229		
20	35.88	0.8103	0.3276	4.58813	35.89	0.8101	0.3273	4.58378	35.91	0.8100	0.3271	4.57945		
25	44.76	0.7101	0.3390	4.33763	44.78	0.7099	0.3388	4.33331	44.79	0.7097	0.3386	4.32901		
30	53.58	0.5937	0.3539	4.04681	53.60	0.5935	0.3536	4.04253	53.62	0.5932	0.3534	4.03826		
35	62.31	0.4646	0.3728	3.72408	62.34	0.4643	0.3726	3.71984	62.36	0.4639	0.3723	3.71562		
40	70.95	0.3265	0.3966	3.37865	70.97	0.3260	0.3964	3.37447	71.00	0.3256	0.3962	3.37030		
45	79.45	0.1831	0.4266	3.02024	79.48	0.1826	0.4264	3.01613	79.51	0.1820	0.4261	3.01203		
50	87.79	0.0385	0.4644	2.65869	87.83	0.0379	0.4642	2.65467	87.86	0.0373	0.4639	2.65065		
55	95.94	-0.1036	0.5123	2.30361	95.98	-0.1042	0.5121	2.29969	96.02	-0.1049	0.5119	2.29578		
60	103.85	-0.2394	0.5737	1.96389	103.90	-0.2402	0.5735	1.96010	103.94	-0.2409	0.5733	1.95631		
65	111.47	-0.3661	0.6532	1.64735	111.52	-0.3668	0.6531	1.64372	111.57	-0.3676	0.6529	1.64009		
70	118.74	-0.4809	0.7575	1.36031	118.79	-0.4817	0.7574	1.35686	118.84	-0.4824	0.7574	1.35342		
75	125.60	-0.5821	0.8958	1.10717	125.66	-0.5829	0.8959	1.10393	125.71	-0.5837	0.8961	1.10071		
80	131.98	-0.6689	1.0810	0.89017	132.04	-0.6697	1.0816	0.88718	132.10	-0.6704	1.0822	0.88420		
85	137.84	-0.7413	1.3306	0.70930	137.90	-0.7420	1.3318	0.70659	137.96	-0.7427	1.3331	0.70387		
90	143.13	-0.8000	1.6667	0.56250	143.19	-0.8006	1.6690	0.56006	143.25	-0.8012	1.6713	0.55763		
95	147.84	-0.8466	2.1158	0.44608	147.90	-0.8471	2.1199	0.44392	147.96	-0.8477	2.1239	0.44177		
100	151.98	-0.8828	2.7073	0.35544	152.04	-0.8833	2.7140	0.35356	152.10	-0.8838	2.7208	0.35168		
105	155.60	-0.9107	3.4703	0.28578	155.66	-0.9111	3.4809	0.28414	155.71	-0.9115	3.4915	0.28250		
110	158.74	-0.9320	4.4299	0.23260	158.79	-0.9323	4.4457	0.23117	158.84	-0.9326	4.4617	0.22975		
115	161.47	-0.9502	5.6026	0.19207	161.52	-0.9484	5.6254	0.19083	161.57	-0.9487	5.6483	0.18959		
120	163.85	-0.9606	6.9935	0.16111	163.90	-0.9608	7.0248	0.16003	163.94	-0.9610	7.0564	0.15895		
125	165.94	-0.9701	8.5927	0.13135	165.98	-0.9702	8.6344	0.13040	166.02	-0.9704	8.6763	0.12945		
130	167.79	-0.9774	10.3750	0.11190	167.83	-0.9775	10.4284	0.11186	167.86	-0.9777	10.4823	0.11131		
135	169.45	-0.9831	12.2990	0.10476	169.48	-0.9832	12.3656	0.10400	169.51	-0.9833	12.4326	0.10324		
140	170.95	-0.9875	14.3097	0.09365	170.97	-0.9876	14.3901	0.09295	171.00	-0.9877	14.4712	0.09226		
145	172.31	-0.9910	16.3401	0.08496	172.34	-0.9911	16.4348	0.08432	172.36	-0.9911	16.5303	0.08369		
150	173.58	-0.9937	18.3159	0.07819	173.60	-0.9938	18.4246	0.07759	173.62	-0.9938	18.5342	0.07700		
155	174.76	-0.9958	20.1590	0.07294	174.78	-0.9958	20.2809	0.07239	174.79	-0.9959	20.4038	0.07183		
160	175.88	-0.9974	21.7928	0.06896	175.89	-0.9974								

2 x = 0.643					2 x = 0.644					2 x = 0.645				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3080	5.04937	0.00	1.0000	0.3078	5.04502	0.00	1.0000	0.3076	5.04068		
5	9.01	0.9877	0.3091	5.01861	9.01	0.9877	0.3089	5.01426	9.01	0.9877	0.3087	5.00993		
10	18.00	0.9510	0.3126	4.92724	18.01	0.9510	0.3123	4.92290	18.02	0.9510	0.3121	4.91857		
15	26.98	0.8912	0.3184	4.77795	26.99	0.8911	0.3182	4.77363	27.00	0.8910	0.3180	4.76931		
20	35.92	0.8099	0.3269	4.57513	35.93	0.8097	0.3267	4.57082	35.94	0.8096	0.3265	4.56653		
25	44.81	0.7095	0.3383	4.32472	44.83	0.7093	0.3381	4.32044	44.84	0.7091	0.3379	4.31617		
30	53.64	0.5929	0.3532	4.03400	53.66	0.5926	0.3530	4.02976	53.68	0.5924	0.3527	4.02552		
35	62.38	0.4636	0.3721	3.71140	62.41	0.4632	0.3718	3.70720	62.43	0.4628	0.3716	3.70301		
40	71.03	0.3251	0.3959	3.36614	71.05	0.3247	0.3957	3.36199	71.08	0.3242	0.3954	3.35786		
45	79.54	0.1815	0.4259	3.00794	79.57	0.1810	0.4256	3.00386	79.60	0.1805	0.4254	2.99979		
50	87.90	0.0367	0.4637	2.64665	87.93	0.0361	0.4634	2.64266	87.97	0.0355	0.4632	2.63867		
55	96.06	-0.1056	0.5117	2.29188	96.10	-0.1063	0.5114	2.28799	96.14	-0.1069	0.5112	2.28411		
60	103.98	-0.2416	0.5731	1.95254	104.03	-0.2424	0.5729	1.94878	104.07	-0.2431	0.5727	1.94503		
65	111.61	-0.3684	0.6528	1.63648	111.66	-0.3691	0.6527	1.63287	111.71	-0.3699	0.6525	1.62927		
70	118.90	-0.4832	0.7574	1.34999	118.95	-0.4840	0.7573	1.34657	119.00	-0.4848	0.7573	1.34315		
75	125.76	-0.5845	0.8963	1.09749	125.82	-0.5852	0.8965	1.09429	125.87	-0.5860	0.8967	1.09109		
80	132.16	-0.6712	1.0827	0.88123	132.21	-0.6719	1.0833	0.87827	132.27	-0.6726	1.0839	0.87531		
85	138.02	-0.7434	1.3343	0.70117	138.08	-0.7440	1.3355	0.69847	138.14	-0.7447	1.3368	0.69579		
90	143.31	-0.8019	1.6737	0.55521	143.37	-0.8025	1.6760	0.55279	143.43	-0.8031	1.6784	0.55039		
95	148.02	-0.8482	2.1281	0.43963	148.08	-0.8488	2.1322	0.43750	148.14	-0.8493	2.1363	0.43537		
100	152.16	-0.8842	2.7276	0.34980	152.21	-0.8847	2.7345	0.34794	152.27	-0.8852	2.7413	0.34608		
105	155.76	-0.9119	3.5022	0.28087	155.82	-0.9123	3.5130	0.27925	155.87	-0.9126	3.5238	0.27764		
110	158.90	-0.9329	4.4777	0.22834	158.95	-0.9332	4.4939	0.22693	159.00	-0.9336	4.5101	0.22553		
115	161.61	-0.9490	5.6713	0.18837	161.66	-0.9492	5.6945	0.18714	161.71	-0.9495	5.7179	0.18593		
120	163.98	-0.9612	7.0882	0.15787	164.03	-0.9614	7.1202	0.15681	164.07	-0.9616	7.1525	0.15574		
125	166.06	-0.9706	8.7186	0.13450	166.10	-0.9707	8.7612	0.13356	166.14	-0.9709	8.8042	0.13262		
130	167.90	-0.9778	10.5366	0.11547	167.93	-0.9779	10.5914	0.11453	167.97	-0.9780	10.6466	0.11360		
135	169.54	-0.9834	12.5002	0.10248	169.57	-0.9835	12.5684	0.10173	169.60	-0.9836	12.6371	0.10098		
140	171.03	-0.9878	14.5530	0.09158	171.05	-0.9878	14.6254	0.09089	171.08	-0.9879	14.7186	0.09021		
145	172.38	-0.9912	16.6266	0.08306	172.41	-0.9912	16.7236	0.08243	172.43	-0.9913	16.8216	0.08181		
150	173.64	-0.9938	18.6448	0.07641	173.66	-0.9939	18.7562	0.07583	173.68	-0.9939	18.8687	0.07525		
155	174.81	-0.9959	20.5278	0.07128	174.83	-0.9959	20.6528	0.07073	174.84	-0.9959	20.7789	0.07018		
160	175.92	-0.9975	22.1972	0.06738	175.93	-0.9975	22.3343	0.06685	175.94	-0.9975	22.4726	0.06634		
165	176.98	-0.9986	23.5807	0.06452	176.99	-0.9986	23.7279	0.06401	177.00	-0.9986	23.8763	0.06352		
170	178.00	-0.9994	24.6165	0.06256	178.01	-0.9994	24.7713	0.06207	178.02	-0.9994	24.9274	0.06159		
175	179.01	-0.9998	25.2578	0.06142	179.01	-0.9999	25.4172	0.06094	179.01	-0.9999	25.5781	0.06047		
180	180.00	-1.0000	25.4749	0.06105	180.00	-1.0000	25.6359	0.06057	180.00	-1.0000	25.7984	0.06010		

2 x = 0.646					2 x = 0.647					2 x = 0.648				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3074	5.03635	0.00	1.0000	0.3072	5.03203	0.00	1.0000	0.3069	5.02773		
5	9.02	0.9876	0.3085	5.00560	9.02	0.9876	0.3083	5.00129	9.02	0.9876	0.3081	4.99698		
10	18.02	0.9509	0.3119	4.91425	18.03	0.9509	0.3117	4.90995	18.04	0.9509	0.3115	4.90565		
15	27.01	0.8910	0.3178	4.76501	27.02	0.8909	0.3175	4.76071	27.03	0.8908	0.3173	4.75641		
20	35.96	0.8095	0.3262	4.56224	35.97	0.8093	0.3260	4.55797	35.98	0.8092	0.3258	4.55371		
25	44.86	0.7089	0.3377	4.31191	44.87	0.7087	0.3374	4.30766	44.89	0.7085	0.3372	4.30341		
30	53.70	0.5921	0.3525	4.02130	53.71	0.5918	0.3523	4.01709	53.73	0.5915	0.3520	4.01289		
35	62.45	0.4625	0.3714	3.69883	62.48	0.4621	0.3711	3.69466	62.50	0.4618	0.3709	3.69050		
40	71.11	0.3238	0.3952	3.35373	71.13	0.3234	0.3950	3.34962	71.16	0.3229	0.3947	3.34551		
45	79.63	0.1799	0.4252	2.99573	79.66	0.1794	0.4249	2.99169	79.70	0.1789	0.4247	2.98765		
50	88.00	0.0348	0.4630	2.63470	88.04	0.0342	0.4627	2.63074	88.07	0.0336	0.4625	2.62679		
55	96.18	-0.1076	0.5110	2.28024	96.22	-0.1083	0.5107	2.27638	96.25	-0.1089	0.5105	2.27253		
60	104.11	-0.2438	0.5725	1.94129	104.15	-0.2445	0.5723	1.93755	104.20	-0.2453	0.5721	1.93383		
65	111.76	-0.3706	0.6524	1.62568	111.80	-0.3714	0.6522	1.62210	111.85	-0.3722	0.6521	1.61853		
70	119.05	-0.4856	0.7573	1.33974	119.10	-0.4863	0.7573	1.33635	119.15	-0.4871	0.7572	1.33296		
75	125.93	-0.5868	0.8969	1.08789	125.98	-0.5875	0.8970	1.08471	126.04	-0.5883	0.8972	1.08154		
80	132.33	-0.6734	1.0844	0.87236	132.39	-0.6741	1.0850	0.86942	132.44	-0.6749	1.0856	0.86649		
85	138.20	-0.7454	1.3380	0.69311	138.25	-0.7461	1.3393	0.69043	138.31	-0.7468	1.3405	0.68777		
90	143.49	-0.8037	1.6807	0.54799	143.55	-0.8044	1.6831	0.54559	143.61	-0.8050	1.6855	0.54321		
95	148.20	-0.8498	2.1405	0.43325	148.25	-0.8504	2.1447	0.43114	148.31	-0.8509	2.1489	0.42903		
100	152.33	-0.8856	2.7483	0.34423	152.39	-0.8861	2.7552	0.34238	152.44	-0.8866	2.7622	0.34054		
105	155.93	-0.9130	3.5347	0.27603	155.98	-0.9134	3.5457	0.27443	156.04	-0.9138	3.5568	0.27283		
110	159.05	-0.9339	4.5265	0.22412	159.10	-0.9342	4.5430	0.22275	159.15	-0.9345	4.5596	0.22137		
115	161.76	-0.9497	5.7415	0.18472	161.80	-0.9500	5.7652	0.18351	161.85	-0.9502	5.7891	0.18231		
120	164.11	-0.9618	7.1851	0.15469	164.15	-0.9620	7.2178	0.15363	164.20	-0.9622	7.2509	0.15259		
125	166.18	-0.9710	8.8474	0.13169	166.22	-0.9712	8.8911	0.13077	166.25	-0.9714	8.9350	0.12984		
130	168.00	-0.9782	10.7022	0.11397	168.04	-0.9783	10.7583	0.11315	168.07	-0.9784	10.8148	0.11233		
135	169.63	-0.9837	12.7064	0.10024	169.66	-0.9838	12.7763	0.09950	169.70	-0.9839	12.8468	0.09868		
140	171.11	-0.9880	14.8024	0.08954	171.13	-0.9881	14.8870	0.08887	171.16	-0.9881	14.9722	0.08820		
145	172.45	-0.9913	16.9203	0.08119	172.48	-0.9914	17.0199	0.08057	172.50	-0.9914	17.1203	0.07996		
150	173.70	-0.9940	18.9821	0.07467	173.71	-0								

x = 0.649					x = 0.650					x = 0.651				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3067	5.02344	0.00	1.0000	0.3065	5.01916	0.00	1.0000	0.3063	5.01489		
5	9.03	0.9876	0.3079	4.99269	9.03	0.9876	0.3076	4.98842	9.03	0.9876	0.3074	4.98415		
10	18.04	0.9508	0.3113	4.90137	18.05	0.9508	0.3111	4.89710	18.05	0.9508	0.3109	4.89284		
15	27.03	0.8907	0.3171	4.75216	27.04	0.8907	0.3169	4.74791	27.05	0.8906	0.3167	4.74366		
20	35.99	0.8091	0.3256	4.54946	36.01	0.8090	0.3254	4.54522	36.02	0.8088	0.3251	4.54099		
25	44.91	0.7083	0.3370	4.29920	44.92	0.7081	0.3368	4.29499	44.94	0.7079	0.3365	4.29079		
30	53.75	0.5913	0.3518	4.00870	53.77	0.5910	0.3516	4.00452	53.79	0.5907	0.3514	4.00035		
35	62.52	0.4614	0.3707	3.68636	62.54	0.4611	0.3705	3.68222	62.57	0.4607	0.3702	3.67810		
40	71.19	0.3225	0.3945	3.34142	71.21	0.3220	0.3943	3.33734	71.24	0.3216	0.3940	3.33327		
45	79.73	0.1784	0.4244	2.98363	79.76	0.1778	0.4242	2.97961	79.79	0.1773	0.4240	2.97561		
50	88.11	0.0330	0.4623	2.62285	88.14	0.0324	0.4620	2.61891	88.18	0.0318	0.4618	2.61499		
55	96.29	-0.1096	0.5103	2.26869	96.33	-0.1103	0.5101	2.26486	96.37	-0.1110	0.5098	2.26104		
60	104.24	-0.2460	0.5719	1.93012	104.28	-0.2467	0.5717	1.92641	104.33	-0.2475	0.5715	1.92272		
65	111.90	-0.3729	0.6519	1.61497	111.94	-0.3737	0.6518	1.61142	111.99	-0.3745	0.6517	1.60787		
70	119.20	-0.4879	0.7572	1.32958	119.25	-0.4887	0.7572	1.32621	119.30	-0.4895	0.7571	1.32285		
75	126.09	-0.5891	0.8974	1.07837	126.15	-0.5899	0.8976	1.07521	126.20	-0.5906	0.8978	1.07206		
80	132.50	-0.6756	1.0862	0.86357	132.56	-0.6763	1.0867	0.86065	132.62	-0.6771	1.0873	0.85774		
85	138.37	-0.7475	1.3418	0.68511	138.43	-0.7482	1.3430	0.68246	138.49	-0.7489	1.3443	0.67982		
90	143.67	-0.8056	1.6879	0.54083	143.73	-0.8062	1.6903	0.53846	143.79	-0.8068	1.6927	0.53610		
95	148.37	-0.8515	2.1532	0.42694	148.43	-0.8520	2.1574	0.42484	148.49	-0.8526	2.1617	0.42276		
100	152.50	-0.8870	2.7693	0.33871	152.56	-0.8875	2.7763	0.33688	152.62	-0.8879	2.7835	0.33507		
105	156.09	-0.9142	3.5679	0.27124	156.15	-0.9146	3.5790	0.26966	156.20	-0.9150	3.5903	0.26808		
110	159.20	-0.9348	4.5763	0.21999	159.25	-0.9352	4.5932	0.21862	159.30	-0.9355	4.6101	0.21726		
115	161.90	-0.9505	5.8132	0.18112	161.94	-0.9508	5.8374	0.17993	161.99	-0.9510	5.8619	0.17875		
120	164.24	-0.9624	7.2842	0.15154	164.28	-0.9626	7.3177	0.15051	164.33	-0.9628	7.3515	0.14948		
125	166.29	-0.9715	8.9793	0.12893	166.33	-0.9717	9.0240	0.12802	166.37	-0.9718	9.0690	0.12711		
130	168.11	-0.9785	10.8718	0.11152	168.14	-0.9787	10.9293	0.11071	168.18	-0.9788	10.9872	0.10990		
135	169.73	-0.9840	12.9178	0.09803	169.76	-0.9841	12.9894	0.09731	169.79	-0.9842	13.0616	0.09659		
140	171.19	-0.9882	15.0582	0.08754	171.21	-0.9883	15.1449	0.08688	171.24	-0.9883	15.2323	0.08622		
145	172.52	-0.9915	17.2216	0.07935	172.54	-0.9915	17.3237	0.07874	172.57	-0.9916	17.4268	0.07814		
150	173.75	-0.9941	19.3282	0.07297	173.77	-0.9941	19.4455	0.07240	173.79	-0.9941	19.5639	0.07184		
155	174.91	-0.9960	21.2944	0.06804	174.92	-0.9961	21.4261	0.06751	174.94	-0.9961	21.5589	0.06698		
160	175.99	-0.9976	23.0380	0.06429	176.01	-0.9976	23.1825	0.06379	176.02	-0.9976	23.3282	0.06329		
165	177.03	-0.9987	24.4833	0.06155	177.04	-0.9987	24.6384	0.06107	177.05	-0.9987	24.7949	0.06059		
170	178.04	-0.9994	25.5656	0.05968	178.05	-0.9994	25.7287	0.05921	178.05	-0.9994	25.8932	0.05874		
175	179.03	-0.9999	26.2357	0.05859	179.03	-0.9999	26.4037	0.05812	179.03	-0.9999	26.5732	0.05766		
180	180.00	-1.0000	26.4625	0.05823	180.00	-1.0000	26.6323	0.05777	180.00	-1.0000	26.8035	0.05731		

x = 0.652					x = 0.653					x = 0.654				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3061	5.01063	0.00	1.0000	0.3059	5.00638	0.00	1.0000	0.3057	5.00215		
5	9.04	0.9876	0.3072	4.97989	9.04	0.9876	0.3070	4.97555	9.04	0.9876	0.3068	4.97142		
10	18.06	0.9507	0.3106	4.88860	18.07	0.9507	0.3104	4.88436	18.07	0.9507	0.3102	4.88013		
15	27.06	0.8905	0.3165	4.73943	27.07	0.8904	0.3163	4.73520	27.08	0.8904	0.3160	4.73099		
20	36.03	0.8087	0.3249	4.53678	36.04	0.8086	0.3247	4.53258	36.06	0.8084	0.3245	4.52838		
25	44.95	0.7077	0.3363	4.28660	44.97	0.7075	0.3361	4.28242	44.98	0.7073	0.3359	4.27826		
30	53.81	0.5904	0.3511	3.99620	53.83	0.5902	0.3509	3.99205	53.85	0.5899	0.3507	3.98792		
35	62.59	0.4604	0.3700	3.67398	62.61	0.4600	0.3698	3.66988	62.64	0.4596	0.3695	3.66579		
40	71.27	0.3212	0.3938	3.32921	71.29	0.3207	0.3935	3.32516	71.32	0.3203	0.3933	3.32112		
45	79.82	0.1768	0.4237	2.97162	79.85	0.1763	0.4235	2.96763	79.88	0.1757	0.4233	2.96366		
50	88.21	0.0312	0.4615	2.61108	88.25	0.0306	0.4613	2.60718	88.28	0.0300	0.4611	2.60329		
55	96.41	-0.1116	0.5096	2.25723	96.45	-0.1123	0.5094	2.25343	96.49	-0.1130	0.5092	2.24964		
60	104.37	-0.2482	0.5713	1.91903	104.41	-0.2489	0.5711	1.91536	104.46	-0.2496	0.5709	1.91169		
65	112.04	-0.3752	0.6515	1.60434	112.09	-0.3760	0.6514	1.60081	112.13	-0.3768	0.6512	1.59730		
70	119.36	-0.4902	0.7571	1.31949	119.41	-0.4910	0.7571	1.31615	119.46	-0.4918	0.7571	1.31281		
75	126.26	-0.5914	0.8980	1.06892	126.31	-0.5922	0.8982	1.06579	126.37	-0.5929	0.8984	1.06266		
80	132.67	-0.6778	1.0879	0.85484	132.73	-0.6786	1.0885	0.85195	132.79	-0.6793	1.0891	0.84907		
85	138.55	-0.7496	1.3456	0.67718	138.61	-0.7502	1.3468	0.67456	138.67	-0.7509	1.3481	0.67194		
90	143.85	-0.8075	1.6952	0.53374	143.91	-0.8081	1.6976	0.53139	143.97	-0.8087	1.7001	0.52905		
95	148.55	-0.8531	2.1660	0.42068	148.61	-0.8537	2.1703	0.41861	148.67	-0.8542	2.1746	0.41655		
100	152.67	-0.8884	2.7906	0.33325	152.73	-0.8889	2.7978	0.33145	152.79	-0.8893	2.8051	0.32965		
105	156.26	-0.9154	3.6016	0.26651	156.31	-0.9157	3.6130	0.26495	156.37	-0.9161	3.6245	0.26339		
110	159.36	-0.9358	4.6272	0.21590	159.41	-0.9361	4.6444	0.21455	159.46	-0.9364	4.6617	0.21320		
115	162.04	-0.9513	5.8865	0.17757	162.09	-0.9515	5.9113	0.17640	162.13	-0.9518	5.9362	0.17523		
120	164.37	-0.9630	7.3855	0.14845	164.41	-0.9632	7.4199	0.14743	164.46	-0.9634	7.4544	0.14641		
125	166.41	-0.9720	9.1144	0.12621	166.45	-0.9722	9.1601	0.12531	166.49	-0.9723	9.2062	0.12442		
130	168.21	-0.9789	11.0456	0.10910	168.25	-0.9790	11.1045	0.10831	168.28	-0.9792	11.1639	0.10752		
135	169.82	-0.9842	13.1344	0.09587	169.85	-0.9843	13.2079	0.09515	169.88	-0.9844	13.2819	0.09444		
140	171.27	-0.9884	15.3205	0.08557	171.29	-0.9885	15.4094	0.08492	171.32	-0.9885	15.4991	0.08428		
145	172.59	-0.9916	17.5307	0.07754	172.61	-0.9917	17.6355	0.07694	172.64	-0.9918	17.7412	0.07635		
150	173.81	-0.9942	19.6833	0.07129	173.83	-0.9942	19.8038	0.07074	173.85	-0.9942	19.9253	0.07019		
155	174.95	-0.9961	21.6929	0.06646	174.97	-0.9961	21.8281	0.06594	174.98	-0.9962	21.9644	0.06542		
160	176.03	-0.9976	2											

2 x = 0.655					2 x = 0.656					2 x = 0.657				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3055	4.99793	0.00	1.0000	0.3053	4.99371	0.00	1.0000	0.3051	4.98951		
5	9.04	0.9876	0.3066	4.96720	9.05	0.9876	0.3064	4.96299	9.05	0.9875	0.3062	4.95879		
10	18.08	0.9506	0.3110	4.87592	18.07	0.9506	0.3108	4.87172	18.09	0.9506	0.3106	4.86753		
15	27.09	0.8902	0.3158	4.72679	27.10	0.8902	0.3156	4.72260	27.11	0.8901	0.3154	4.71843		
20	36.07	0.8083	0.3243	4.52420	36.08	0.8082	0.3241	4.52003	36.09	0.8080	0.3238	4.51587		
25	45.00	0.7071	0.3357	4.27410	45.02	0.7069	0.3354	4.26996	45.03	0.7067	0.3352	4.26582		
30	53.87	0.5896	0.3505	3.98379	53.89	0.5893	0.3502	3.97968	53.91	0.5891	0.3500	3.97558		
35	62.66	0.4593	0.3693	3.66171	62.68	0.4589	0.3691	3.65764	62.70	0.4586	0.3688	3.65358		
40	71.35	0.3198	0.3931	3.31709	71.37	0.3194	0.3928	3.31308	71.40	0.3190	0.3926	3.30907		
45	79.91	0.1752	0.4230	2.95970	79.94	0.1747	0.4228	2.95574	79.97	0.1742	0.4225	2.95180		
50	88.31	0.0294	0.4608	2.59941	88.35	0.0288	0.4606	2.59554	88.38	0.0282	0.4604	2.59168		
55	96.53	-0.1136	0.5089	2.24586	96.56	-0.1143	0.5087	2.24209	96.60	-0.1150	0.5085	2.23833		
60	104.50	-0.2504	0.5707	1.90803	104.54	-0.2511	0.5705	1.90438	104.58	-0.2518	0.5703	1.90074		
65	112.18	-0.3775	0.6511	1.59379	112.23	-0.3783	0.6510	1.59029	112.27	-0.3790	0.6508	1.58680		
70	119.51	-0.4926	0.7570	1.30948	119.56	-0.4933	0.7570	1.30616	119.61	-0.4941	0.7570	1.30285		
75	126.42	-0.5937	0.8986	1.05954	126.48	-0.5945	0.8987	1.05643	126.53	-0.5952	0.8989	1.05333		
80	132.85	-0.6800	1.0897	0.84619	132.90	-0.6808	1.0902	0.84332	132.96	-0.6815	1.0908	0.84046		
85	138.73	-0.7516	1.3494	0.66932	138.79	-0.7523	1.3507	0.66672	138.85	-0.7530	1.3520	0.66412		
90	144.03	-0.8093	1.7025	0.52672	144.09	-0.8099	1.7050	0.52439	144.15	-0.8106	1.7075	0.52207		
95	148.73	-0.8547	2.1790	0.41449	148.79	-0.8553	2.1834	0.41244	148.85	-0.8558	2.1878	0.41040		
100	152.85	-0.8898	2.8123	0.32786	152.90	-0.8903	2.8197	0.32607	152.96	-0.8907	2.8271	0.32429		
105	156.42	-0.9165	3.6360	0.26184	156.48	-0.9169	3.6477	0.26030	156.53	-0.9173	3.6593	0.25876		
110	159.51	-0.9367	4.6791	0.21186	159.56	-0.9370	4.6967	0.21053	159.61	-0.9374	4.7143	0.20920		
115	162.18	-0.9520	5.9614	0.17407	162.23	-0.9523	5.9868	0.17291	162.27	-0.9525	6.0123	0.17176		
120	164.50	-0.9636	7.4893	0.14540	164.54	-0.9638	7.5244	0.14440	164.58	-0.9640	7.5598	0.14339		
125	166.53	-0.9725	9.2527	0.12353	166.56	-0.9726	9.2996	0.12265	166.60	-0.9728	9.3468	0.12177		
130	168.31	-0.9793	11.2237	0.10673	168.35	-0.9794	11.2841	0.10595	168.38	-0.9795	11.3450	0.10517		
135	169.91	-0.9845	13.3566	0.09374	169.94	-0.9846	13.4319	0.09303	169.97	-0.9847	13.5079	0.09234		
140	171.35	-0.9886	15.5896	0.08364	171.37	-0.9887	15.6808	0.08300	171.40	-0.9888	15.7729	0.08237		
145	172.66	-0.9918	17.8479	0.07577	172.68	-0.9919	17.9555	0.07518	172.70	-0.9919	18.0640	0.07460		
150	173.87	-0.9943	20.0479	0.06964	173.89	-0.9943	20.1715	0.06910	173.91	-0.9944	20.2963	0.06856		
155	175.00	-0.9962	22.1020	0.06491	175.02	-0.9962	22.2408	0.06440	175.03	-0.9962	22.3808	0.06389		
160	176.07	-0.9976	23.9241	0.06132	176.08	-0.9977	24.0764	0.06084	176.09	-0.9977	24.2300	0.06036		
165	177.09	-0.9987	25.4347	0.05869	177.10	-0.9987	25.5982	0.05823	177.11	-0.9987	25.7633	0.05776		
170	178.08	-0.9994	26.5661	0.05690	178.09	-0.9994	26.7381	0.05645	178.09	-0.9994	26.9117	0.05599		
175	179.04	-0.9999	27.2666	0.05585	179.05	-0.9999	27.4439	0.05541	179.05	-0.9999	27.6227	0.05496		
180	180.00	-1.0000	27.5038	0.05551	180.00	-1.0000	27.6828	0.05507	180.00	-1.0000	27.8635	0.05463		

2 x = 0.658					2 x = 0.659					2 x = 0.660				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.3048	4.98533	0.00	1.0000	0.3046	4.98115	0.00	1.0000	0.3044	4.97698		
5	9.05	0.9875	0.3060	4.95460	9.06	0.9875	0.3058	4.95043	9.06	0.9875	0.3056	4.94627		
10	18.10	0.9505	0.3094	4.86335	18.10	0.9505	0.3092	4.85918	18.11	0.9505	0.3090	4.85503		
15	27.12	0.8901	0.3152	4.71426	27.13	0.8900	0.3150	4.71010	27.14	0.8899	0.3148	4.70596		
20	36.11	0.8079	0.3236	4.51173	36.12	0.8078	0.3234	4.50759	36.13	0.8077	0.3232	4.50346		
25	45.05	0.7065	0.3350	4.26170	45.06	0.7063	0.3348	4.25759	45.08	0.7061	0.3346	4.25349		
30	53.93	0.5898	0.3598	3.97149	53.95	0.5895	0.3596	3.96741	53.97	0.5893	0.3594	3.96334		
35	62.73	0.4582	0.3686	3.64953	62.75	0.4579	0.3684	3.64549	62.77	0.4575	0.3681	3.64146		
40	71.43	0.3185	0.3924	3.30507	71.45	0.3181	0.3921	3.30109	71.48	0.3176	0.3919	3.29711		
45	80.00	0.1736	0.4223	2.94787	80.03	0.1731	0.4221	2.94395	80.06	0.1726	0.4218	2.94004		
50	88.42	0.0276	0.4601	2.58782	88.45	0.0270	0.4599	2.58398	88.49	0.0264	0.4597	2.58015		
55	96.64	-0.1157	0.5083	2.23458	96.68	-0.1163	0.5080	2.23083	96.72	-0.1170	0.5078	2.22710		
60	104.63	-0.2525	0.5701	1.89711	104.67	-0.2533	0.5699	1.89349	104.71	-0.2540	0.5697	1.88988		
65	112.32	-0.3798	0.6507	1.58332	112.37	-0.3806	0.6505	1.57984	112.42	-0.3813	0.6504	1.57638		
70	119.66	-0.4949	0.7570	1.29955	119.71	-0.4957	0.7569	1.29625	119.77	-0.4965	0.7569	1.29296		
75	126.59	-0.5960	0.8991	1.05024	126.64	-0.5968	0.8993	1.04715	126.69	-0.5976	0.8995	1.04407		
80	133.02	-0.6823	1.0914	0.83760	133.08	-0.6830	1.0920	0.83476	133.14	-0.6837	1.0926	0.83192		
85	138.91	-0.7537	1.3533	0.66153	138.97	-0.7544	1.3546	0.65895	139.03	-0.7550	1.3559	0.65637		
90	144.21	-0.8112	1.7100	0.51976	144.27	-0.8118	1.7125	0.51745	144.33	-0.8124	1.7150	0.51515		
95	148.91	-0.8564	2.1922	0.40836	148.97	-0.8569	2.1967	0.40634	149.03	-0.8574	2.2012	0.40431		
100	153.02	-0.8912	2.8345	0.32252	153.08	-0.8916	2.8419	0.32076	153.14	-0.8921	2.8494	0.31900		
105	156.59	-0.9177	3.6711	0.25722	156.64	-0.9180	3.6800	0.25570	156.69	-0.9184	3.6899	0.25418		
110	159.66	-0.9377	4.7321	0.20788	159.71	-0.9380	4.7501	0.20656	159.77	-0.9383	4.7681	0.20525		
115	162.32	-0.9528	6.0380	0.17062	162.37	-0.9530	6.0640	0.16948	162.42	-0.9533	6.0901	0.16835		
120	164.63	-0.9642	7.5955	0.14240	164.67	-0.9644	7.6315	0.14141	164.71	-0.9646	7.6677	0.14042		
125	166.64	-0.9729	9.3945	0.12089	166.68	-0.9731	9.4425	0.12002	166.72	-0.9733	9.4909	0.11916		
130	168.42	-0.9796	11.4064	0.10439	168.45	-0.9798	11.4682	0.10362	168.49	-0.9799	11.5307	0.10285		
135	170.00	-0.9848	13.5845	0.09164	170.03	-0.9849	13.6618	0.09095	170.06	-0.9850	13.7397	0.09026		
140	171.43	-0.9888	15.8657	0.08174	171.45	-0.9889	15.9593	0.08111	171.48	-0.9890	16.0538	0.08049		
145	172.73	-0.9920	18.1734	0.07402	172.75	-0.9920	18.2839	0.07345	172.77	-0.9921	18.3953	0.07288		
150	173.93	-0.9944	20.4221	0.06802	173.95	-0.9944	20.5491	0.06749	173.97	-0.9945	20.6772	0.06696		
155	175.05	-0.9963	22.5221	0.06339	175.06	-0.9963	22.6849	0.06289	175.08					

x = 0.661					x = 0.662					x = 0.663				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3042	4.97283	0.00	1.0000	0.3040	4.96868	0.00	1.0000	0.3038	4.96455		
5	9.06	0.9875	0.3053	4.94211	9.07	0.9875	0.3051	4.93797	9.07	0.9875	0.3049	4.93384		
10	18.12	0.9504	0.3087	4.85088	18.12	0.9504	0.3085	4.84675	18.13	0.9504	0.3083	4.84262		
15	27.15	0.8898	0.3146	4.70183	27.16	0.8898	0.3143	4.69771	27.17	0.8897	0.3141	4.69360		
20	36.14	0.8075	0.3230	4.49935	36.16	0.8074	0.3228	4.49525	36.17	0.8073	0.3226	4.49115		
25	45.10	0.7059	0.3343	4.24940	45.11	0.7057	0.3341	4.24532	45.13	0.7055	0.3339	4.24125		
30	53.99	0.5880	0.3491	3.95929	54.01	0.5877	0.3489	3.95524	54.02	0.5874	0.3487	3.95120		
35	62.80	0.4572	0.3679	3.63745	62.82	0.4568	0.3677	3.63344	62.84	0.4564	0.3675	3.62944		
40	71.51	0.3172	0.3917	3.29314	71.53	0.3168	0.3914	3.28919	71.56	0.3163	0.3912	3.28524		
45	80.09	0.1721	0.4216	2.93614	80.12	0.1715	0.4214	2.93224	80.15	0.1710	0.4211	2.92836		
50	88.52	0.0258	0.4594	2.57633	88.56	0.0252	0.4592	2.57252	88.59	0.0246	0.4590	2.56871		
55	96.76	-0.1177	0.5076	2.22338	96.80	-0.1183	0.5074	2.21966	96.84	-0.1190	0.5071	2.21596		
60	104.76	-0.2547	0.5695	1.88628	104.80	-0.2554	0.5693	1.88268	104.84	-0.2562	0.5691	1.87910		
65	112.46	-0.3821	0.6502	1.57292	112.51	-0.3829	0.6501	1.56947	112.56	-0.3836	0.6500	1.56603		
70	119.82	-0.4972	0.7569	1.28968	119.87	-0.4980	0.7569	1.28641	119.92	-0.4988	0.7568	1.28315		
75	126.75	-0.5983	0.8997	1.04100	126.80	-0.5991	0.8999	1.03794	126.86	-0.5999	0.9001	1.03488		
80	133.19	-0.6845	1.0932	0.82909	133.25	-0.6852	1.0938	0.82626	133.31	-0.6859	1.0944	0.82344		
85	139.09	-0.7557	1.3572	0.65380	139.15	-0.7564	1.3585	0.65124	139.21	-0.7571	1.3598	0.64869		
90	144.39	-0.8130	1.7175	0.51286	144.45	-0.8136	1.7201	0.51057	144.51	-0.8142	1.7226	0.50829		
95	149.09	-0.8580	2.2057	0.40230	149.15	-0.8585	2.2102	0.40029	149.21	-0.8590	2.2148	0.39829		
100	153.19	-0.8925	2.8570	0.31725	153.25	-0.8930	2.8646	0.31550	153.31	-0.8934	2.8722	0.31376		
105	156.75	-0.9188	3.7069	0.25266	156.80	-0.9192	3.7190	0.25116	156.86	-0.9195	3.7312	0.24965		
110	159.82	-0.9386	4.7863	0.20394	159.87	-0.9389	4.8046	0.20264	159.92	-0.9392	4.8231	0.20215		
115	162.46	-0.9535	6.1164	0.16722	162.51	-0.9538	6.1429	0.16610	162.56	-0.9540	6.1696	0.16498		
120	164.76	-0.9648	7.7043	0.13944	164.80	-0.9650	7.7411	0.13846	164.84	-0.9652	7.7782	0.13749		
125	166.76	-0.9734	9.5397	0.11830	166.80	-0.9736	9.5889	0.11744	166.84	-0.9737	9.6385	0.11659		
130	168.52	-0.9800	11.5936	0.10209	168.56	-0.9801	11.6571	0.10133	168.59	-0.9802	11.7211	0.10058		
135	170.09	-0.9851	13.8183	0.08958	170.12	-0.9852	13.8975	0.08890	170.15	-0.9853	13.9775	0.08823		
140	171.51	-0.9890	16.1491	0.07987	171.53	-0.9891	16.2452	0.07926	171.56	-0.9892	16.3421	0.07864		
145	172.80	-0.9921	18.5077	0.07231	172.82	-0.9922	18.6210	0.07175	172.84	-0.9922	18.7354	0.07119		
150	173.99	-0.9945	20.8064	0.06643	174.01	-0.9945	20.9368	0.06591	174.02	-0.9946	21.0684	0.06539		
155	175.10	-0.9963	22.9535	0.06190	175.11	-0.9964	23.0999	0.06141	175.13	-0.9964	23.2477	0.06092		
160	176.14	-0.9977	24.8586	0.05846	176.16	-0.9978	25.0193	0.05799	176.17	-0.9978	25.1815	0.05753		
165	177.15	-0.9988	26.4384	0.05594	177.16	-0.9988	26.6110	0.05549	177.17	-0.9988	26.7852	0.05505		
170	178.12	-0.9995	27.6217	0.05422	178.12	-0.9995	27.8033	0.05379	178.13	-0.9995	27.9865	0.05335		
175	179.06	-0.9999	28.3545	0.05322	179.07	-0.9999	28.5416	0.05279	179.07	-0.9999	28.7305	0.05237		
180	180.00	-1.0000	28.6026	0.05289	180.00	-1.0000	28.7916	0.05247	180.00	-1.0000	28.9823	0.05204		

x = 0.664					x = 0.665					x = 0.666				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.3036	4.96043	0.00	1.0000	0.3034	4.95632	0.00	1.0000	0.3032	4.95222		
5	9.07	0.9875	0.3047	4.92972	9.08	0.9875	0.3045	4.92561	9.08	0.9875	0.3043	4.92152		
10	18.13	0.9503	0.3081	4.83851	18.14	0.9503	0.3079	4.83441	18.15	0.9503	0.3077	4.83032		
15	27.18	0.8896	0.3139	4.68950	27.18	0.8895	0.3137	4.68541	27.19	0.8895	0.3135	4.68133		
20	36.18	0.8071	0.3223	4.48707	36.20	0.8070	0.3221	4.48300	36.21	0.8069	0.3219	4.47894		
25	45.14	0.7053	0.3337	4.23719	45.16	0.7051	0.3335	4.23314	45.18	0.7049	0.3333	4.22911		
30	54.04	0.5872	0.3484	3.94718	54.06	0.5869	0.3482	3.94316	54.08	0.5866	0.3480	3.93916		
35	62.86	0.4561	0.3672	3.62546	62.89	0.4557	0.3670	3.62148	62.91	0.4554	0.3668	3.61752		
40	71.59	0.3159	0.3910	3.28131	71.61	0.3154	0.3907	3.27738	71.64	0.3150	0.3905	3.27347		
45	80.18	0.1705	0.4209	2.92449	80.21	0.1700	0.4207	2.92063	80.24	0.1695	0.4204	2.91677		
50	88.62	0.0240	0.4587	2.56492	88.66	0.0234	0.4585	2.56113	88.69	0.0228	0.4583	2.55736		
55	96.87	-0.1197	0.5069	2.21226	96.91	-0.1204	0.5067	2.20857	96.95	-0.1210	0.5065	2.20490		
60	104.89	-0.2569	0.5689	1.97552	104.93	-0.2576	0.5687	1.97195	104.97	-0.2583	0.5685	1.96839		
65	112.61	-0.3844	0.6498	1.75620	112.65	-0.3851	0.6497	1.75268	112.70	-0.3859	0.6495	1.74917		
70	119.97	-0.4996	0.7568	1.27989	120.02	-0.5003	0.7568	1.27665	120.07	-0.5011	0.7568	1.27341		
75	126.91	-0.6006	0.9003	1.03184	126.97	-0.6014	0.9005	1.02880	127.03	-0.6022	0.9007	1.02576		
80	133.37	-0.6867	1.0950	0.82063	133.43	-0.6874	1.0956	0.81783	133.48	-0.6882	1.0962	0.81504		
85	139.27	-0.7578	1.3612	0.64614	139.33	-0.7585	1.3625	0.64360	139.39	-0.7591	1.3638	0.64107		
90	144.57	-0.8149	1.7252	0.50602	144.63	-0.8155	1.7277	0.50376	144.70	-0.8161	1.7303	0.50150		
95	149.27	-0.8596	2.2193	0.39629	149.33	-0.8601	2.2239	0.39430	149.39	-0.8606	2.2285	0.39232		
100	153.37	-0.8939	2.8799	0.31203	153.43	-0.8944	2.8876	0.31030	153.48	-0.8948	2.8954	0.30858		
105	156.91	-0.9199	3.7434	0.24316	156.97	-0.9203	3.7557	0.24167	157.03	-0.9207	3.7681	0.24519		
110	159.97	-0.9395	4.8416	0.20006	160.02	-0.9398	4.8604	0.19878	160.07	-0.9401	4.8792	0.19750		
115	162.61	-0.9543	6.1966	0.16387	162.65	-0.9545	6.2237	0.16276	162.70	-0.9548	6.2510	0.16166		
120	164.89	-0.9654	7.8156	0.13653	164.93	-0.9656	7.8533	0.13557	164.97	-0.9658	7.8914	0.13461		
125	166.87	-0.9739	9.6885	0.11575	166.91	-0.9740	9.7389	0.11490	166.95	-0.9742	9.7898	0.11407		
130	168.62	-0.9804	11.7856	0.09983	168.66	-0.9805	11.8507	0.09909	168.69	-0.9806	11.9164	0.09834		
135	170.18	-0.9854	14.0581	0.08756	170.21	-0.9854	14.1395	0.08689	170.24	-0.9855	14.2216	0.08623		
140	171.59	-0.9892	16.4399	0.07804	171.61	-0.9893	16.5386	0.07743	171.64	-0.9894	16.6382	0.07683		
145	172.86	-0.9923	18.8509	0.07063	172.89	-0.9923	18.9673	0.07007	172.91	-0.9924	19.0848	0.06952		
150	174.04	-0.9946	21.2011	0.06487	174.06	-0.9946	21.3351	0.06436	174.08	-0.9947	21.4703	0.06385		
155	175.14	-0.9964	23.3967	0.06043	175.16	-0.9964	23.5472	0.05995	175.18	-0.9965	23.6990	0.05947		
160	176.18	-0.9978	25.3451	0.05707	176.20	-0.9978								

$x = 0.667$					$x = 0.668$					$x = 0.669$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.3030	4.94813	0.00	1.0000	0.3028	4.94405	0.00	1.0000	0.3026	4.93998	0.00	1.0000
5	9.08	0.9875	0.3041	4.91743	9.08	0.9875	0.3039	4.91335	9.09	0.9874	0.3037	4.90929	9.10	0.9874
10	18.15	0.9502	0.3075	4.82624	18.16	0.9502	0.3073	4.82217	18.17	0.9502	0.3071	4.81811	18.18	0.9501
15	27.20	0.8894	0.3133	4.67726	27.21	0.8893	0.3131	4.67320	27.22	0.8892	0.3129	4.66916	27.25	0.8892
20	36.22	0.8068	0.3217	4.47489	36.23	0.8066	0.3215	4.47085	36.25	0.8065	0.3213	4.46682	36.28	0.8065
25	45.19	0.7047	0.3330	4.22508	45.21	0.7045	0.3328	4.22107	45.22	0.7044	0.3326	4.21706	45.27	0.7044
30	54.10	0.5864	0.3478	3.93516	54.12	0.5861	0.3476	3.93118	54.14	0.5858	0.3473	3.92720	54.20	0.5858
35	62.93	0.4550	0.3666	3.61356	62.96	0.4547	0.3663	3.60962	62.98	0.4543	0.3661	3.60568	63.00	0.4543
40	71.67	0.3146	0.3903	3.26956	71.69	0.3141	0.3900	3.26567	71.72	0.3137	0.3898	3.26178	71.75	0.3137
45	80.27	0.1689	0.4202	2.91293	80.30	0.1684	0.4200	2.90910	80.34	0.1679	0.4197	2.90528	80.37	0.1679
50	88.73	0.0222	0.4580	2.55360	88.76	0.0216	0.4578	2.54984	88.80	0.0210	0.4576	2.54609	88.83	0.0210
55	96.99	-0.1217	0.5062	2.20123	97.03	-0.1224	0.5060	2.19757	97.07	-0.1230	0.5058	2.19392	97.10	-0.1230
60	105.01	-0.2591	0.5683	1.86484	105.06	-0.2598	0.5681	1.86130	105.10	-0.2605	0.5679	1.85777	105.13	-0.2605
65	112.75	-0.3867	0.6494	1.55236	112.79	-0.3874	0.6493	1.54896	112.84	-0.3882	0.6491	1.54558	112.87	-0.3882
70	120.13	-0.5019	0.7567	1.27018	120.18	-0.5027	0.7567	1.26695	120.23	-0.5034	0.7567	1.26374	120.27	-0.5034
75	127.08	-0.6029	0.9009	1.02274	127.14	-0.6037	0.9011	1.01972	127.19	-0.6045	0.9013	1.01671	127.23	-0.6045
80	133.54	-0.6889	1.0968	0.81225	133.60	-0.6896	1.0974	0.80947	133.66	-0.6904	1.0981	0.80650	133.70	-0.6904
85	139.45	-0.7598	1.3652	0.63854	139.51	-0.7605	1.3665	0.63602	139.57	-0.7612	1.3679	0.63351	139.62	-0.7612
90	144.76	-0.8167	1.7329	0.49925	144.82	-0.8173	1.7355	0.49701	144.88	-0.8179	1.7381	0.49477	144.93	-0.8179
95	149.45	-0.8612	2.2332	0.39034	149.51	-0.8617	2.2379	0.38837	149.57	-0.8622	2.2426	0.38641	149.62	-0.8622
100	153.54	-0.8953	2.9032	0.30686	153.60	-0.8957	2.9111	0.30516	153.66	-0.8962	2.9190	0.30345	153.71	-0.8962
105	157.08	-0.9211	3.7806	0.24371	157.14	-0.9214	3.7932	0.24224	157.19	-0.9218	3.8059	0.24077	157.24	-0.9218
110	160.13	-0.9404	4.8982	0.19923	160.18	-0.9407	4.9173	0.19497	160.23	-0.9410	4.9366	0.19371	160.28	-0.9410
115	162.75	-0.9550	6.2786	0.16056	162.79	-0.9552	6.3064	0.15947	162.84	-0.9555	6.3343	0.15838	162.89	-0.9555
120	165.01	-0.9660	7.9297	0.13366	165.06	-0.9662	7.9683	0.13271	165.10	-0.9664	8.0073	0.13177	165.15	-0.9664
125	166.99	-0.9743	9.8411	0.11323	167.03	-0.9745	9.8928	0.11240	167.07	-0.9746	9.9450	0.11158	167.11	-0.9746
130	168.73	-0.9807	11.9826	0.09761	168.76	-0.9808	12.0494	0.09687	168.80	-0.9809	12.1168	0.09615	168.83	-0.9809
135	170.27	-0.9856	14.3043	0.08557	170.30	-0.9857	14.3879	0.08491	170.34	-0.9858	14.4721	0.08426	170.37	-0.9858
140	171.67	-0.9894	16.7386	0.07623	171.69	-0.9895	16.8400	0.07564	171.72	-0.9896	16.9422	0.07505	171.75	-0.9896
145	172.93	-0.9924	19.2034	0.06898	172.96	-0.9925	19.3203	0.06843	172.98	-0.9925	19.4437	0.06789	173.01	-0.9925
150	174.10	-0.9947	21.6067	0.06334	174.12	-0.9947	21.7443	0.06283	174.14	-0.9948	21.8832	0.06233	174.17	-0.9948
155	175.19	-0.9965	23.8522	0.05899	175.21	-0.9965	24.0068	0.05852	175.22	-0.9965	24.1628	0.05805	175.24	-0.9965
160	176.22	-0.9978	25.8452	0.05570	176.23	-0.9978	26.0149	0.05525	176.25	-0.9979	26.1863	0.05480	176.27	-0.9979
165	177.20	-0.9988	27.4981	0.05329	177.21	-0.9988	27.6805	0.05286	177.22	-0.9988	27.8646	0.05243	177.24	-0.9988
170	178.15	-0.9995	28.7365	0.05164	178.16	-0.9995	28.9284	0.05122	178.17	-0.9995	29.1221	0.05081	178.19	-0.9995
175	179.08	-0.9999	29.5034	0.05069	179.08	-0.9999	29.7012	0.05027	179.09	-0.9999	29.9008	0.04986	179.10	-0.9999
180	180.00	-1.0000	29.7631	0.05037	180.00	-1.0000	29.9629	0.04996	180.00	-1.0000	30.1645	0.04955	180.00	-1.0000

$x = 0.670$					$x = 0.671$					$x = 0.672$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.3024	4.93593	0.00	1.0000	0.3022	4.93188	0.00	1.0000	0.3020	4.92785	0.00	1.0000
5	9.09	0.9874	0.3035	4.90523	9.09	0.9874	0.3033	4.90119	9.10	0.9874	0.3031	4.89716	9.10	0.9874
10	18.17	0.9501	0.3069	4.81407	18.18	0.9501	0.3067	4.81003	18.18	0.9501	0.3065	4.80600	18.18	0.9501
15	27.23	0.8892	0.3127	4.66512	27.24	0.8891	0.3125	4.66110	27.25	0.8890	0.3123	4.65709	27.25	0.8890
20	36.26	0.8064	0.3211	4.46280	36.27	0.8062	0.3209	4.45880	36.28	0.8061	0.3206	4.45480	36.28	0.8061
25	45.24	0.7042	0.3324	4.21307	45.25	0.7040	0.3322	4.20908	45.27	0.7038	0.3320	4.20511	45.27	0.7038
30	54.16	0.5855	0.3471	3.92324	54.18	0.5853	0.3469	3.91929	54.20	0.5850	0.3467	3.91534	54.20	0.5850
35	63.00	0.4540	0.3659	3.60176	63.02	0.4536	0.3657	3.59785	63.05	0.4533	0.3654	3.59394	63.05	0.4533
40	71.75	0.3132	0.3896	3.25791	71.77	0.3128	0.3894	3.25404	71.80	0.3124	0.3891	3.25019	71.80	0.3124
45	80.37	0.1674	0.4195	2.90146	80.40	0.1668	0.4193	2.89766	80.43	0.1663	0.4190	2.89386	80.43	0.1663
50	88.83	0.0204	0.4573	2.54236	88.87	0.0198	0.4571	2.53863	88.90	0.0192	0.4569	2.53491	88.93	0.0192
55	97.11	-0.1237	0.5056	2.19027	97.14	-0.1244	0.5053	2.18664	97.18	-0.1250	0.5051	2.18302	97.20	-0.1250
60	105.14	-0.2612	0.5677	1.85424	105.19	-0.2620	0.5675	1.85073	105.23	-0.2627	0.5674	1.84722	105.27	-0.2627
65	112.89	-0.3889	0.6490	1.54219	112.94	-0.3897	0.6488	1.53882	112.98	-0.3905	0.6487	1.53546	113.02	-0.3905
70	120.28	-0.5042	0.7567	1.26053	120.33	-0.5050	0.7566	1.25733	120.38	-0.5058	0.7566	1.25414	120.42	-0.5058
75	127.25	-0.6052	0.9015	1.01371	127.30	-0.6060	0.9017	1.01072	127.36	-0.6068	0.9019	1.00773	127.40	-0.6068
80	133.72	-0.6911	1.0987	0.80393	133.77	-0.6918	1.0993	0.80117	133.83	-0.6926	1.0999	0.79842	133.87	-0.6926
85	139.63	-0.7619	1.3692	0.63100	139.69	-0.7625	1.3706	0.62850	139.75	-0.7632	1.3719	0.62601	139.80	-0.7632
90	144.94	-0.8185	1.7408	0.49254	145.00	-0.8191	1.7434	0.49031	145.06	-0.8198	1.7461	0.48809	145.11	-0.8198
95	149.63	-0.8628	2.2473	0.38446	149.69	-0.8633	2.2520	0.38251	149.75	-0.8638	2.2568	0.38056	149.80	-0.8638
100	153.72	-0.8966	2.9270	0.30176	153.77	-0.8971	2.9350	0.30007	153.83	-0.8975	2.9431	0.29839	153.87	-0.8975
105	157.25	-0.9222	3.8186	0.23931	157.30	-0.9225	3.8315	0.23786	157.36	-0.9229	3.8444	0.23641	157.40	-0.9229
110	160.28	-0.9414	4.9560	0.19245	160.33	-0.9417	4.9755	0.19120	160.38	-0.9420	4.9952	0.18996	160.42	-0.9420
115	162.89	-0.9557	6.3626	0.15730	162.94	-0.9560	6.3910	0.15623	162.98	-0.9562	6.4196	0.15516	163.02	-0.9562
120	165.14	-0.9665	8.0466	0.13083	165.19	-0.9668	8.0862	0.12990	165.23	-0.9670	8.1261	0.12897	165.27	-0.9670
125	167.11	-0.9748	9.9776	0.11076	167.14	-0.9749	10.0506	0.10994	167.18	-0.9751	10.1041	0.10913	167.21	-0.9751
130	168.83	-0.9811	12.1847	0.09542	168.87	-0.9812	12.2533	0.09470	168.90	-0.9813	12.3224	0.09398	168.93	-0.9813
135	170.37	-0.9859	14.5571	0.08361	170.40	-0.9860	14.6428	0.08297	170.43	-0.9861	14.7294	0.08232	170.46	-0.9861
140	171.75	-0.9896	17.0454	0.07446	171.77	-0.9897	17.1495	0.07388	171.80	-0.9898	17.2545	0.07330	171.83	-0.9898
145	173.00	-0.9925	19.5655	0.06735	173.02	-0.9926	19.6884	0.06682	173.05	-0.9926	19.8125	0.06629	173.08	-0.9926
150	174.16	-0.9948	22.0234	0.06183	174.18	-0.9948	22.1648	0.06134	174.20	-0.9949	22.3076	0.06085	174.23	-0.9949
155	175.24	-0.9965	24.3203	0.05758	175.27	-0.9966	24.4792	0.05712	175.29	-0.9966	24.6397	0.05665	175.31	-0.9966

2 x = 0.673					2 x = 0.674					2 x = 0.675				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.3018	4.92382	0.00	1.0000	0.3016	4.91981	0.00	1.0000	0.3014	4.91580		
5	9.10	0.9874	0.3029	4.89314	9.10	0.9874	0.3027	4.88912	9.11	0.9874	0.3025	4.88512		
10	18.19	0.9500	0.3063	4.80199	18.20	0.9500	0.3061	4.79798	18.20	0.9500	0.3059	4.79399		
15	27.26	0.8889	0.3121	4.65308	27.27	0.8889	0.3118	4.64909	27.28	0.8888	0.3116	4.64511		
20	36.29	0.8060	0.3204	4.45081	36.31	0.8059	0.3202	4.44684	36.32	0.8057	0.3200	4.44287		
25	45.29	0.7036	0.3317	4.20115	45.30	0.7034	0.3315	4.19720	45.32	0.7032	0.3313	4.19325		
30	54.22	0.5847	0.3465	3.91141	54.24	0.5845	0.3462	3.90749	54.25	0.5842	0.3460	3.90357		
35	63.07	0.4529	0.3652	3.59005	63.09	0.4526	0.3650	3.58616	63.11	0.4522	0.3648	3.58229		
40	71.82	0.3119	0.3889	3.24634	71.85	0.3115	0.3887	3.24250	71.88	0.3111	0.3884	3.23868		
45	80.46	0.1658	0.4188	2.89008	80.49	0.1653	0.4186	2.88630	80.52	0.1648	0.4183	2.88254		
50	88.93	-0.0186	0.4566	2.53120	88.97	-0.0180	0.4564	2.52750	89.00	-0.0174	0.4562	2.52381		
55	97.22	-0.1257	0.5049	2.17940	97.26	-0.1264	0.5047	2.17580	97.30	-0.1271	0.5044	2.17220		
60	105.27	-0.2634	0.5672	1.84372	105.32	-0.2641	0.5670	1.84023	105.36	-0.2649	0.5668	1.83675		
65	113.03	-0.3912	0.6486	1.53210	113.08	-0.3920	0.6484	1.52875	113.13	-0.3927	0.6483	1.52541		
70	120.43	-0.5065	0.7566	1.25096	120.49	-0.5073	0.7566	1.24778	120.54	-0.5081	0.7565	1.24461		
75	127.41	-0.6075	0.9021	1.00475	127.47	-0.6083	0.9023	1.00178	127.52	-0.6091	0.9025	0.99881		
80	133.89	-0.6933	1.1005	0.79567	133.95	-0.6940	1.1011	0.79294	134.01	-0.6948	1.1018	0.79020		
85	139.81	-0.7639	1.3733	0.62353	139.87	-0.7646	1.3747	0.62105	139.93	-0.7653	1.3761	0.61858		
90	145.12	-0.8204	1.7487	0.48588	145.18	-0.8210	1.7514	0.48368	145.24	-0.8216	1.7541	0.48148		
95	149.81	-0.8644	2.2616	0.37862	149.87	-0.8649	2.2664	0.37669	149.93	-0.8654	2.2713	0.37477		
100	153.89	-0.8980	2.9512	0.29671	153.95	-0.8984	2.9594	0.29504	154.01	-0.8989	2.9676	0.29337		
105	157.41	-0.9233	3.8574	0.23497	157.47	-0.9237	3.8705	0.23353	157.52	-0.9240	3.8837	0.23210		
110	160.43	-0.9423	5.0151	0.18872	160.49	-0.9426	5.0351	0.18749	160.54	-0.9429	5.0552	0.18626		
115	163.03	-0.9565	6.4485	0.15409	163.08	-0.9567	6.4776	0.15303	163.13	-0.9569	6.5069	0.15197		
120	165.27	-0.9671	8.1663	0.12805	165.32	-0.9673	8.2069	0.12713	165.36	-0.9675	8.2478	0.12621		
125	167.22	-0.9752	10.1580	0.10832	167.26	-0.9754	10.2124	0.10752	167.30	-0.9755	10.2673	0.10672		
130	168.93	-0.9814	12.3922	0.09327	168.97	-0.9815	12.4626	0.09256	169.00	-0.9816	12.5336	0.09185		
135	170.46	-0.9862	14.8166	0.08169	170.49	-0.9862	14.9047	0.08105	170.52	-0.9863	14.9936	0.08042		
140	171.82	-0.9898	17.3605	0.07272	171.85	-0.9899	17.4674	0.07215	171.88	-0.9900	17.5754	0.07158		
145	173.07	-0.9927	19.9377	0.06576	173.09	-0.9927	20.0640	0.06524	173.11	-0.9928	20.1915	0.06471		
150	174.22	-0.9949	22.4517	0.06036	174.24	-0.9949	22.5971	0.05987	174.25	-0.9950	22.7439	0.05939		
155	175.29	-0.9966	24.8016	0.05619	175.30	-0.9966	24.9650	0.05574	175.32	-0.9967	25.1299	0.05529		
160	176.29	-0.9979	26.8877	0.05304	176.31	-0.9979	27.0672	0.05261	176.32	-0.9979	27.2483	0.05218		
165	177.26	-0.9989	28.6183	0.05074	177.27	-0.9989	28.8111	0.05032	177.28	-0.9989	29.0058	0.04991		
170	178.19	-0.9995	29.9150	0.04916	178.20	-0.9995	30.1179	0.04876	178.20	-0.9995	30.3228	0.04836		
175	179.10	-0.9999	30.7181	0.04825	179.10	-0.9999	30.9272	0.04785	179.11	-0.9999	31.1384	0.04746		
180	180.00	-1.0000	30.9900	0.04795	180.00	-1.0000	31.2013	0.04755	180.00	-1.0000	31.4146	0.04716		

2 x = 0.676					2 x = 0.677					2 x = 0.678				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.3012	4.91181	0.00	1.0000	0.3010	4.90783	0.00	1.0000	0.3008	4.90386		
5	9.11	0.9874	0.3023	4.88113	9.11	0.9874	0.3021	4.87715	9.12	0.9874	0.3019	4.87318		
10	18.21	0.9499	0.3057	4.79001	18.21	0.9499	0.3055	4.78603	18.22	0.9499	0.3053	4.78207		
15	27.29	0.8887	0.3114	4.64113	27.30	0.8887	0.3112	4.63717	27.30	0.8886	0.3110	4.63322		
20	36.33	0.8056	0.3198	4.43892	36.34	0.8055	0.3196	4.43497	36.36	0.8053	0.3194	4.43104		
25	45.33	0.7030	0.3311	4.18932	45.35	0.7028	0.3309	4.18540	45.36	0.7026	0.3307	4.18149		
30	54.27	0.5839	0.3458	3.89967	54.29	0.5836	0.3456	3.89578	54.31	0.5834	0.3454	3.89190		
35	63.14	0.4519	0.3645	3.57842	63.16	0.4515	0.3643	3.57457	63.18	0.4511	0.3641	3.57072		
40	71.90	0.3106	0.3882	3.23486	71.93	0.3102	0.3880	3.23105	71.96	0.3097	0.3878	3.22726		
45	80.55	0.1642	0.4181	2.87878	80.58	0.1637	0.4179	2.87503	80.61	0.1632	0.4176	2.87130		
50	89.04	0.0168	0.4559	2.52013	89.07	0.0162	0.4557	2.51646	89.11	0.0156	0.4555	2.51279		
55	97.34	-0.1277	0.5042	2.15861	97.38	-0.1284	0.5040	2.15503	97.42	-0.1291	0.5038	2.15146		
60	105.40	-0.2656	0.5666	1.83327	105.44	-0.2663	0.5664	1.82981	105.49	-0.2670	0.5662	1.82635		
65	113.17	-0.3935	0.6481	1.52208	113.22	-0.3943	0.6480	1.51875	113.27	-0.3950	0.6479	1.51544		
70	120.59	-0.5089	0.7565	1.24145	120.64	-0.5096	0.7565	1.23829	120.69	-0.5104	0.7565	1.23515		
75	127.58	-0.6098	0.9027	0.99585	127.63	-0.6106	0.9029	0.99290	127.69	-0.6114	0.9031	0.98996		
80	134.07	-0.6955	1.1024	0.78748	134.13	-0.6962	1.1030	0.78476	134.18	-0.6970	1.1036	0.78405		
85	139.99	-0.7659	1.3775	0.61611	140.05	-0.7666	1.3789	0.61365	140.11	-0.7673	1.3803	0.61120		
90	145.30	-0.8222	1.7568	0.47929	145.37	-0.8228	1.7595	0.47710	145.43	-0.8234	1.7623	0.47493		
95	149.99	-0.8659	2.2762	0.37285	150.05	-0.8665	2.2811	0.37094	150.11	-0.8670	2.2860	0.36903		
100	154.07	-0.8993	2.9759	0.29171	154.13	-0.8998	2.9842	0.29006	154.18	-0.9002	2.9926	0.28841		
105	157.58	-0.9244	3.8970	0.23067	157.63	-0.9248	3.9104	0.22926	157.69	-0.9251	3.9239	0.22784		
110	160.59	-0.9432	5.0755	0.18504	160.64	-0.9435	5.0960	0.18382	160.69	-0.9438	5.1166	0.18261		
115	163.17	-0.9572	6.5365	0.15092	163.22	-0.9574	6.5663	0.14988	163.27	-0.9577	6.5964	0.14884		
120	165.40	-0.9677	8.2891	0.12530	165.44	-0.9679	8.3307	0.12440	165.49	-0.9681	8.3727	0.12350		
125	167.34	-0.9757	10.3227	0.10593	167.38	-0.9758	10.3785	0.10514	167.42	-0.9760	10.4348	0.10435		
130	169.04	-0.9818	12.6052	0.09115	169.07	-0.9819	12.6774	0.09046	169.11	-0.9820	12.7503	0.08976		
135	170.55	-0.9864	15.0832	0.07980	170.58	-0.9865	15.1737	0.07917	170.61	-0.9866	15.2650	0.07855		
140	171.90	-0.9900	17.6843	0.07101	171.93	-0.9901	17.7942	0.07045	171.96	-0.9902	17.9051	0.06989		
145	173.14	-0.9928	20.3202	0.06420	173.16	-0.9929	20.4500	0.06368	173.18	-0.9929	20.5811	0.06317		
150	174.27	-0.9950	22.8921	0.05891	174.29	-0.9950	23.0416	0.05843	174.31	-0.9951	23.1926	0.05795		
155	175.33	-0.9967	25.2954	0.05483	175.35	-0.9967	25.4645	0.05439	175.36	-0.9967	25.6342	0.05394		
160	176.33	-0.9980	27.4312	0.05175	176.34	-0.9980	27.6159	0.05133	176.35	-0.9980	27.8022	0.05090		
165	177.29	-0.9989	29.2024	0.04950	177.30	-0.9989	29.4008	0.04909	177.30	-0.9989	29.6011	0.04868		
170	178.21	-0.9995	30.5296	0.04796	178.21	-0.9995	30.7384	0.04756	178.22	-0.9995	30.9491	0.04717		
175	179.11	-0.9999	31.3516	0.04706	179.11	-0.9999	31.5668	0.04667	179.12	-0.9999	31.7841	0.04628		
180	180.00	-1.0000	31.6299	0.04677	180.00	-1.0000	31.8473	0.04638	180.00	-1.0000	32.0668	0.04600		

$$x = 0.679$$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3006	4.89990
5	9.12	0.9874	0.3017	4.86922
10	18.23	0.9498	0.3051	4.77812
15	27.31	0.8885	0.3108	4.62928
20	36.37	0.8052	0.3192	4.42711
25	45.38	0.7024	0.3305	4.17758
30	54.33	0.5831	0.3451	3.88802
35	63.21	0.4508	0.3639	3.56689
40	71.98	0.3093	0.3875	3.22347
45	80.64	0.1627	0.4174	2.86757
50	89.14	0.0150	0.4552	2.50914
55	97.45	-0.1297	0.5035	2.15789
60	105.53	-0.2677	0.5660	1.82290
65	113.31	-0.3958	0.6477	1.51213
70	120.74	-0.5112	0.7564	1.23201
75	127.74	-0.6121	0.9033	0.98702
80	134.24	-0.6977	1.1043	0.77935
85	140.17	-0.7680	1.3817	0.60876
90	145.49	-0.8240	1.7650	0.47275
95	150.17	-0.8675	2.2910	0.36713
100	154.24	-0.9006	3.0010	0.28677
105	157.74	-0.9255	3.9374	0.22643
110	160.74	-0.9441	5.1373	0.18141
115	163.31	-0.9579	6.6267	0.14780
120	165.53	-0.9683	8.4150	0.12260
125	167.45	-0.9761	10.4916	0.10357
130	169.14	-0.9821	12.8239	0.08907
135	170.64	-0.9867	15.3571	0.07794
140	171.98	-0.9902	18.0171	0.06933
145	173.21	-0.9930	20.7135	0.06266
150	174.33	-0.9951	23.3450	0.05748
155	175.38	-0.9968	25.8055	0.05350
160	176.37	-0.9980	27.9904	0.05048
165	177.31	-0.9989	29.8033	0.04828
170	178.23	-0.9995	31.1619	0.04677
175	179.12	-0.9999	32.0034	0.04590
180	180.00	-1.0000	32.2884	0.04561

$$x = 0.680$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3004	4.89594
9.12	0.9874	0.3015	4.86527
18.23	0.9498	0.3049	4.77418
27.32	0.8884	0.3106	4.62535
36.38	0.8051	0.3190	4.42320
45.40	0.7022	0.3303	4.17369
54.35	0.5828	0.3449	3.88416
63.23	0.4504	0.3636	3.56306
72.01	0.3089	0.3873	3.21969
80.67	0.1621	0.4172	2.86385
89.18	0.0144	0.4550	2.50549
97.49	-0.1304	0.5033	2.15434
105.57	-0.2685	0.5658	1.81946
113.36	-0.3965	0.6476	1.50883
120.80	-0.5120	0.7564	1.22888
127.80	-0.6129	0.9035	0.98409
134.30	-0.6984	1.1049	0.77665
140.23	-0.7687	1.3831	0.60632
145.55	-0.8246	1.7678	0.47059
150.23	-0.8681	2.2959	0.36524
154.30	-0.9011	3.0095	0.28514
157.80	-0.9259	3.9511	0.22503
160.80	-0.9443	5.1582	0.18021
163.36	-0.9581	6.6572	0.14677
165.57	-0.9685	8.4577	0.12171
167.49	-0.9763	10.5489	0.10279
169.18	-0.9822	12.8981	0.08839
170.67	-0.9868	15.4501	0.07733
172.01	-0.9903	18.1301	0.06878
173.23	-0.9930	20.8470	0.06215
174.35	-0.9951	23.4988	0.05701
175.40	-0.9968	25.9784	0.05306
176.38	-0.9980	28.1804	0.05007
177.32	-0.9989	30.0075	0.04788
178.23	-0.9995	31.3768	0.04639
179.12	-0.9999	32.2249	0.04552
180.00	-1.0000	32.5121	0.04523

$$x = 0.681$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.3002	4.89200
9.12	0.9873	0.3013	4.86134
18.24	0.9498	0.3047	4.77024
27.33	0.8884	0.3104	4.62143
36.39	0.8050	0.3188	4.41929
45.41	0.7020	0.3300	4.16981
54.37	0.5826	0.3447	3.88031
63.25	0.4501	0.3634	3.55925
72.04	0.3084	0.3871	3.21592
80.70	0.1616	0.4169	2.86014
89.21	0.0138	0.4548	2.50185
97.53	-0.1311	0.5031	2.15080
105.62	-0.2692	0.5656	1.81603
113.41	-0.3973	0.6474	1.50553
120.85	-0.5127	0.7564	1.22575
127.85	-0.6137	0.9037	0.98117
134.36	-0.6992	1.1055	0.77396
140.29	-0.7693	1.3845	0.60389
145.61	-0.8252	1.7705	0.46843
150.29	-0.8686	2.3010	0.36335
154.36	-0.9015	3.0181	0.28351
157.85	-0.9262	3.9649	0.22364
160.85	-0.9446	5.1793	0.17901
163.41	-0.9584	6.6880	0.14575
165.62	-0.9687	8.5007	0.12083
167.53	-0.9764	10.6067	0.10202
169.21	-0.9823	12.9729	0.08770
170.70	-0.9869	15.5439	0.07672
172.04	-0.9904	18.2441	0.06823
173.25	-0.9931	20.9818	0.06165
174.37	-0.9952	23.6541	0.05655
175.41	-0.9968	26.1529	0.05262
176.39	-0.9980	28.3722	0.04965
177.33	-0.9989	30.2136	0.04748
178.24	-0.9995	31.5937	0.04600
179.12	-0.9999	32.4485	0.04514
180.00	-1.0000	32.7380	0.04485

$$x = 0.682$$

PSI	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.3000	4.88807
5	9.13	0.9873	0.3011	4.85741
10	18.24	0.9497	0.3045	4.76632
15	27.34	0.8883	0.3102	4.61752
20	36.41	0.8048	0.3186	4.41540
25	45.43	0.7018	0.3298	4.16594
30	54.39	0.5823	0.3445	3.87647
35	63.27	0.4497	0.3632	3.55544
40	72.06	0.3080	0.3869	3.21216
45	80.73	0.1611	0.4167	2.85644
50	89.24	0.0132	0.4546	2.49823
55	97.57	-0.1317	0.5029	2.14726
60	105.66	-0.2699	0.5654	1.81260
65	113.46	-0.3981	0.6473	1.50225
70	120.90	-0.5135	0.7564	1.22264
75	127.91	-0.6144	0.9039	0.97825
80	134.42	-0.6999	1.1062	0.77128
85	140.36	-0.7700	1.3859	0.60146
90	145.67	-0.8258	1.7733	0.46627
95	150.36	-0.8691	2.3060	0.36147
100	154.42	-0.9020	3.0267	0.28189
105	157.91	-0.9266	3.9787	0.22225
110	160.90	-0.9449	5.2006	0.17782
115	163.46	-0.9586	6.7190	0.14472
120	165.66	-0.9688	8.5441	0.11994
125	167.57	-0.9766	10.6650	0.10125
130	169.24	-0.9824	13.0485	0.08703
135	170.73	-0.9869	15.6386	0.07611
140	172.06	-0.9904	18.3592	0.06768
145	173.27	-0.9931	21.1179	0.06115
150	174.39	-0.9952	23.8108	0.05609
155	175.43	-0.9968	26.3292	0.05219
160	176.41	-0.9980	28.5658	0.04924
165	177.34	-0.9989	30.4218	0.04708
170	178.24	-0.9995	31.8128	0.04561
175	179.13	-0.9999	32.6743	0.04476
180	180.00	-1.0000	32.9661	0.04448

$$x = 0.683$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.2998	4.88415
9.13	0.9873	0.3009	4.85349
18.25	0.9497	0.3043	4.76241
27.35	0.8882	0.3100	4.61362
36.42	0.8047	0.3184	4.41152
45.44	0.7016	0.3296	4.16208
54.41	0.5820	0.3443	3.87263
63.30	0.4494	0.3630	3.55164
72.09	0.3076	0.3866	3.20941
80.76	0.1606	0.4165	2.85274
89.28	0.0126	0.4543	2.49461
97.61	-0.1324	0.5027	2.14373
105.70	-0.2706	0.5652	1.80919
113.50	-0.3988	0.6472	1.49897
120.95	-0.5143	0.7564	1.21953
127.97	-0.6152	0.9041	0.97534
134.48	-0.7006	1.1068	0.76860
140.42	-0.7707	1.3873	0.59904
145.73	-0.8264	1.7761	0.46413
150.42	-0.8696	2.3111	0.35960
154.48	-0.9024	3.0353	0.28027
157.97	-0.9270	3.9927	0.22086
160.95	-0.9452	5.2220	0.17664
163.50	-0.9588	6.7503	0.14371
165.70	-0.9690	8.5879	0.11907
167.61	-0.9767	10.7239	0.10049
169.28	-0.9825	13.1247	0.08635
170.76	-0.9870	15.7341	0.07551
172.09	-0.9905	18.4754	0.06714
173.30	-0.9932	21.2553	0.06065
174.41	-0.9952	23.9691	0.05563
175.44	-0.9968	26.5071	0.05176
176.42	-0.9980	28.7613	0.04883
177.35	-0.9989	30.6319	0.04669
178.25	-0.9995	32.0339	0.04523
179.13	-0.9999	32.9023	0.04438
180.00	-1.0000	33.1964	0.04411

$$x = 0.684$$

θ	$\cos \theta$	G	S^2
0.00	1.0000	0.2996	4.88024
9.13	0.9873	0.3007	4.84958
18.26	0.9497	0.3041	4.75851
27.36	0.8881	0.3098	4.60973
36.43	0.8046	0.3181	4.40764
45.46	0.7014	0.3294	4.15822
54.43	0.5818	0.3441	3.86881
63.32	0.4490	0.3628	3.54786
72.11	0.3071	0.3864	3.20467
80.79	0.1601	0.4163	2.84906
89.31	0.0120	0.4541	2.49100
97.65	-0.1331	0.5025	2.14021
105.74	-0.2714	0.5650	1.80578
113.55	-0.3996	0.6470	1.49570
121.00	-0.5151	0.7563	1.21643
128.02	-0.6160	0.9043	0.97244
134.54	-0.7014	1.1075	0.76593
140.48	-0.7714	1.3887	0.59663
145.80	-0.8270	1.7789	0.46199
150.48	-0.8702	2.3162	0.35773
154.54	-0.9029	3.0440	0.27866
158.02	-0.9273	4.0068	0.21948
161.00	-0.9455	5.2435	0.17546
163.55	-0.9591	6.7818	0.14270
165.74	-0.9692	8.6320	0.11819
167.65	-0.9768	10.7832	0.09973
169.31	-0.9827	13.2016	0.08568
170.79	-0.9871	15.8306	0.07491
172.11	-0.9905	18.5927	0.06660
173.32	-0.9932	21.3939	0.06016
174.43	-0.9953	24.1288	0.05517
175.46	-0.9969	26.6868	0.05133
176.43	-0.9981	28.9587	0.04842
177.36	-0.9989	30.8441	0.04630
178.26	-0.9995	32.2572	0.04485
179.13	-0.9999	33.1376	0.04401
180.00	-1.0000	33.4290	0.04373

2 x = 0.685					2 x = 0.686					2 x = 0.687				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2994	4.87634	0.00	1.0000	0.2992	4.87245	0.00	1.0000	0.2990	4.86857		
5	9.14	0.9873	0.3005	4.84568	9.14	0.9873	0.3003	4.84180	9.14	0.9873	0.3001	4.83792		
10	18.26	0.9496	0.3039	4.75462	18.27	0.9496	0.3037	4.75074	18.28	0.9496	0.3035	4.74686		
15	27.37	0.8881	0.3096	4.60585	27.38	0.8880	0.3094	4.60198	27.39	0.8879	0.3092	4.59812		
20	36.44	0.8044	0.3179	4.40378	36.46	0.8043	0.3177	4.39992	36.47	0.8042	0.3175	4.39608		
25	45.47	0.7012	0.3292	4.15438	45.49	0.7010	0.3290	4.15055	45.50	0.7008	0.3288	4.14673		
30	54.45	0.5815	0.3439	3.86499	54.46	0.5812	0.3436	3.86119	54.48	0.5809	0.3434	3.85740		
35	63.34	0.4487	0.3625	3.54408	63.36	0.4483	0.3623	3.54031	63.39	0.4480	0.3621	3.53655		
40	72.14	0.3067	0.3862	3.20094	72.17	0.3062	0.3859	3.19722	72.19	0.3058	0.3857	3.19350		
45	80.82	0.1595	0.4160	2.84539	80.85	0.1590	0.4158	2.84172	80.88	0.1585	0.4156	2.83807		
50	89.35	0.0114	0.4539	2.48740	89.38	0.0108	0.4536	2.48380	89.42	0.0102	0.4534	2.48022		
55	97.69	-0.1337	0.5022	2.13670	97.72	-0.1344	0.5020	2.13319	97.76	-0.1351	0.5018	2.12970		
60	105.79	-0.2721	0.5648	1.80238	105.83	-0.2728	0.5646	1.79899	105.87	-0.2735	0.5644	1.79560		
65	113.60	-0.4003	0.6469	1.49244	113.65	-0.4011	0.6467	1.48919	113.69	-0.4019	0.6466	1.48594		
70	121.05	-0.5158	0.7563	1.21333	121.11	-0.5166	0.7563	1.21025	121.16	-0.5174	0.7563	1.20717		
75	128.08	-0.6167	0.9045	0.96955	128.13	-0.6175	0.9047	0.96666	128.19	-0.6183	0.9049	0.96378		
80	134.59	-0.7021	1.1081	0.76327	134.65	-0.7028	1.1087	0.76061	134.71	-0.7035	1.1094	0.75796		
85	140.54	-0.7720	1.3902	0.59422	140.60	-0.7727	1.3916	0.59182	140.66	-0.7734	1.3931	0.58943		
90	145.86	-0.8276	1.7817	0.45985	145.92	-0.8283	1.7846	0.45773	145.98	-0.8289	1.7874	0.45560		
95	150.54	-0.8707	2.3213	0.35587	150.60	-0.8712	2.3265	0.35401	150.66	-0.8717	2.3317	0.35216		
100	154.59	-0.9033	3.0528	0.27705	154.65	-0.9037	3.0616	0.27585	154.71	-0.9042	3.0705	0.27386		
105	158.08	-0.9277	4.0209	0.21811	158.13	-0.9281	4.0352	0.21674	158.19	-0.9284	4.0495	0.21538		
110	161.05	-0.9458	5.2653	0.17428	161.11	-0.9461	5.2872	0.17312	161.16	-0.9464	5.3092	0.17195		
115	163.60	-0.9593	6.8136	0.14169	163.65	-0.9595	6.8457	0.14069	163.69	-0.9598	6.8780	0.13969		
120	165.79	-0.9694	8.6765	0.11733	165.83	-0.9696	8.7214	0.11646	165.87	-0.9698	8.7667	0.11560		
125	167.69	-0.9770	10.8431	0.09897	167.72	-0.9771	10.9035	0.09822	167.76	-0.9773	10.9645	0.09747		
130	169.35	-0.9828	13.2793	0.08501	169.38	-0.9829	13.3576	0.08435	169.42	-0.9830	13.4367	0.08369		
135	170.82	-0.9872	15.9279	0.07432	170.85	-0.9873	16.0262	0.07373	170.88	-0.9874	16.1253	0.07314		
140	172.14	-0.9906	18.7111	0.06606	172.17	-0.9907	18.8306	0.06553	172.19	-0.9907	18.9512	0.06500		
145	173.34	-0.9933	21.5339	0.05967	173.36	-0.9933	21.6753	0.05918	173.39	-0.9933	21.8180	0.05869		
150	174.45	-0.9953	24.2901	0.05471	174.46	-0.9953	24.4530	0.05426	174.48	-0.9954	24.6174	0.05381		
155	175.47	-0.9969	26.8681	0.05090	175.49	-0.9969	27.0513	0.05048	175.50	-0.9969	27.2362	0.05006		
160	176.44	-0.9981	29.1580	0.04802	176.46	-0.9981	29.3593	0.04762	176.47	-0.9981	29.5625	0.04722		
165	177.37	-0.9989	31.0584	0.04591	177.38	-0.9990	31.2748	0.04553	177.39	-0.9990	31.4932	0.04514		
170	178.26	-0.9995	32.4828	0.04448	178.27	-0.9995	32.7105	0.04410	178.28	-0.9995	32.9404	0.04373		
175	179.14	-0.9999	33.3650	0.04364	179.14	-0.9999	33.5998	0.04327	179.14	-0.9999	33.8369	0.04291		
180	180.00	-1.0000	33.6638	0.04337	180.00	-1.0000	33.9010	0.04300	180.00	-1.0000	34.1405	0.04264		

2 x = 0.688					2 x = 0.689					2 x = 0.690				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2988	4.86470	0.00	1.0000	0.2986	4.86084	0.00	1.0000	0.2984	4.85699		
5	9.15	0.9873	0.2999	4.83405	9.15	0.9873	0.2997	4.83019	9.15	0.9873	0.2995	4.82634		
10	18.28	0.9496	0.3033	4.74300	18.29	0.9495	0.3031	4.73915	18.29	0.9495	0.3029	4.73531		
15	27.40	0.8878	0.3090	4.59426	27.41	0.8878	0.3088	4.59042	27.42	0.8877	0.3086	4.58659		
20	36.48	0.8041	0.3173	4.39224	36.49	0.8039	0.3171	4.38842	36.51	0.8038	0.3169	4.38460		
25	45.52	0.7007	0.3286	4.14291	45.54	0.7005	0.3284	4.13911	45.55	0.7003	0.3282	4.13531		
30	54.50	0.5807	0.3432	3.85361	54.52	0.5804	0.3430	3.84983	54.54	0.5801	0.3428	3.84607		
35	63.41	0.4476	0.3619	3.53280	63.43	0.4473	0.3617	3.52906	63.45	0.4469	0.3614	3.52533		
40	72.22	0.3054	0.3855	3.18980	72.25	0.3049	0.3853	3.18611	72.27	0.3045	0.3851	3.18242		
45	80.91	0.1580	0.4153	2.83442	80.94	0.1575	0.4151	2.83078	80.97	0.1569	0.4149	2.82715		
50	89.45	0.0096	0.4532	2.47664	89.48	0.0090	0.4529	2.47308	89.52	0.0084	0.4527	2.46952		
55	97.80	-0.1357	0.5016	2.12621	97.84	-0.1364	0.5014	2.12273	97.88	-0.1371	0.5011	2.11926		
60	105.92	-0.2742	0.5642	1.79223	105.96	-0.2750	0.5640	1.78886	106.00	-0.2757	0.5638	1.78550		
65	113.74	-0.4026	0.6465	1.48270	113.79	-0.4034	0.6463	1.47947	113.84	-0.4041	0.6462	1.47624		
70	121.21	-0.5182	0.7562	1.20409	121.26	-0.5189	0.7562	1.20103	121.31	-0.5197	0.7562	1.19797		
75	128.24	-0.6190	0.9052	0.96091	128.30	-0.6198	0.9054	0.95804	128.36	-0.6205	0.9056	0.95518		
80	134.77	-0.7043	1.1100	0.75532	134.83	-0.7050	1.1107	0.75268	134.89	-0.7057	1.1113	0.75005		
85	140.72	-0.7741	1.3945	0.58704	140.78	-0.7747	1.3960	0.58466	140.84	-0.7754	1.3974	0.58229		
90	146.04	-0.8295	1.7903	0.45349	146.10	-0.8301	1.7932	0.45138	146.17	-0.8307	1.7961	0.44927		
95	150.72	-0.8722	2.3369	0.35032	150.78	-0.8728	2.3421	0.34848	150.84	-0.8733	2.3474	0.34665		
100	154.77	-0.9046	3.0794	0.27227	154.83	-0.9051	3.0884	0.27069	154.89	-0.9055	3.0975	0.26911		
105	158.24	-0.9288	4.0640	0.21402	158.30	-0.9291	4.0786	0.21267	158.36	-0.9295	4.0933	0.21132		
110	161.21	-0.9467	5.3315	0.17079	161.26	-0.9470	5.3539	0.16964	161.31	-0.9473	5.3765	0.16849		
115	163.74	-0.9600	6.9106	0.13870	163.79	-0.9602	6.9435	0.13771	163.84	-0.9605	6.9767	0.13673		
120	165.92	-0.9699	8.8124	0.11475	165.96	-0.9701	8.8585	0.11389	166.00	-0.9703	8.9050	0.11305		
125	167.80	-0.9774	11.0260	0.09672	167.84	-0.9776	11.0880	0.09598	167.88	-0.9777	11.1506	0.09524		
130	169.45	-0.9831	13.5164	0.08304	169.48	-0.9832	13.5970	0.08238	169.52	-0.9833	13.6782	0.08174		
135	170.91	-0.9874	16.2254	0.07255	170.94	-0.9875	16.3264	0.07197	170.97	-0.9876	16.4284	0.07140		
140	172.22	-0.9908	19.0730	0.06447	172.25	-0.9909	19.1959	0.06395	172.27	-0.9909	19.3201	0.06343		
145	173.41	-0.9934	21.9620	0.05821	173.43	-0.9934	22.1075	0.05773	173.45	-0.9935	22.2543	0.05726		
150	174.50	-0.9954	24.7835	0.05337	174.52	-0.9954	24.9511	0.05292	174.54	-0.9955	25.1204	0.05248		
155	175.52	-0.9969	27.4230	0.04964	175.54	-0.9970	27.6115	0.04922	175.55	-0.9970	27.8019	0.04881		
160	176.48	-0.9981	29.7678	0.04682										

$\frac{2}{x} = 0.691$
 $\frac{2}{x} = 0.692$
 $\frac{2}{x} = 0.693$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2982	4.85315	0.00	1.0000	0.2980	4.84932	0.00	1.0000	0.2978	4.84550
5	9.15	0.9873	0.2993	4.82251	9.16	0.9873	0.2991	4.81868	9.16	0.9872	0.2989	4.81486
10	18.30	0.9494	0.3027	4.73148	18.31	0.9494	0.3025	4.72766	18.31	0.9494	0.3023	4.72384
15	27.42	0.8876	0.3084	4.58277	27.43	0.8875	0.3082	4.57896	27.44	0.8875	0.3080	4.57516
20	36.52	0.8037	0.3167	4.38080	36.53	0.8035	0.3165	4.37700	36.54	0.8034	0.3163	4.37322
25	45.57	0.7001	0.3273	4.13153	45.58	0.6999	0.3277	4.12776	45.60	0.6997	0.3275	4.12399
30	54.56	0.5799	0.3426	3.84231	54.58	0.5796	0.3424	3.83856	54.60	0.5793	0.3421	3.83483
35	63.48	0.4466	0.3612	3.52161	63.50	0.4462	0.3610	3.51790	63.52	0.4459	0.3608	3.51420
40	72.30	0.3041	0.3848	3.17874	72.32	0.3036	0.3846	3.17508	72.35	0.3032	0.3844	3.17142
45	81.00	0.1564	0.4147	2.82353	81.03	0.1559	0.4144	2.81992	81.06	0.1554	0.4142	2.81632
50	89.55	0.0078	0.4525	2.46597	89.59	0.0072	0.4523	2.46243	89.62	0.0066	0.4520	2.45889
55	97.92	-0.1377	0.5009	2.11580	97.96	-0.1384	0.5007	2.11235	97.99	-0.1391	0.5005	2.10990
60	106.05	-0.2764	0.5636	1.78215	106.09	-0.2771	0.5634	1.77880	106.13	-0.2778	0.5632	1.77547
65	113.88	-0.4049	0.6460	1.47303	113.93	-0.4056	0.6459	1.46982	113.98	-0.4064	0.6458	1.46661
70	121.36	-0.5205	0.7562	1.19492	121.42	-0.5213	0.7562	1.19187	121.47	-0.5220	0.7561	1.18883
75	128.41	-0.6213	0.9058	0.95233	128.47	-0.6221	0.9060	0.94948	128.52	-0.6228	0.9062	0.94664
80	134.95	-0.7065	1.1120	0.74743	135.01	-0.7072	1.1126	0.74481	135.07	-0.7079	1.1133	0.74220
85	140.90	-0.7761	1.3989	0.57992	140.97	-0.7768	1.4004	0.57756	141.03	-0.7774	1.4019	0.57520
90	146.23	-0.8313	1.7999	0.44718	146.29	-0.8319	1.8019	0.44509	146.35	-0.8325	1.8048	0.44300
95	150.90	-0.8738	2.3527	0.34482	150.97	-0.8743	2.3580	0.34300	151.03	-0.8748	2.3634	0.34118
100	154.95	-0.9059	3.1066	0.26754	155.01	-0.9064	3.1157	0.26598	155.07	-0.9068	3.1250	0.26442
105	158.41	-0.9299	4.1081	0.20998	158.47	-0.9302	4.1230	0.20864	158.52	-0.9306	4.1380	0.20731
110	161.36	-0.9476	5.3993	0.16735	161.42	-0.9479	5.4223	0.16621	161.47	-0.9481	5.4454	0.16508
115	163.88	-0.9607	7.0101	0.13575	163.93	-0.9609	7.0438	0.13478	163.98	-0.9612	7.0778	0.13381
120	166.05	-0.9705	8.9519	0.11221	166.09	-0.9707	8.9932	0.11137	166.13	-0.9709	9.0470	0.11103
125	167.92	-0.9778	11.2138	0.09451	167.96	-0.9780	11.2776	0.09378	167.99	-0.9781	11.3419	0.09306
130	169.55	-0.9834	13.7602	0.08109	169.59	-0.9835	13.8430	0.08045	169.62	-0.9836	13.9265	0.07981
135	171.00	-0.9877	16.5314	0.07082	171.03	-0.9878	16.6353	0.07025	171.06	-0.9879	16.7402	0.06968
140	172.30	-0.9910	19.4454	0.06291	172.32	-0.9910	19.5719	0.06239	172.35	-0.9911	19.6996	0.06188
145	173.48	-0.9935	22.4026	0.05678	173.50	-0.9936	22.5524	0.05631	173.52	-0.9936	22.7036	0.05584
150	174.56	-0.9955	25.2914	0.05204	174.58	-0.9955	25.4640	0.05161	174.60	-0.9956	25.6383	0.05118
155	175.57	-0.9970	27.9942	0.04840	175.58	-0.9970	28.1884	0.04799	175.60	-0.9971	28.3846	0.04759
160	176.52	-0.9982	30.3957	0.04565	176.53	-0.9982	30.6092	0.04526	176.54	-0.9982	30.8248	0.04488
165	177.42	-0.9990	32.3890	0.04363	177.43	-0.9990	32.6186	0.04326	177.44	-0.9990	32.8504	0.04289
170	178.30	-0.9996	33.8833	0.04226	178.31	-0.9996	34.1249	0.04190	178.31	-0.9996	34.3689	0.04154
175	179.15	-0.9999	34.8090	0.04147	179.16	-0.9999	35.0581	0.04111	179.16	-0.9999	35.3097	0.04076
180	180.00	-1.0000	35.1225	0.04120	180.00	-1.0000	35.3741	0.04085	180.00	-1.0000	35.6283	0.04050

 $\frac{2}{x} = 0.694$
 $\frac{2}{x} = 0.695$
 $\frac{2}{x} = 0.696$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2976	4.84169	0.00	1.0000	0.2974	4.83789	0.00	1.0000	0.2972	4.83410
5	9.16	0.9872	0.2987	4.81105	9.17	0.9872	0.2985	4.80725	9.17	0.9872	0.2983	4.80346
10	18.32	0.9493	0.3021	4.72004	18.32	0.9493	0.3019	4.71625	18.33	0.9493	0.3017	4.71246
15	27.45	0.8874	0.3078	4.57137	27.46	0.8873	0.3076	4.56758	27.47	0.8873	0.3074	4.56381
20	36.55	0.8033	0.3161	4.36944	36.57	0.8032	0.3159	4.36567	36.58	0.8030	0.3157	4.36191
25	45.61	0.6995	0.3273	4.12023	45.63	0.6993	0.3271	4.11649	45.64	0.6991	0.3269	4.11275
30	54.62	0.5791	0.3426	3.83110	54.63	0.5788	0.3417	3.82738	54.65	0.5785	0.3415	3.82367
35	63.54	0.4455	0.3606	3.51050	63.57	0.4452	0.3604	3.50682	63.59	0.4448	0.3601	3.50314
40	72.38	0.3028	0.3842	3.16777	72.40	0.3023	0.3839	3.16413	72.43	0.3019	0.3837	3.16049
45	81.09	0.1549	0.4140	2.81272	81.12	0.1543	0.4137	2.80914	81.15	0.1538	0.4135	2.80556
50	89.66	0.0060	0.4518	2.45537	89.69	0.0054	0.4516	2.45185	89.72	0.0048	0.4514	2.44834
55	98.03	-0.1397	0.5003	2.10547	98.07	-0.1404	0.5000	2.10204	98.11	-0.1411	0.4998	2.09881
60	106.17	-0.2786	0.5630	1.77214	106.22	-0.2793	0.5628	1.76882	106.26	-0.2800	0.5626	1.76550
65	114.03	-0.4072	0.6456	1.46342	114.07	-0.4079	0.6455	1.46023	114.12	-0.4087	0.6453	1.45705
70	121.52	-0.5228	0.7561	1.18580	121.57	-0.5236	0.7561	1.18278	121.62	-0.5243	0.7561	1.17976
75	128.58	-0.6236	0.9064	0.94380	128.64	-0.6244	0.9066	0.94098	128.69	-0.6251	0.9068	0.93816
80	135.13	-0.7087	1.1140	0.73959	135.19	-0.7094	1.1146	0.73700	135.24	-0.7101	1.1153	0.73440
85	141.09	-0.7781	1.4034	0.57285	141.15	-0.7788	1.4048	0.57051	141.21	-0.7795	1.4063	0.56817
90	146.42	-0.8331	1.8078	0.44092	146.48	-0.8337	1.8107	0.43885	146.54	-0.8343	1.8137	0.43678
95	151.03	-0.8754	2.3688	0.33937	151.15	-0.8759	2.3742	0.33757	151.21	-0.8764	2.3797	0.33577
100	155.13	-0.9072	3.1343	0.26286	155.19	-0.9077	3.1436	0.26131	155.24	-0.9081	3.1531	0.25977
105	158.58	-0.9309	4.1531	0.20599	158.64	-0.9313	4.1683	0.20467	158.69	-0.9316	4.1837	0.20335
110	161.52	-0.9484	5.4687	0.16395	161.57	-0.9487	5.4923	0.16283	161.62	-0.9490	5.5167	0.16171
115	164.03	-0.9614	7.1121	0.13285	164.07	-0.9616	7.1467	0.13189	164.12	-0.9618	7.1815	0.13093
120	166.17	-0.9710	9.0951	0.10970	166.22	-0.9712	9.1437	0.10888	166.26	-0.9714	9.1927	0.10806
125	168.03	-0.9783	11.4068	0.09234	168.07	-0.9784	11.4724	0.09162	168.11	-0.9785	11.5385	0.09091
130	169.66	-0.9837	14.0109	0.07918	169.69	-0.9839	14.0961	0.08865	169.72	-0.9840	14.1820	0.07792
135	171.09	-0.9879	16.8461	0.06912	171.12	-0.9880	16.9531	0.06856	171.15	-0.9881	17.0611	0.06800
140	172.38	-0.9912	19.8286	0.06137	172.40	-0.9912	19.9589	0.06087	172.43	-0.9913	20.0904	0.06036
145	173.54	-0.9937	22.8562	0.05538	173.57	-0.9937	23.0104	0.05492	173.59	-0.9937	23.1661	0.05446
150	174.62	-0.9956	25.8144	0.05075	174.63	-0.9956	25.9922	0.05032	174.65	-0.9956	26.1717	0.04989
155	175.61	-0.9971	28.5826	0.04718	175.63	-0.9971	28.7827	0.04678	175.64	-0.9971	28.9848	0.04639
160	176.55	-0.9982	31.0425	0.04449	176.57	-0.9982	31.2625	0.04411	176.58	-0.9982	31.4846	0.04374
165	177.45	-0.9990	33.0846	0.04253	177.46	-0.9990	33.3211	0.04216	177.47	-0.9990	33.5600	0.04180
170	178.32	-0.9996	34.6154	0.04119	178.32	-0.9996	34.8644	0.04084	178.33	-0.9996	35.1159	0.04048
175	179.16	-0.9999	35.5638	0.04041	179.17	-0.9999	35.8206	0.04006	179.17	-0.9999	36.0799	0.03972
180	180.00	-1.0000	35.8851	0.04015	180.00	-1.0000	36.1444	0.03981	180.00	-1.0000	36.4064	0.03947

2 x = 0.697					2 x = 0.698					2 x = 0.699				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2970	4.83032	0.00	1.0000	0.2968	4.82654	0.00	1.0000	0.2966	4.82278		
5	9.17	0.9872	0.2981	4.79968	9.18	0.9872	0.2979	4.79591	9.18	0.9872	0.2977	4.79215		
10	18.34	0.9492	0.3015	4.70869	18.34	0.9492	0.3013	4.70493	18.35	0.9492	0.3011	4.70117		
15	27.48	0.8872	0.3072	4.56005	27.49	0.8871	0.3070	4.55629	27.50	0.8870	0.3068	4.55255		
20	36.59	0.8029	0.3155	4.35817	36.60	0.8028	0.3153	4.35443	36.62	0.8027	0.3151	4.35070		
25	45.66	0.6989	0.3267	4.10902	45.68	0.6987	0.3265	4.10530	45.69	0.6985	0.3263	4.10160		
30	54.67	0.5782	0.3413	3.81997	54.69	0.5780	0.3411	3.81628	54.71	0.5777	0.3409	3.81259		
35	63.61	0.4445	0.3599	3.49948	63.63	0.4441	0.3597	3.49582	63.66	0.4438	0.3595	3.49217		
40	72.46	0.3015	0.3835	3.15687	72.48	0.3010	0.3833	3.15326	72.51	0.3006	0.3830	3.14965		
45	81.18	0.1533	0.4133	2.80199	81.21	0.1528	0.4131	2.79843	81.24	0.1523	0.4128	2.79488		
50	89.76	0.0042	0.4511	2.44484	89.79	0.0036	0.4509	2.44135	89.83	0.0030	0.4507	2.43787		
55	98.15	-0.1417	0.4996	2.09520	98.19	-0.1424	0.4994	2.09180	98.22	-0.1431	0.4992	2.08840		
60	106.30	-0.2807	0.5625	1.76220	106.35	-0.2815	0.5623	1.75890	106.39	-0.2822	0.5621	1.75561		
65	114.17	-0.4094	0.6452	1.45388	114.22	-0.4102	0.6451	1.45071	114.26	-0.4109	0.6449	1.44756		
70	121.68	-0.5251	0.7560	1.17675	121.73	-0.5259	0.7560	1.17375	121.78	-0.5267	0.7560	1.17076		
75	128.75	-0.6259	0.9071	0.93534	128.80	-0.6267	0.9073	0.93254	128.86	-0.6274	0.9075	0.92974		
80	135.30	-0.7108	1.1160	0.73182	135.36	-0.7116	1.1166	0.72924	135.42	-0.7123	1.1173	0.72667		
85	141.27	-0.7801	1.4078	0.56584	141.33	-0.7808	1.4094	0.56352	141.40	-0.7815	1.4109	0.56120		
90	146.60	-0.8349	1.8167	0.43472	146.66	-0.8355	1.8197	0.43266	146.73	-0.8361	1.8227	0.43061		
95	151.27	-0.8769	2.3852	0.33398	151.33	-0.8774	2.3907	0.33220	151.40	-0.8779	2.3963	0.33042		
100	155.30	-0.9085	3.1625	0.25823	155.36	-0.9090	3.1721	0.25670	155.42	-0.9094	3.1817	0.25518		
105	158.75	-0.9320	4.1991	0.20204	158.80	-0.9323	4.2147	0.20074	158.86	-0.9327	4.2304	0.19944		
110	161.68	-0.9493	5.5399	0.16060	161.73	-0.9496	5.5640	0.15949	161.78	-0.9499	5.5883	0.15838		
115	164.17	-0.9621	7.2167	0.12998	164.22	-0.9623	7.2522	0.12904	164.26	-0.9625	7.2880	0.12810		
120	166.30	-0.9716	9.2422	0.10724	166.35	-0.9717	9.2921	0.10643	166.39	-0.9719	9.3425	0.10562		
125	168.15	-0.9787	11.6052	0.09020	168.19	-0.9788	11.6726	0.08949	168.22	-0.9790	11.7406	0.08879		
130	169.76	-0.9841	14.2688	0.07730	169.79	-0.9842	14.3564	0.07668	169.83	-0.9843	14.4448	0.07606		
135	171.18	-0.9882	17.1701	0.06745	171.21	-0.9883	17.2801	0.06689	171.24	-0.9883	17.3913	0.06635		
140	172.46	-0.9913	20.2232	0.05986	172.48	-0.9914	20.3573	0.05937	172.51	-0.9915	20.4927	0.05887		
145	173.61	-0.9938	23.3234	0.05400	173.63	-0.9938	23.4822	0.05355	173.66	-0.9939	23.6426	0.05310		
150	174.67	-0.9957	26.3531	0.04947	174.69	-0.9957	26.5363	0.04905	174.71	-0.9957	26.7213	0.04864		
155	175.66	-0.9971	29.1889	0.04599	175.68	-0.9972	29.3950	0.04560	175.69	-0.9972	29.6032	0.04521		
160	176.59	-0.9982	31.7090	0.04336	176.60	-0.9982	31.9357	0.04299	176.62	-0.9983	32.1647	0.04262		
165	177.48	-0.9990	33.8013	0.04144	177.49	-0.9990	34.0451	0.04109	177.50	-0.9990	34.2914	0.04073		
170	178.34	-0.9996	35.3700	0.04013	178.34	-0.9996	35.6267	0.03979	178.35	-0.9996	35.8860	0.03944		
175	179.17	-0.9999	36.3419	0.03937	179.18	-0.9999	36.6065	0.03903	179.18	-0.9999	36.8739	0.03869		
180	180.00	-1.0000	36.6710	0.03912	180.00	-1.0000	36.9384	0.03879	180.00	-1.0000	37.2085	0.03845		

2 x = 0.700					2 x = 0.701					2 x = 0.702				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2964	4.81903	0.00	1.0000	0.2963	4.81529	0.00	1.0000	0.2961	4.81155		
5	9.18	0.9872	0.2975	4.78840	9.18	0.9872	0.2974	4.78466	9.19	0.9872	0.2972	4.78093		
10	18.35	0.9491	0.3009	4.69743	18.36	0.9491	0.3007	4.69369	18.37	0.9491	0.3005	4.68997		
15	27.51	0.8870	0.3066	4.54882	27.52	0.8869	0.3064	4.54509	27.52	0.8868	0.3062	4.54137		
20	36.63	0.8025	0.3149	4.34698	36.64	0.8024	0.3147	4.34327	36.65	0.8023	0.3145	4.33957		
25	45.71	0.6983	0.3261	4.09790	45.72	0.6981	0.3259	4.09421	45.74	0.6979	0.3257	4.09052		
30	54.73	0.5774	0.3407	3.80892	54.75	0.5772	0.3405	3.80526	54.77	0.5769	0.3402	3.80160		
35	63.68	0.4434	0.3593	3.48853	63.70	0.4431	0.3591	3.48490	63.72	0.4427	0.3588	3.48128		
40	72.53	0.3001	0.3828	3.14606	72.56	0.2997	0.3826	3.14247	72.59	0.2993	0.3824	3.13889		
45	81.27	0.1518	0.4126	2.79134	81.30	0.1512	0.4124	2.78781	81.33	0.1507	0.4122	2.78428		
50	89.86	0.0024	0.4505	2.43440	89.89	0.0018	0.4502	2.43093	89.93	0.0012	0.4500	2.42747		
55	98.26	-0.1437	0.4989	2.08501	98.30	-0.1444	0.4987	2.08163	98.34	-0.1451	0.4985	2.07825		
60	106.43	-0.2829	0.5619	1.75232	106.48	-0.2836	0.5617	1.74905	106.52	-0.2843	0.5615	1.74578		
65	114.31	-0.4117	0.6448	1.44440	114.36	-0.4125	0.6447	1.44126	114.41	-0.4132	0.6445	1.43812		
70	121.83	-0.5274	0.7560	1.16777	121.88	-0.5282	0.7560	1.16478	121.94	-0.5290	0.7559	1.16181		
75	128.92	-0.6282	0.9077	0.92694	128.97	-0.6289	0.9079	0.92415	129.03	-0.6297	0.9081	0.92137		
80	135.48	-0.7130	1.1180	0.72410	135.54	-0.7138	1.1186	0.72154	135.60	-0.7145	1.1193	0.71898		
85	141.46	-0.7821	1.4124	0.55888	141.52	-0.7828	1.4139	0.55658	141.58	-0.7835	1.4155	0.55427		
90	146.79	-0.8367	1.8257	0.42857	146.85	-0.8373	1.8288	0.42653	146.91	-0.8379	1.8319	0.42450		
95	151.46	-0.8785	2.4019	0.32864	151.52	-0.8790	2.4075	0.32687	151.58	-0.8795	2.4132	0.32511		
100	155.48	-0.9098	3.1914	0.25366	155.54	-0.9103	3.2011	0.25214	155.60	-0.9107	3.2109	0.25063		
105	158.92	-0.9331	4.2462	0.19815	158.97	-0.9334	4.2622	0.19686	159.03	-0.9338	4.2782	0.19558		
110	161.83	-0.9501	5.6128	0.15729	161.88	-0.9504	5.6375	0.15619	161.94	-0.9507	5.6624	0.15510		
115	164.31	-0.9627	7.3241	0.12716	164.36	-0.9630	7.3605	0.12623	164.41	-0.9632	7.3972	0.12530		
120	166.43	-0.9721	9.3933	0.10482	166.48	-0.9723	9.4446	0.10402	166.52	-0.9724	9.4963	0.10322		
125	168.26	-0.9791	11.8092	0.08809	168.30	-0.9792	11.8785	0.08740	168.34	-0.9794	11.9484	0.08671		
130	169.86	-0.9844	14.5341	0.07545	169.89	-0.9845	14.6242	0.07474	169.93	-0.9846	14.7152	0.07423		
135	171.27	-0.9884	17.5035	0.06580	171.30	-0.9885	17.6168	0.06526	171.33	-0.9886	17.7313	0.06472		
140	172.53	-0.9915	20.6295	0.05838	172.56	-0.9916	20.7676	0.05789	172.59	-0.9916	20.9071	0.05741		
145	173.68	-0.9939	23.8046	0.05265	173.70	-0.9940	23.9682	0.05221	173.72	-0.9940	24.1335	0.05176		
150	174.73	-0.9958	26.9082	0.04822	174.75	-0.9958	27.0970	0.04781	174.77	-0.9958	27.2877	0.04740		
155	175.71	-0.9972	29.8136	0.04482	175.72	-0.9972	30.0261	0.04444	175.74	-0.9972	30.2408	0.04405		
160	176.63	-0.9983	32.3960	0.04225										

$z = 0.703$
 $z = 0.704$
 $z = 0.705$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.2959	4.80783	0.00	1.0000	0.2957	4.80411	0.00	1.0000	0.2955	4.80040
5	9.19	0.9872	0.2970	4.77720	9.19	0.9872	0.2968	4.77349	9.20	0.9871	0.2966	4.76979
10	18.37	0.9490	0.3003	4.68625	18.38	0.9490	0.3001	4.68254	18.38	0.9490	0.2999	4.67884
15	27.53	0.8867	0.3060	4.53767	27.54	0.8867	0.3058	4.53397	27.55	0.8866	0.3056	4.53028
20	36.66	0.8021	0.3143	4.33587	36.68	0.8020	0.3141	4.33219	36.69	0.8019	0.3139	4.32852
25	45.75	0.6977	0.3253	4.08685	45.77	0.6976	0.3252	4.08319	45.78	0.6974	0.3251	4.07953
30	54.79	0.5766	0.3400	3.79795	54.80	0.5764	0.3398	3.79432	54.82	0.5761	0.3396	3.79069
35	63.75	0.4424	0.3586	3.47787	63.77	0.4420	0.3584	3.47406	63.79	0.4417	0.3582	3.47047
40	72.61	0.2988	0.3822	3.13532	72.64	0.2984	0.3819	3.13176	72.66	0.2980	0.3817	3.12820
45	81.36	0.1502	0.4119	2.78076	81.39	0.1497	0.4117	2.77725	81.42	0.1492	0.4115	2.77375
50	89.96	0.0006	0.4498	2.42402	90.00	0.0001	0.4496	2.42058	90.03	-0.0005	0.4493	2.41714
55	98.38	-0.1457	0.4983	2.07489	98.42	-0.1464	0.4981	2.07153	98.46	-0.1470	0.4979	2.06818
60	106.56	-0.2851	0.5613	1.74252	106.61	-0.2858	0.5611	1.73927	106.65	-0.2865	0.5609	1.73602
65	114.45	-0.4140	0.6444	1.43499	114.50	-0.4147	0.6442	1.43187	114.55	-0.4155	0.6441	1.42875
70	121.99	-0.5297	0.7559	1.15894	122.04	-0.5305	0.7559	1.15588	122.09	-0.5313	0.7559	1.15292
75	129.08	-0.6305	0.9084	0.91860	129.14	-0.6312	0.9086	0.91583	129.20	-0.6320	0.9088	0.91306
80	135.66	-0.7152	1.1200	0.71643	135.72	-0.7159	1.1207	0.71389	135.78	-0.7167	1.1214	0.71135
85	141.64	-0.7842	1.4170	0.55198	141.70	-0.7848	1.4185	0.54969	141.77	-0.7855	1.4201	0.54741
90	146.98	-0.8385	1.8349	0.42247	147.04	-0.8390	1.8360	0.42045	147.10	-0.8396	1.8411	0.41844
95	151.64	-0.8800	2.4189	0.32335	151.70	-0.8805	2.4246	0.32160	151.77	-0.8810	2.4304	0.31986
100	155.66	-0.9111	3.2208	0.24913	155.72	-0.9116	3.2308	0.24763	155.78	-0.9120	3.2408	0.24614
105	159.08	-0.9341	4.2544	0.19430	159.14	-0.9345	4.3107	0.19303	159.20	-0.9348	4.3272	0.19176
110	161.99	-0.9510	5.6875	0.15402	162.04	-0.9513	5.7128	0.15294	162.09	-0.9516	5.7383	0.15187
115	164.45	-0.9634	7.4342	0.12438	164.50	-0.9636	7.4716	0.12346	164.55	-0.9639	7.5093	0.12255
120	166.56	-0.9726	9.5485	0.10243	166.61	-0.9728	9.6012	0.10164	166.65	-0.9730	9.6544	0.10086
125	168.38	-0.9795	12.0190	0.08602	168.42	-0.9796	12.0903	0.08534	168.46	-0.9798	12.1622	0.08456
130	169.96	-0.9847	14.8071	0.07363	170.00	-0.9848	14.8998	0.07303	170.03	-0.9849	14.9935	0.07244
135	171.36	-0.9887	17.8468	0.06419	171.39	-0.9887	17.9636	0.06365	171.42	-0.9888	18.0814	0.06312
140	172.61	-0.9917	21.0480	0.05693	172.64	-0.9918	21.1904	0.05645	172.66	-0.9918	21.3341	0.05597
145	173.75	-0.9940	24.3065	0.05132	173.77	-0.9941	24.4691	0.05089	173.79	-0.9941	24.6395	0.05045
150	174.79	-0.9959	27.4803	0.04700	174.80	-0.9959	27.6749	0.04659	174.82	-0.9959	27.8715	0.04619
155	175.75	-0.9973	30.4576	0.04367	175.77	-0.9973	30.6767	0.04330	175.78	-0.9973	30.8981	0.04292
160	176.66	-0.9983	33.1043	0.04116	176.68	-0.9983	33.3453	0.04081	176.69	-0.9983	33.5888	0.04045
165	177.53	-0.9991	35.3021	0.03933	177.54	-0.9991	35.5613	0.03899	177.55	-0.9991	35.8233	0.03865
170	178.37	-0.9996	36.9501	0.03809	178.38	-0.9996	37.2230	0.03775	178.38	-0.9996	37.4988	0.03742
175	179.19	-0.9999	37.9711	0.03736	179.19	-0.9999	38.2526	0.03703	179.20	-0.9999	38.5370	0.03671
180	180.00	-1.0000	38.3170	0.03712	180.00	-1.0000	38.6013	0.03680	180.00	-1.0000	38.8887	0.03647

 $z = 0.706$
 $z = 0.707$
 $z = 0.708$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.2953	4.79671	0.00	1.0000	0.2951	4.79302	0.00	1.0000	0.2949	4.78934
5	9.20	0.9871	0.2964	4.76609	9.20	0.9871	0.2962	4.76241	9.21	0.9871	0.2960	4.75873
10	18.39	0.9489	0.2997	4.67515	18.40	0.9489	0.2995	4.67147	18.40	0.9489	0.2993	4.66780
15	27.56	0.8865	0.3054	4.52660	27.57	0.8865	0.3052	4.52293	27.58	0.8864	0.3050	4.51927
20	36.70	0.8018	0.3137	4.32485	36.71	0.8016	0.3135	4.32120	36.73	0.8015	0.3133	4.31755
25	45.80	0.6972	0.3249	4.07589	45.81	0.6970	0.3247	4.07225	45.83	0.6968	0.3245	4.06863
30	54.84	0.5758	0.3394	3.78707	54.86	0.5756	0.3392	3.78346	54.88	0.5753	0.3390	3.77986
35	63.81	0.4413	0.3580	3.46698	63.83	0.4410	0.3578	3.46330	63.86	0.4406	0.3576	3.45973
40	72.69	0.2975	0.3815	3.12466	72.72	0.2971	0.3813	3.12112	72.74	0.2967	0.3811	3.11759
45	81.45	0.1487	0.4113	2.77026	81.48	0.1481	0.4110	2.76678	81.51	0.1476	0.4108	2.76330
50	90.07	-0.0011	0.4491	2.41372	90.10	-0.0017	0.4489	2.41030	90.13	-0.0023	0.4487	2.40689
55	98.49	-0.1477	0.4976	2.06483	98.53	-0.1484	0.4974	2.06150	98.57	-0.1490	0.4972	2.05817
60	106.69	-0.2872	0.5607	1.73278	106.73	-0.2879	0.5605	1.72955	106.78	-0.2887	0.5603	1.72633
65	114.60	-0.4162	0.6440	1.42565	114.65	-0.4170	0.6438	1.42254	114.69	-0.4178	0.6437	1.41945
70	122.14	-0.5321	0.7559	1.14997	122.20	-0.5328	0.7558	1.14703	122.25	-0.5336	0.7558	1.14409
75	129.25	-0.6327	0.9090	0.91031	129.31	-0.6335	0.9092	0.90756	129.37	-0.6343	0.9095	0.90481
80	135.84	-0.7174	1.1220	0.70882	135.90	-0.7181	1.1227	0.70630	135.96	-0.7189	1.1234	0.70378
85	141.83	-0.7862	1.4217	0.54513	141.89	-0.7868	1.4232	0.54286	141.95	-0.7875	1.4248	0.54059
90	147.17	-0.8402	1.8443	0.41643	147.23	-0.8408	1.8474	0.41443	147.29	-0.8414	1.8506	0.41243
95	151.83	-0.8815	2.4362	0.31812	151.89	-0.8821	2.4420	0.31638	151.95	-0.8826	2.4479	0.31465
100	155.84	-0.9124	3.2509	0.24465	155.90	-0.9128	3.2611	0.24317	155.96	-0.9133	3.2713	0.24169
105	159.25	-0.9352	4.3437	0.19050	159.31	-0.9355	4.3604	0.18924	159.37	-0.9359	4.3772	0.18919
110	162.14	-0.9518	5.7641	0.15080	162.20	-0.9521	5.7800	0.14973	162.25	-0.9524	5.8162	0.14867
115	164.60	-0.9641	7.5474	0.12164	164.65	-0.9643	7.5858	0.12073	164.69	-0.9645	7.6245	0.11983
120	166.69	-0.9731	9.7081	0.10008	166.73	-0.9733	9.7623	0.09930	166.78	-0.9735	9.8170	0.09853
125	168.49	-0.9799	12.2348	0.08398	168.53	-0.9800	12.3082	0.08331	168.57	-0.9802	12.3822	0.08264
130	170.07	-0.9850	15.0881	0.07185	170.10	-0.9851	15.1836	0.07126	170.13	-0.9852	15.2801	0.07067
135	171.45	-0.9889	18.2005	0.06260	171.48	-0.9890	18.3207	0.06208	171.51	-0.9890	18.4422	0.06156
140	172.69	-0.9919	21.4793	0.05550	172.72	-0.9919	21.6260	0.05503	172.74	-0.9920	21.7742	0.05456
145	173.81	-0.9942	24.8116	0.05002	173.83	-0.9942	24.9854	0.04959	173.86	-0.9943	25.1611	0.04916
150	174.84	-0.9960	28.0702	0.04579	174.86	-0.9960	28.2709	0.04539	174.88	-0.9960	28.4736	0.04500
155	175.80	-0.9973	31.1218	0.04255	175.81	-0.9973	31.3478	0.04218	175.83	-0.9974	31.5761	0.04181
160	176.70	-0.9983	33.8348	0.04010	176.71	-0.9984	34.0834	0.03975	176.73	-0.9984	34.3346	0.03940
165	177.56	-0.9991	36.0879	0.03831	177.57	-0.9991	36.3554	0.03797	177.58	-0.9991	36.6256	0.03764
170	178.39	-0.9996	37.7775	0.03709	178.40	-0.9996	38.0591	0.03677	178.40	-0.9996	38.3437	0.03644
175	179.20	-0.9999	38.8244	0.03639	179.20	-0.9999	39.1148	0.03606	179.21	-0.9999	39.4083	0.03574
180	180.00	-1.0000	39.1790	0.03615	180.00	-1.0000	39.4724	0.03583	180.00	-1.0000	39.7689	0.03552

2 x = 0.709					2 x = 0.710					2 x = 0.711				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$
0	0.00	1.0000	0.2947	4.78567	0.00	1.0000	0.2945	4.78201	0.00	1.0000	0.2943	4.77836	0.00	1.0000
5	9.21	0.9871	0.2958	4.75506	9.21	0.9871	0.2956	4.75140	9.21	0.9871	0.2954	4.74776	9.21	0.9871
10	18.41	0.9488	0.2992	4.66414	18.41	0.9488	0.2990	4.66049	18.42	0.9488	0.2988	4.65685	18.42	0.9488
15	27.59	0.8863	0.3048	4.51562	27.60	0.8862	0.3046	4.51198	27.61	0.8862	0.3045	4.50834	27.61	0.8862
20	36.74	0.8014	0.3131	4.31391	36.75	0.8013	0.3129	4.31028	36.76	0.8011	0.3127	4.30666	36.76	0.8011
25	45.85	0.6966	0.3243	4.06501	45.86	0.6964	0.3241	4.06140	45.88	0.6962	0.3239	4.05780	45.88	0.6962
30	54.90	0.5750	0.3388	3.77626	54.92	0.5748	0.3386	3.77268	54.94	0.5745	0.3384	3.76910	54.94	0.5745
35	63.88	0.4403	0.3573	3.45617	63.90	0.4399	0.3571	3.45262	63.92	0.4396	0.3569	3.44908	63.92	0.4396
40	72.77	0.2962	0.3808	3.11407	72.79	0.2958	0.3806	3.11056	72.82	0.2954	0.3804	3.10706	72.82	0.2954
45	81.54	0.1471	0.4106	2.75983	81.57	0.1466	0.4104	2.75637	81.60	0.1461	0.4102	2.75292	81.60	0.1461
50	90.17	-0.0029	0.4484	2.40349	90.20	-0.0035	0.4482	2.40009	90.24	-0.0041	0.4480	2.39671	90.24	-0.0041
55	98.61	-0.1497	0.4970	2.05485	98.65	-0.1504	0.4968	2.05154	98.69	-0.1510	0.4966	2.04823	98.69	-0.1510
60	106.82	-0.2894	0.5601	1.72311	106.86	-0.2901	0.5599	1.71990	106.91	-0.2908	0.5597	1.71670	106.91	-0.2908
65	114.74	-0.4185	0.6435	1.41636	114.79	-0.4193	0.6434	1.41328	114.84	-0.4200	0.6433	1.41020	114.84	-0.4200
70	122.30	-0.5344	0.7558	1.14116	122.35	-0.5351	0.7558	1.13824	122.41	-0.5359	0.7558	1.13532	122.41	-0.5359
75	129.42	-0.6350	0.9097	0.90208	129.48	-0.6358	0.9099	0.89935	129.54	-0.6366	0.9101	0.89662	129.54	-0.6366
80	136.02	-0.7196	1.1241	0.70127	136.08	-0.7203	1.1248	0.69876	136.14	-0.7210	1.1255	0.69626	136.14	-0.7210
85	142.02	-0.7882	1.4264	0.53833	142.08	-0.7888	1.4280	0.53608	142.14	-0.7895	1.4295	0.53383	142.14	-0.7895
90	147.35	-0.8420	1.8538	0.41044	147.42	-0.8426	1.8570	0.40845	147.48	-0.8432	1.8602	0.40647	147.48	-0.8432
95	152.02	-0.8831	2.4538	0.31293	152.08	-0.8836	2.4597	0.31121	152.14	-0.8841	2.4657	0.30950	152.14	-0.8841
100	156.02	-0.9137	3.2816	0.24022	156.08	-0.9141	3.2920	0.23875	156.14	-0.9145	3.3024	0.23729	156.14	-0.9145
105	159.42	-0.9362	4.3942	0.18674	159.48	-0.9365	4.4113	0.18550	159.54	-0.9369	4.4285	0.18427	159.54	-0.9369
110	162.30	-0.9527	5.8426	0.14762	162.35	-0.9529	5.8693	0.14657	162.41	-0.9532	5.8961	0.14552	162.41	-0.9532
115	164.74	-0.9647	7.6636	0.11894	164.79	-0.9650	7.7030	0.11805	164.84	-0.9652	7.7428	0.11716	164.84	-0.9652
120	166.82	-0.9737	9.8722	0.09776	166.86	-0.9738	9.9279	0.09700	166.91	-0.9740	9.9841	0.09624	166.91	-0.9740
125	168.61	-0.9803	12.4570	0.08198	168.65	-0.9804	12.5324	0.08132	168.69	-0.9806	12.6086	0.08066	168.69	-0.9806
130	170.17	-0.9853	15.3775	0.07009	170.20	-0.9854	15.4759	0.06951	170.24	-0.9855	15.5753	0.06894	170.24	-0.9855
135	171.54	-0.9891	18.5648	0.06104	171.57	-0.9892	18.6888	0.06053	171.60	-0.9893	18.8139	0.06002	171.60	-0.9893
140	172.77	-0.9920	21.9239	0.05410	172.79	-0.9921	22.0751	0.05363	172.82	-0.9922	22.2278	0.05317	172.82	-0.9922
145	173.88	-0.9943	25.3365	0.04874	173.90	-0.9943	25.5178	0.04832	173.92	-0.9944	25.6990	0.04790	173.92	-0.9944
150	174.90	-0.9960	28.6785	0.04461	174.92	-0.9961	28.8855	0.04422	174.94	-0.9961	29.0947	0.04383	174.94	-0.9961
155	175.85	-0.9974	31.8068	0.04144	175.86	-0.9974	32.0400	0.04108	175.88	-0.9974	32.2756	0.04072	175.88	-0.9974
160	176.74	-0.9984	34.5885	0.03905	176.75	-0.9984	34.8450	0.03871	176.76	-0.9984	35.1042	0.03836	176.76	-0.9984
165	177.59	-0.9991	36.8987	0.03731	177.60	-0.9991	37.1747	0.03698	177.61	-0.9991	37.4537	0.03665	177.61	-0.9991
170	178.41	-0.9996	38.6313	0.03612	178.41	-0.9996	38.9219	0.03580	178.42	-0.9996	39.2157	0.03548	178.42	-0.9996
175	179.21	-0.9999	39.7049	0.03543	179.21	-0.9999	40.0046	0.03511	179.21	-0.9999	40.3075	0.03480	179.21	-0.9999
180	180.00	-1.0000	40.0685	0.03520	180.00	-1.0000	40.3713	0.03489	180.00	-1.0000	40.6774	0.03458	180.00	-1.0000

2 x = 0.712					2 x = 0.713					2 x = 0.714				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$
0	0.00	1.0000	0.2942	4.77472	0.00	1.0000	0.2940	4.77109	0.00	1.0000	0.2938	4.76747	0.00	1.0000
5	9.22	0.9871	0.2952	4.74412	9.22	0.9871	0.2951	4.74049	9.22	0.9871	0.2949	4.73686	9.22	0.9871
10	18.43	0.9487	0.2986	4.65321	18.43	0.9487	0.2984	4.64959	18.44	0.9487	0.2982	4.64597	18.44	0.9487
15	27.61	0.8861	0.3043	4.50472	27.62	0.8860	0.3041	4.50110	27.63	0.8859	0.3039	4.49750	27.63	0.8859
20	36.77	0.8010	0.3125	4.30305	36.79	0.8009	0.3123	4.29945	36.80	0.8008	0.3121	4.29586	36.80	0.8008
25	45.89	0.6960	0.3237	4.05421	45.91	0.6958	0.3235	4.05062	45.92	0.6956	0.3233	4.04705	45.92	0.6956
30	54.95	0.5742	0.3382	3.76554	54.97	0.5740	0.3380	3.76198	54.99	0.5737	0.3378	3.75843	54.99	0.5737
35	63.95	0.4392	0.3567	3.44554	63.97	0.4389	0.3565	3.44202	63.99	0.4385	0.3563	3.43850	63.99	0.4385
40	72.85	0.2949	0.3802	3.10357	72.87	0.2945	0.3800	3.10008	72.90	0.2941	0.3798	3.09660	72.90	0.2941
45	81.63	0.1456	0.4099	2.74948	81.66	0.1450	0.4097	2.74604	81.69	0.1445	0.4095	2.74262	81.69	0.1445
50	90.27	-0.0047	0.4478	2.39333	90.30	-0.0053	0.4475	2.38996	90.34	-0.0059	0.4473	2.38659	90.34	-0.0059
55	98.73	-0.1517	0.4963	2.04494	98.76	-0.1524	0.4961	2.04165	98.80	-0.1530	0.4959	2.03826	98.80	-0.1530
60	106.95	-0.2915	0.5595	1.71350	106.99	-0.2922	0.5593	1.71031	107.04	-0.2930	0.5591	1.70713	107.04	-0.2930
65	114.88	-0.4208	0.6431	1.40714	114.93	-0.4215	0.6430	1.40408	114.98	-0.4223	0.6428	1.40102	114.98	-0.4223
70	122.46	-0.5367	0.7557	1.13241	122.51	-0.5375	0.7557	1.12951	122.56	-0.5382	0.7557	1.12661	122.56	-0.5382
75	129.59	-0.6373	0.9103	0.89390	129.65	-0.6381	0.9106	0.89119	129.71	-0.6388	0.9108	0.88848	129.71	-0.6388
80	136.20	-0.7218	1.1262	0.69377	136.26	-0.7225	1.1269	0.69128	136.32	-0.7232	1.1276	0.68879	136.32	-0.7232
85	142.20	-0.7902	1.4311	0.53158	142.26	-0.7908	1.4328	0.52935	142.33	-0.7915	1.4344	0.52711	142.33	-0.7915
90	147.54	-0.8438	1.8634	0.40449	147.61	-0.8444	1.8666	0.40252	147.67	-0.8450	1.8699	0.40056	147.67	-0.8450
95	152.20	-0.8846	2.4717	0.30779	152.26	-0.8851	2.4778	0.30609	152.33	-0.8856	2.4839	0.30439	152.33	-0.8856
100	156.20	-0.9150	3.3130	0.23594	156.26	-0.9154	3.3236	0.23439	156.32	-0.9158	3.3343	0.23294	156.32	-0.9158
105	159.59	-0.9372	4.4459	0.18303	159.65	-0.9376	4.4634	0.18181	159.71	-0.9379	4.4810	0.18059	159.71	-0.9379
110	162.46	-0.9535	5.9232	0.14448	162.51	-0.9538	5.9505	0.14345	162.56	-0.9540	5.9781	0.14242	162.56	-0.9540
115	164.88	-0.9654	7.7829	0.11628	164.93	-0.9656	7.8234	0.11540	164.98	-0.9658	7.8643	0.11452	164.98	-0.9658
120	166.95	-0.9742	10.0409	0.09549	166.99	-0.9743	10.0982	0.09473	167.04	-0.9745	10.1561	0.09399	167.04	-0.9745
125	168.73	-0.9807	12.6856	0.08001	168.76	-0.9808	12.7633	0.07936	168.80	-0.9810	12.8418	0.07871	168.80	-0.9810
130	170.27	-0.9856	15.6757	0.06836	170.30	-0.9857	15.7771	0.06779	170.34	-0.9858	15.8795	0.06723	170.34	-0.9858
135	171.63	-0.9894	18.9404	0.05951	171.66	-0.9894	19.0681	0.05900	171.69	-0.9895	19.1972	0.05850	171.69	-0.9895
140	172.85	-0.9922	22.3822	0.05272	172.87	-0.9923	22.5381	0.05227	172.90	-0.9923	22.6957	0.05181	172.90	-0.9923
145	173.95	-0.9944	25.8821	0.04749	173.97	-0.9945	26.0670	0.04707	173.99	-0.9945	26.2539	0.04666	173.99	-0.9945
150	174.95	-0.9961	29.3061	0.04345	174.97	-0.9962	29.5197	0.04307	174.99	-0.9962	29.7356	0.04269	174.99	-0.9962
155	175.89	-0.9974	32.5137	0.04036	175.91	-0.9974	32.7543	0.04000	175.92	-0.9975	32.9975	0.03965	175.92	-0.

2 x = 0.715					2 x = 0.716					2 x = 0.717				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2936	4.76385	0.00	1.0000	0.2934	4.76025	0.00	1.0000	0.2932	4.75665		
5	9.23	0.9871	0.2947	4.73325	9.23	0.9871	0.2945	4.72965	9.23	0.9870	0.2943	4.72605		
10	18.44	0.9486	0.2980	4.64236	18.45	0.9486	0.2978	4.63876	18.46	0.9486	0.2976	4.63518		
15	27.64	0.8859	0.3037	4.49390	27.65	0.8858	0.3035	4.49031	27.66	0.8857	0.3033	4.48673		
20	36.81	0.8006	0.3119	4.29228	36.82	0.8005	0.3117	4.28870	36.83	0.8004	0.3115	4.28513		
25	45.94	0.6954	0.3231	4.04348	45.95	0.6952	0.3229	4.03993	45.97	0.6951	0.3227	4.03638		
30	55.01	0.5734	0.3375	3.75489	55.03	0.5732	0.3373	3.75136	55.05	0.5729	0.3371	3.74783		
35	64.01	0.4382	0.3561	3.43499	64.03	0.4378	0.3559	3.43149	64.06	0.4375	0.3556	3.42799		
40	72.92	0.2936	0.3795	3.09313	72.95	0.2932	0.3793	3.08967	72.98	0.2928	0.3791	3.08622		
45	81.72	0.1440	0.4093	2.73920	81.75	0.1435	0.4090	2.73579	81.78	0.1430	0.4088	2.73232		
50	90.37	-0.0065	0.4471	2.38324	90.41	-0.0071	0.4469	2.37989	90.44	-0.0077	0.4466	2.37655		
55	98.84	-0.1537	0.4957	2.03509	98.88	-0.1544	0.4955	2.03182	98.92	-0.1550	0.4953	2.02856		
60	107.08	-0.2937	0.5590	1.70396	107.12	-0.2944	0.5588	1.70079	107.16	-0.2951	0.5586	1.69763		
65	115.03	-0.4231	0.6427	1.39797	115.08	-0.4238	0.6426	1.39493	115.12	-0.4246	0.6424	1.39190		
70	122.62	-0.5390	0.7557	1.12372	122.67	-0.5398	0.7557	1.12084	122.72	-0.5405	0.7556	1.11796		
75	129.76	-0.6396	0.9110	0.88578	129.82	-0.6404	0.9112	0.88308	129.88	-0.6411	0.9115	0.88040		
80	136.38	-0.7239	1.1283	0.68632	136.44	-0.7247	1.1290	0.68394	136.50	-0.7254	1.1297	0.68138		
85	142.39	-0.7922	1.4360	0.52489	142.45	-0.7929	1.4376	0.52267	142.52	-0.7935	1.4383	0.52045		
90	147.73	-0.8456	1.8732	0.39880	147.80	-0.8462	1.8765	0.39665	147.86	-0.8468	1.8798	0.39470		
95	152.39	-0.8861	2.4900	0.30270	152.45	-0.8866	2.4962	0.30101	152.52	-0.8871	2.5024	0.29933		
100	156.38	-0.9162	3.3450	0.23150	156.44	-0.9166	3.3559	0.23007	156.50	-0.9171	3.3668	0.22864		
105	159.76	-0.9383	4.4988	0.17937	159.82	-0.9386	4.5167	0.17816	159.88	-0.9389	4.5348	0.17695		
110	162.62	-0.9543	6.0059	0.14139	162.67	-0.9546	6.0339	0.14037	162.72	-0.9549	6.0622	0.13935		
115	165.03	-0.9660	7.9056	0.11365	165.08	-0.9663	7.9472	0.11279	165.12	-0.9665	7.9893	0.11192		
120	167.08	-0.9747	10.2145	0.09324	167.12	-0.9748	10.2735	0.09250	167.16	-0.9750	10.3330	0.09177		
125	168.84	-0.9811	12.9210	0.07807	168.88	-0.9812	13.0011	0.07743	168.92	-0.9814	13.0819	0.07680		
130	170.37	-0.9859	15.9829	0.06567	170.41	-0.9860	16.0874	0.06611	170.44	-0.9861	16.1929	0.06555		
135	171.72	-0.9896	19.3275	0.05600	171.75	-0.9897	19.4593	0.05751	171.78	-0.9897	19.5923	0.05702		
140	172.92	-0.9924	22.8549	0.05137	172.95	-0.9924	23.0158	0.05092	172.98	-0.9925	23.1784	0.05048		
145	174.01	-0.9945	26.4428	0.04625	174.03	-0.9946	26.6337	0.04585	174.06	-0.9946	26.8266	0.04545		
150	175.01	-0.9962	29.9537	0.04231	175.03	-0.9962	30.1742	0.04194	175.05	-0.9963	30.3971	0.04157		
155	175.94	-0.9975	33.2433	0.03929	175.95	-0.9975	33.4917	0.03894	175.97	-0.9975	33.7428	0.03860		
160	176.81	-0.9985	36.1691	0.03702	176.82	-0.9985	36.4424	0.03668	176.83	-0.9985	36.7188	0.03636		
165	177.64	-0.9992	38.5995	0.03535	177.65	-0.9992	38.8937	0.03504	177.66	-0.9992	39.1911	0.03472		
170	178.44	-0.9996	40.4224	0.03422	178.45	-0.9996	40.7323	0.03392	178.46	-0.9996	41.0456	0.03361		
175	179.23	-0.9999	41.5521	0.03357	179.23	-0.9999	41.8717	0.03326	179.23	-0.9999	42.1948	0.03296		
180	180.00	-1.0000	41.9348	0.03335	180.00	-1.0000	42.2577	0.03305	180.00	-1.0000	42.5841	0.03275		

2 x = 0.718					2 x = 0.719					2 x = 0.720				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2936	4.75305	0.00	1.0000	0.2934	4.74948	0.00	1.0000	0.2932	4.74591		
5	9.24	0.9870	0.2947	4.72247	9.24	0.9870	0.2939	4.71889	9.24	0.9870	0.2937	4.71532		
10	18.46	0.9485	0.2980	4.63149	18.47	0.9485	0.2972	4.62002	18.47	0.9485	0.2971	4.61646		
15	27.67	0.8856	0.3031	4.48313	27.68	0.8856	0.3029	4.47959	27.69	0.8855	0.3027	4.47604		
20	36.85	0.8002	0.3113	4.28158	36.86	0.8001	0.3111	4.27803	36.87	0.8000	0.3109	4.27449		
25	45.98	0.6949	0.3225	4.03284	46.00	0.6947	0.3223	4.02931	46.01	0.6945	0.3221	4.02579		
30	55.07	0.5726	0.3369	3.74432	55.09	0.5724	0.3367	3.74081	55.10	0.5721	0.3365	3.73731		
35	64.08	0.4371	0.3554	3.42451	64.10	0.4368	0.3552	3.42103	64.12	0.4364	0.3550	3.41756		
40	73.00	0.2923	0.3789	3.08277	73.03	0.2919	0.3787	3.07933	73.05	0.2915	0.3785	3.07591		
45	81.81	0.1425	0.4086	2.72699	81.84	0.1419	0.4084	2.72350	81.87	0.1414	0.4082	2.72002		
50	90.47	-0.0083	0.4464	2.37322	90.51	-0.0089	0.4462	2.36989	90.54	-0.0095	0.4460	2.36658		
55	98.96	-0.1557	0.4950	2.02531	98.99	-0.1563	0.4948	2.02206	99.03	-0.1570	0.4946	2.01882		
60	107.21	-0.2958	0.5584	1.69448	107.25	-0.2966	0.5582	1.69133	107.29	-0.2973	0.5580	1.68819		
65	115.17	-0.4253	0.6423	1.38857	115.22	-0.4261	0.6422	1.38535	115.27	-0.4268	0.6420	1.38204		
70	122.77	-0.5413	0.7556	1.11509	122.83	-0.5421	0.7556	1.11222	122.88	-0.5429	0.7556	1.10936		
75	129.93	-0.6419	0.9117	0.87771	129.99	-0.6426	0.9119	0.87504	130.05	-0.6434	0.9121	0.87236		
80	136.56	-0.7261	1.1304	0.67892	136.62	-0.7268	1.1311	0.67646	136.68	-0.7276	1.1319	0.67401		
85	142.58	-0.7942	1.4409	0.51824	142.64	-0.7949	1.4425	0.51604	142.70	-0.7955	1.4442	0.51384		
90	147.92	-0.8473	1.8831	0.39276	147.99	-0.8479	1.8865	0.39032	148.05	-0.8485	1.8898	0.38889		
95	152.58	-0.8876	2.5087	0.29766	152.64	-0.8881	2.5150	0.29599	152.70	-0.8886	2.5213	0.29432		
100	156.56	-0.9175	3.3778	0.22721	156.62	-0.9179	3.3888	0.22579	156.68	-0.9183	3.4000	0.22438		
105	159.93	-0.9393	4.5530	0.17575	159.99	-0.9396	4.5714	0.17455	160.05	-0.9400	4.5899	0.17336		
110	162.77	-0.9551	6.0907	0.13834	162.83	-0.9554	6.1195	0.13733	162.88	-0.9557	6.1486	0.13633		
115	165.17	-0.9667	8.0317	0.11107	165.22	-0.9669	8.0745	0.11021	165.27	-0.9671	8.1177	0.10937		
120	167.21	-0.9752	10.3932	0.09104	167.25	-0.9753	10.4539	0.09031	167.29	-0.9755	10.5152	0.08958		
125	168.96	-0.9815	13.1635	0.07617	168.99	-0.9816	13.2460	0.07554	169.03	-0.9817	13.3293	0.07491		
130	170.47	-0.9862	16.2996	0.06500	170.51	-0.9863	16.4073	0.06445	170.54	-0.9864	16.5161	0.06390		
135	171.81	-0.9898	19.7268	0.05653	171.84	-0.9899	19.8627	0.05604	171.87	-0.9899	20.0000	0.05556		
140	173.00	-0.9925	23.3427	0.05004	173.03	-0.9926	23.5087	0.04960	173.05	-0.9927	23.6765	0.04917		
145	174.08	-0.9947	27.0215	0.04505	174.10	-0.9947	27.2186	0.04465	174.12	-0.9947	27.4177	0.04425		
150	175.07	-0.9963	30.6223	0.04120	175.09	-0.9963	30.8500	0.04083	175.10	-0.9964	31.0801	0.04047		
155	175.98	-0.9975	33.9966	0.03825	176.00	-0.9976	34.2532	0.03791						

x = 0.721					x = 0.722					x = 0.723				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2925	4.74235	0.00	1.0000	0.2923	4.73880	0.00	1.0000	0.2921	4.73525		
5	9.24	0.9870	0.2936	4.71176	9.25	0.9870	0.2934	4.70821	9.25	0.9870	0.2932	4.70467		
10	18.48	0.9484	0.2969	4.62091	18.48	0.9484	0.2967	4.61736	18.49	0.9484	0.2965	4.61382		
15	27.70	0.8854	0.3025	4.47250	27.70	0.8854	0.3023	4.46896	27.71	0.8853	0.3021	4.46543		
20	36.88	0.7999	0.3107	4.27095	36.89	0.7997	0.3106	4.26743	36.91	0.7996	0.3104	4.26392		
25	46.03	0.6943	0.3219	4.02227	46.05	0.6941	0.3217	4.01877	46.06	0.6939	0.3215	4.01527		
30	55.12	0.5718	0.3363	3.73382	55.14	0.5716	0.3361	3.73034	55.16	0.5713	0.3359	3.72687		
35	64.15	0.4361	0.3548	3.41411	64.17	0.4357	0.3546	3.41065	64.19	0.4354	0.3544	3.40721		
40	73.08	0.2910	0.3782	3.07248	73.11	0.2906	0.3780	3.06907	73.13	0.2902	0.3778	3.06567		
45	81.90	0.1409	0.4079	2.71885	81.93	0.1404	0.4077	2.71548	81.96	0.1399	0.4075	2.71213		
50	90.58	-0.0101	0.4458	2.36327	90.61	-0.0107	0.4455	2.35996	90.64	-0.0112	0.4453	2.35667		
55	99.07	-0.1577	0.4944	2.01559	99.11	-0.1583	0.4942	2.01237	99.15	-0.1590	0.4940	2.00915		
60	107.34	-0.2980	0.5578	1.68506	107.38	-0.2987	0.5576	1.68193	107.42	-0.2994	0.5574	1.67882		
65	115.31	-0.4276	0.6419	1.37983	115.36	-0.4283	0.6417	1.37683	115.41	-0.4291	0.6416	1.37383		
70	122.93	-0.5436	0.7556	1.10651	122.98	-0.5444	0.7555	1.10366	123.04	-0.5452	0.7555	1.10082		
75	130.10	-0.6442	0.9124	0.86970	130.16	-0.6449	0.9126	0.86704	130.22	-0.6457	0.9128	0.86438		
80	136.74	-0.7283	1.1326	0.67157	136.80	-0.7290	1.1333	0.66913	136.86	-0.7297	1.1340	0.66670		
85	142.77	-0.7962	1.4458	0.51165	142.83	-0.7968	1.4475	0.50946	142.89	-0.7975	1.4492	0.50728		
90	148.92	-0.8491	1.8932	0.38695	148.18	-0.8497	1.8966	0.38504	148.24	-0.8503	1.9000	0.38312		
95	152.77	-0.8892	2.5277	0.29266	152.83	-0.8897	2.5341	0.29101	152.89	-0.8902	2.5405	0.28936		
100	156.74	-0.9187	3.4113	0.22297	156.80	-0.9192	3.4226	0.22157	156.86	-0.9196	3.4340	0.22017		
105	160.10	-0.9403	4.6086	0.17217	160.16	-0.9406	4.6274	0.17099	160.22	-0.9410	4.6464	0.16981		
110	162.93	-0.9560	6.1779	0.13533	162.98	-0.9562	6.2074	0.13433	163.04	-0.9565	6.2373	0.13334		
115	165.31	-0.9673	8.1614	0.10852	165.36	-0.9675	8.2054	0.10768	165.41	-0.9678	8.2499	0.10684		
120	167.34	-0.9757	10.5771	0.08886	167.38	-0.9758	10.6396	0.08815	167.42	-0.9760	10.7028	0.08743		
125	169.07	-0.9819	13.4134	0.07429	169.11	-0.9820	13.4984	0.07367	169.15	-0.9821	13.5843	0.07306		
130	170.58	-0.9865	16.6261	0.06336	170.61	-0.9866	16.7372	0.06282	170.64	-0.9867	16.8494	0.06228		
135	171.90	-0.9900	20.1387	0.05507	171.93	-0.9901	20.2790	0.05460	171.96	-0.9902	20.4207	0.05412		
140	173.08	-0.9927	23.8460	0.04874	173.11	-0.9928	24.0174	0.04831	173.13	-0.9928	24.1907	0.04788		
145	174.15	-0.9948	27.6190	0.04386	174.17	-0.9948	27.8225	0.04347	174.19	-0.9949	28.0282	0.04308		
150	175.12	-0.9964	31.3127	0.04010	175.14	-0.9964	31.5479	0.03974	175.16	-0.9964	31.7856	0.03939		
155	176.03	-0.9976	34.7747	0.03723	176.05	-0.9976	35.0398	0.03689	176.06	-0.9976	35.3077	0.03656		
160	176.88	-0.9985	37.8546	0.03506	176.89	-0.9985	38.1464	0.03474	176.91	-0.9985	38.4414	0.03443		
165	177.70	-0.9992	40.4136	0.03348	177.70	-0.9992	40.7276	0.03317	177.71	-0.9992	41.0452	0.03287		
170	178.48	-0.9996	42.3332	0.03240	178.48	-0.9997	42.6640	0.03211	178.49	-0.9997	42.9985	0.03181		
175	179.24	-0.9999	43.5229	0.03178	179.25	-0.9999	43.8641	0.03149	179.25	-0.9999	44.2091	0.03120		
180	180.00	-1.0000	43.9259	0.03158	180.00	-1.0000	44.2706	0.03129	180.00	-1.0000	44.6192	0.03100		

x = 0.724					x = 0.725					x = 0.726				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2919	4.73172	0.00	1.0000	0.2917	4.72819	0.00	1.0000	0.2915	4.72467		
5	9.25	0.9870	0.2930	4.70113	9.26	0.9870	0.2928	4.69761	9.26	0.9870	0.2926	4.69409		
10	18.50	0.9483	0.2963	4.61029	18.50	0.9483	0.2961	4.60677	18.51	0.9483	0.2959	4.60326		
15	27.72	0.8852	0.3020	4.46191	27.73	0.8851	0.3018	4.45840	27.74	0.8851	0.3016	4.45490		
20	36.92	0.7995	0.3102	4.26041	36.93	0.7994	0.3100	4.25691	36.94	0.7992	0.3098	4.25342		
25	46.08	0.6937	0.3213	4.01178	46.09	0.6935	0.3211	4.00830	46.11	0.6933	0.3209	4.00483		
30	55.18	0.5710	0.3357	3.72340	55.20	0.5708	0.3355	3.71994	55.22	0.5705	0.3353	3.71649		
35	64.21	0.4350	0.3542	3.40077	64.23	0.4347	0.3540	3.40035	64.26	0.4343	0.3538	3.39693		
40	73.16	0.2897	0.3776	3.06227	73.18	0.2893	0.3774	3.05888	73.21	0.2889	0.3772	3.05550		
45	81.99	0.1394	0.4073	2.70878	82.02	0.1388	0.4071	2.70544	82.05	0.1383	0.4068	2.70211		
50	90.68	-0.0118	0.4451	2.35338	90.71	-0.0124	0.4449	2.35010	90.75	-0.0130	0.4447	2.34683		
55	99.19	-0.1597	0.4937	2.00594	99.23	-0.1603	0.4935	2.00274	99.26	-0.1610	0.4933	1.99954		
60	107.47	-0.3002	0.5572	1.67570	107.51	-0.3009	0.5570	1.67260	107.55	-0.3016	0.5568	1.66950		
65	115.46	-0.4299	0.6415	1.37094	115.51	-0.4306	0.6413	1.36786	115.55	-0.4314	0.6412	1.36488		
70	123.09	-0.5459	0.7555	1.09798	123.14	-0.5467	0.7555	1.09516	123.19	-0.5475	0.7555	1.09233		
75	130.27	-0.6464	0.9130	0.86174	130.33	-0.6472	0.9133	0.85909	130.39	-0.6480	0.9135	0.85646		
80	136.92	-0.7305	1.1348	0.66427	136.99	-0.7312	1.1355	0.66185	137.05	-0.7319	1.1362	0.65943		
85	142.96	-0.7982	1.4509	0.50510	143.02	-0.7988	1.4525	0.50293	143.08	-0.7995	1.4542	0.50076		
90	148.31	-0.8509	1.9035	0.38121	148.37	-0.8515	1.9069	0.37931	148.44	-0.8521	1.9104	0.37741		
95	152.96	-0.8907	2.5470	0.28772	153.02	-0.8912	2.5536	0.28608	153.08	-0.8917	2.5602	0.28444		
100	156.92	-0.9200	3.4455	0.21877	156.99	-0.9204	3.4571	0.21738	157.05	-0.9208	3.4688	0.21600		
105	160.27	-0.9413	4.6655	0.16864	160.33	-0.9417	4.6848	0.16747	160.39	-0.9420	4.7043	0.16631		
110	163.09	-0.9568	6.2674	0.13236	163.14	-0.9570	6.2977	0.13137	163.19	-0.9573	6.3284	0.13040		
115	165.46	-0.9680	8.2947	0.10601	165.51	-0.9682	8.3400	0.10518	165.55	-0.9684	8.3858	0.10436		
120	167.47	-0.9762	10.7665	0.08672	167.51	-0.9763	10.8309	0.08602	167.55	-0.9765	10.8960	0.08532		
125	169.19	-0.9822	13.6710	0.07245	169.23	-0.9824	13.7586	0.07184	169.26	-0.9825	13.8471	0.07124		
130	170.68	-0.9868	16.9629	0.06175	170.71	-0.9869	17.0775	0.06122	170.75	-0.9870	17.1933	0.06069		
135	171.99	-0.9902	20.5639	0.05365	172.02	-0.9903	20.7086	0.05318	172.05	-0.9904	20.8549	0.05271		
140	173.16	-0.9929	24.3657	0.04746	173.18	-0.9929	24.5477	0.04704	173.21	-0.9930	24.7216	0.04662		
145	174.21	-0.9949	28.2361	0.04270	174.23	-0.9949	28.4463	0.04231	174.26	-0.9950	28.6588	0.04193		
150	175.18	-0.9965	32.0260	0.03903	175.20	-0.9965	32.2689	0.03868	175.22	-0.9965	32.5146	0.03833		
155	176.08	-0.9977	35.5786	0.03622	176.09	-0.9977	35.8525	0.03589	176.11	-0.9977	36.1295	0.03557		
160	176.92	-0.9986	38.7396	0.03411	176									

2 x = 0.727					2 x = 0.728					2 x = 0.729				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2914	4.72116	0.00	1.0000	0.2912	4.71766	0.00	1.0000	0.2910	4.71417		
5	9.26	0.9870	0.2924	4.69058	9.26	0.9870	0.2923	4.68708	9.27	0.9869	0.2921	4.68359		
10	18.51	0.9482	0.2957	4.59976	18.52	0.9482	0.2955	4.59627	18.53	0.9482	0.2954	4.59278		
15	27.75	0.8850	0.3014	4.45140	27.76	0.8849	0.3012	4.44792	27.77	0.8849	0.3010	4.44444		
20	36.96	0.7991	0.3096	4.24994	36.97	0.7990	0.3094	4.24647	36.98	0.7989	0.3092	4.24300		
25	46.12	0.6931	0.3207	4.00137	46.14	0.6929	0.3205	3.99791	46.15	0.6928	0.3203	3.99446		
30	55.23	0.5702	0.3351	3.71305	55.25	0.5700	0.3349	3.70962	55.27	0.5697	0.3347	3.70620		
35	64.28	0.4340	0.3536	3.39352	64.30	0.4336	0.3533	3.39011	64.32	0.4333	0.3531	3.38672		
40	73.23	0.2885	0.3770	3.05213	73.26	0.2880	0.3767	3.04876	73.29	0.2876	0.3765	3.04540		
45	82.08	0.1378	0.4066	2.69878	82.11	0.1373	0.4064	2.69546	82.14	0.1368	0.4062	2.69215		
50	90.78	-0.0136	0.4444	2.34356	90.81	-0.0142	0.4442	2.34031	90.85	-0.0148	0.4440	2.33706		
55	99.30	-0.1616	0.4931	1.99635	99.34	-0.1623	0.4929	1.99317	99.38	-0.1630	0.4927	1.99000		
60	107.60	-0.3023	0.5566	1.66641	107.64	-0.3030	0.5564	1.66332	107.68	-0.3037	0.5562	1.66025		
65	115.60	-0.4321	0.6410	1.36192	115.65	-0.4329	0.6409	1.35895	115.70	-0.4336	0.6408	1.35600		
70	123.25	-0.5482	0.7554	1.08951	123.30	-0.5490	0.7554	1.08670	123.35	-0.5498	0.7554	1.08390		
75	130.45	-0.6487	0.9137	0.85383	130.50	-0.6495	0.9140	0.85120	130.56	-0.6502	0.9142	0.84858		
80	137.11	-0.7326	1.1369	0.65702	137.17	-0.7334	1.1377	0.65462	137.23	-0.7341	1.1384	0.65222		
85	143.15	-0.8002	1.4559	0.49860	143.21	-0.8008	1.4576	0.49644	143.27	-0.8015	1.4594	0.49429		
90	148.50	-0.8526	1.9139	0.37551	148.56	-0.8532	1.9174	0.37363	148.63	-0.8538	1.9209	0.37174		
95	153.15	-0.8922	2.5668	0.28262	153.21	-0.8927	2.5735	0.28119	153.27	-0.8932	2.5802	0.27957		
100	157.11	-0.9212	3.4805	0.21462	157.17	-0.9216	3.4924	0.21325	157.23	-0.9221	3.5043	0.21188		
105	160.45	-0.9423	4.7239	0.16515	160.50	-0.9427	4.7437	0.16400	160.56	-0.9430	4.7637	0.16285		
110	163.25	-0.9576	6.3593	0.12943	163.30	-0.9578	6.3905	0.12846	163.35	-0.9581	6.4220	0.12750		
115	165.60	-0.9686	8.4320	0.10354	165.65	-0.9688	8.4786	0.10272	165.70	-0.9690	8.5257	0.10191		
120	167.60	-0.9767	10.9617	0.08462	167.64	-0.9768	11.0281	0.08393	167.68	-0.9770	11.0951	0.08324		
125	169.30	-0.9826	13.9366	0.07033	169.34	-0.9827	14.0270	0.07004	169.38	-0.9829	14.1183	0.06944		
130	170.78	-0.9871	17.3104	0.05017	170.81	-0.9872	17.4287	0.05065	170.85	-0.9873	17.5483	0.05013		
135	172.08	-0.9905	21.0027	0.03225	172.11	-0.9905	21.1522	0.03179	172.14	-0.9906	21.3033	0.03133		
140	173.23	-0.9930	24.9025	0.01820	173.26	-0.9931	25.0853	0.01859	173.29	-0.9931	25.2702	0.01813		
145	174.28	-0.9950	28.8736	0.00455	174.30	-0.9951	29.0908	0.00418	174.32	-0.9951	29.3105	0.00380		
150	175.23	-0.9965	32.7630	0.03798	175.25	-0.9966	33.0141	0.03763	175.27	-0.9966	33.2681	0.03729		
155	176.12	-0.9977	36.4095	0.03524	176.14	-0.9977	36.6927	0.03492	176.15	-0.9977	36.9791	0.03460		
160	176.96	-0.9986	39.6545	0.03318	176.97	-0.9986	39.9663	0.03287	176.98	-0.9986	40.2816	0.03257		
165	177.75	-0.9992	42.3511	0.03168	177.76	-0.9992	42.6868	0.03138	177.77	-0.9992	43.0263	0.03109		
170	178.51	-0.9997	44.3743	0.03056	178.52	-0.9997	44.7279	0.03037	178.53	-0.9997	45.0856	0.03009		
175	179.26	-0.9999	45.6282	0.03006	179.26	-0.9999	45.9930	0.02978	179.27	-0.9999	46.3620	0.02951		
180	180.00	-1.0000	46.0530	0.02987	180.00	-1.0000	46.4216	0.02959	180.00	-1.0000	46.7944	0.02931		

2 x = 0.730					2 x = 0.731					2 x = 0.732				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2908	4.71059	0.00	1.0000	0.2906	4.70721	0.00	1.0000	0.2904	4.70374		
5	9.27	0.9869	0.2919	4.68011	9.27	0.9869	0.2917	4.67554	9.28	0.9869	0.2915	4.67317		
10	18.53	0.9481	0.2952	4.58930	18.54	0.9481	0.2950	4.58583	18.54	0.9481	0.2948	4.58327		
15	27.78	0.8848	0.3008	4.44097	27.78	0.8847	0.3006	4.43751	27.79	0.8846	0.3004	4.43406		
20	36.99	0.7987	0.3090	4.23955	37.00	0.7986	0.3088	4.23610	37.02	0.7985	0.3086	4.23266		
25	46.17	0.6926	0.3201	3.99102	46.18	0.6924	0.3199	3.98759	46.20	0.6922	0.3197	3.98417		
30	55.29	0.5694	0.3345	3.70278	55.31	0.5692	0.3343	3.69937	55.33	0.5690	0.3341	3.69597		
35	64.34	0.4330	0.3529	3.38333	64.37	0.4326	0.3527	3.37995	64.39	0.4323	0.3525	3.37658		
40	73.31	0.2872	0.3763	3.04205	73.34	0.2867	0.3761	3.03871	73.36	0.2863	0.3759	3.03537		
45	82.17	0.1363	0.4060	2.68885	82.20	0.1358	0.4058	2.68555	82.23	0.1352	0.4055	2.68226		
50	90.88	-0.0154	0.4438	2.33381	90.92	-0.0160	0.4436	2.33058	90.95	-0.0166	0.4433	2.32735		
55	99.42	-0.1636	0.4925	1.98683	99.46	-0.1643	0.4922	1.98367	99.49	-0.1650	0.4920	1.98052		
60	107.73	-0.3045	0.5561	1.65718	107.77	-0.3052	0.5559	1.65411	107.81	-0.3059	0.5557	1.65105		
65	115.75	-0.4344	0.6406	1.35904	115.79	-0.4351	0.6405	1.35610	115.84	-0.4359	0.6403	1.35316		
70	123.41	-0.5506	0.7554	1.08110	123.46	-0.5513	0.7554	1.07831	123.51	-0.5521	0.7553	1.07552		
75	130.62	-0.6510	0.9144	0.84597	130.68	-0.6518	0.9147	0.84336	130.73	-0.6525	0.9149	0.84076		
80	137.29	-0.7348	1.1392	0.64982	137.35	-0.7355	1.1399	0.64743	137.41	-0.7362	1.1406	0.64505		
85	143.34	-0.8022	1.4611	0.49215	143.40	-0.8028	1.4628	0.49001	143.46	-0.8035	1.4646	0.48787		
90	148.69	-0.8544	1.9245	0.35986	148.76	-0.8550	1.9281	0.35799	148.82	-0.8556	1.9317	0.35612		
95	153.34	-0.8937	2.5869	0.27796	153.40	-0.8942	2.5938	0.27635	153.46	-0.8947	2.6006	0.27475		
100	157.29	-0.9225	3.5163	0.21052	157.35	-0.9229	3.5285	0.20916	157.41	-0.9233	3.5407	0.20780		
105	160.62	-0.9433	4.7838	0.16171	160.68	-0.9437	4.8042	0.16057	160.73	-0.9440	4.8246	0.15943		
110	163.41	-0.9583	6.4538	0.12654	163.46	-0.9586	6.4859	0.12558	163.51	-0.9589	6.5183	0.12463		
115	165.75	-0.9692	8.5733	0.10110	165.79	-0.9694	8.6213	0.10030	165.84	-0.9696	8.6698	0.09950		
120	167.73	-0.9771	11.1628	0.08255	167.77	-0.9773	11.2312	0.08187	167.81	-0.9775	11.3003	0.08119		
125	169.42	-0.9830	14.2106	0.06885	169.46	-0.9831	14.3038	0.06827	169.49	-0.9832	14.3980	0.06768		
130	170.88	-0.9874	17.6691	0.05082	170.92	-0.9875	17.7912	0.05010	170.95	-0.9876	17.9147	0.05060		
135	172.17	-0.9907	21.4560	0.03088	172.20	-0.9907	21.6104	0.03042	172.23	-0.9908	21.7665	0.03097		
140	173.31	-0.9932	25.4571	0.01497	173.34	-0.9932	25.6460	0.01436	173.36	-0.9933	25.8371	0.01416		
145	174.34	-0.9951	29.5325	0.00403	174.37	-0.9952	29.7570	0.00406	174.39	-0.9952	29.9841	0.00397		
150	175.29	-0.9966	33.5249	0.03694	175.31	-0.9966	33.7846	0.03661	175.33	-0.9967	34.0472	0.03627		
155	176.17	-0.9978	37.2687	0.03426	176.18	-0.9978	37.5615	0.03396	176.20	-0.9978	37.8577	0.033		

$x = 0.733$					$x = 0.734$					$x = 0.735$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2902	4.70028	0.00	1.0000	0.2901	4.69683	0.00	1.0000	0.2899	4.69339	0.00	1.0000
5	9.28	0.9869	0.2913	4.66971	9.28	0.9869	0.2912	4.66627	9.29	0.9869	0.2910	4.66283	9.29	0.9869
10	18.55	0.9480	0.2946	4.57892	18.56	0.9480	0.2944	4.57548	18.56	0.9480	0.2943	4.57204	18.56	0.9480
15	27.80	0.8846	0.3003	4.43062	27.81	0.8845	0.3001	4.42718	27.82	0.8844	0.2999	4.42375	27.82	0.8844
20	37.03	0.7984	0.3084	4.22923	37.04	0.7982	0.3082	4.22581	37.05	0.7981	0.3081	4.22239	37.05	0.7981
25	46.21	0.6920	0.3195	3.98076	46.23	0.6918	0.3193	3.97735	46.24	0.6916	0.3191	3.97395	46.24	0.6916
30	55.35	0.5686	0.3339	3.69258	55.36	0.5684	0.3337	3.68920	55.38	0.5681	0.3335	3.68582	55.38	0.5681
35	64.41	0.4319	0.3523	3.37322	64.43	0.4316	0.3521	3.36986	64.45	0.4312	0.3519	3.36651	64.45	0.4312
40	73.39	0.2859	0.3757	3.03205	73.42	0.2854	0.3755	3.02873	73.44	0.2850	0.3753	3.02542	73.44	0.2850
45	82.26	0.1347	0.4053	2.67898	82.29	0.1342	0.4051	2.67571	82.32	0.1337	0.4049	2.67245	82.32	0.1337
50	90.98	-0.0172	0.4431	2.32413	91.02	-0.0178	0.4429	2.32091	91.05	-0.0184	0.4427	2.31770	91.05	-0.0184
55	99.53	-0.1656	0.4918	1.97737	99.57	-0.1663	0.4916	1.97423	99.61	-0.1669	0.4914	1.97110	99.61	-0.1669
60	107.86	-0.3066	0.5555	1.64800	107.90	-0.3073	0.5553	1.64495	107.94	-0.3080	0.5551	1.64192	107.94	-0.3080
65	115.89	-0.4366	0.6402	1.34423	115.94	-0.4374	0.6401	1.34131	115.99	-0.4382	0.6399	1.33839	115.99	-0.4382
70	123.56	-0.5529	0.7553	1.07274	123.62	-0.5536	0.7553	1.06996	123.67	-0.5544	0.7553	1.06719	123.67	-0.5544
75	130.79	-0.6533	0.9151	0.83816	130.85	-0.6540	0.9154	0.83557	130.90	-0.6548	0.9156	0.83298	130.90	-0.6548
80	137.47	-0.7370	1.1414	0.64267	137.54	-0.7377	1.1421	0.64030	137.60	-0.7384	1.1429	0.63793	137.60	-0.7384
85	143.53	-0.8041	1.4663	0.48574	143.59	-0.8048	1.4681	0.48362	143.66	-0.8055	1.4698	0.48150	143.66	-0.8055
90	148.89	-0.8562	1.9353	0.36426	148.95	-0.8567	1.9389	0.36240	149.02	-0.8573	1.9426	0.36054	149.02	-0.8573
95	153.53	-0.8952	2.6075	0.27315	153.59	-0.8956	2.6145	0.27156	153.66	-0.8961	2.6214	0.26997	153.66	-0.8961
100	157.47	-0.9237	3.5530	0.20645	157.54	-0.9241	3.5654	0.20511	157.60	-0.9245	3.5779	0.20377	157.60	-0.9245
105	160.79	-0.9443	4.8453	0.15830	160.85	-0.9446	4.8662	0.15718	160.90	-0.9450	4.8872	0.15606	160.90	-0.9450
110	163.56	-0.9591	6.5510	0.12369	163.62	-0.9594	6.5840	0.12274	163.67	-0.9597	6.6173	0.12181	163.67	-0.9597
115	165.89	-0.9698	8.7187	0.09871	165.94	-0.9700	8.7682	0.09791	165.99	-0.9702	8.8181	0.09713	165.99	-0.9702
120	167.86	-0.9776	11.3701	0.08051	167.90	-0.9778	11.4407	0.07984	167.94	-0.9779	11.5120	0.07917	167.94	-0.9779
125	169.53	-0.9834	14.4932	0.06710	169.57	-0.9835	14.5895	0.06652	169.61	-0.9836	14.6867	0.06595	169.61	-0.9836
130	170.98	-0.9876	18.0395	0.05709	171.02	-0.9877	18.1657	0.05659	171.05	-0.9878	18.2932	0.05609	171.05	-0.9878
135	172.26	-0.9909	21.9243	0.04953	172.29	-0.9910	22.0638	0.04908	172.32	-0.9910	22.2451	0.04864	172.32	-0.9910
140	173.39	-0.9934	26.0302	0.04376	173.42	-0.9934	26.2256	0.04336	173.44	-0.9935	26.4231	0.04297	173.44	-0.9935
145	174.41	-0.9952	30.2137	0.03933	174.43	-0.9953	30.4459	0.03897	174.45	-0.9953	30.6807	0.04271	174.45	-0.9953
150	175.35	-0.9967	34.3128	0.03593	175.36	-0.9967	34.5814	0.03560	175.38	-0.9968	34.8531	0.03527	175.38	-0.9968
155	176.21	-0.9978	38.1573	0.03333	176.23	-0.9978	38.4603	0.03302	176.24	-0.9979	38.7667	0.03271	176.24	-0.9979
160	177.03	-0.9987	41.5792	0.03137	177.04	-0.9987	41.9129	0.03108	177.05	-0.9987	42.2505	0.03079	177.05	-0.9987
165	177.80	-0.9993	44.4235	0.02995	177.81	-0.9993	44.7829	0.02966	177.82	-0.9993	45.1464	0.02939	177.82	-0.9993
170	178.55	-0.9997	46.5577	0.02898	178.56	-0.9997	46.9363	0.02870	178.56	-0.9997	47.3194	0.02843	178.56	-0.9997
175	179.28	-0.9999	47.8806	0.02841	179.28	-0.9999	48.2712	0.02815	179.29	-0.9999	48.6664	0.02788	179.29	-0.9999
180	180.00	-1.0000	48.3287	0.02823	180.00	-1.0000	48.7234	0.02796	180.00	-1.0000	49.1227	0.02770	180.00	-1.0000

2 x = 0.736					2 x = 0.737					2 x = 0.738				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2897	4.68996	0.00	1.0000	0.2895	4.68653	0.00	1.0000	0.2893	4.68311		
5	9.29	0.9869	0.2908	4.65939	9.29	0.9869	0.2906	4.65597	9.29	0.9869	0.2904	4.65255		
10	18.57	0.9479	0.2941	4.56861	18.57	0.9479	0.2939	4.56519	18.58	0.9479	0.2937	4.56178		
15	27.83	0.8843	0.2997	4.42033	27.84	0.8843	0.2995	4.41692	27.85	0.8842	0.2993	4.41352		
20	37.06	0.7980	0.3079	4.21898	37.07	0.7978	0.3077	4.21558	37.09	0.7977	0.3075	4.21219		
25	46.26	0.6914	0.3189	3.97056	46.27	0.6912	0.3187	3.96718	46.29	0.6910	0.3185	3.96381		
30	55.40	0.5678	0.3333	3.68245	55.42	0.5676	0.3331	3.67909	55.44	0.5673	0.3329	3.67574		
35	64.48	0.4309	0.3517	3.36317	64.50	0.4305	0.3515	3.35984	64.52	0.4302	0.3513	3.35652		
40	73.47	0.2846	0.3750	3.02211	73.49	0.2841	0.3748	3.01882	73.52	0.2837	0.3746	3.01553		
45	82.35	0.1332	0.4047	2.66919	82.38	0.1327	0.4045	2.66594	82.41	0.1322	0.4042	2.66269		
50	91.09	-0.0190	0.4425	2.31450	91.12	-0.0195	0.4422	2.31131	91.15	-0.0201	0.4420	2.30812		
55	99.65	-0.1676	0.4912	1.96797	99.69	-0.1683	0.4910	1.96485	99.73	-0.1689	0.4907	1.96174		
60	107.98	-0.3088	0.5549	1.63888	108.03	-0.3095	0.5547	1.63586	108.07	-0.3102	0.5545	1.63294		
65	116.03	-0.4389	0.6398	1.33547	116.08	-0.4397	0.6396	1.33256	116.13	-0.4404	0.6395	1.32966		
70	123.72	-0.5552	0.7553	1.06443	123.78	-0.5559	0.7552	1.06167	123.83	-0.5567	0.7552	1.05891		
75	130.96	-0.6556	0.9158	0.83040	131.02	-0.6563	0.9161	0.82782	131.08	-0.6571	0.9163	0.82525		
80	137.66	-0.7391	1.1436	0.63557	137.72	-0.7399	1.1444	0.63321	137.78	-0.7406	1.1452	0.63086		
85	143.72	-0.8061	1.4716	0.47938	143.78	-0.8068	1.4734	0.47727	143.85	-0.8075	1.4752	0.47517		
90	149.08	-0.8579	1.9462	0.35869	149.15	-0.8585	1.9499	0.35685	149.21	-0.8591	1.9537	0.35501		
95	153.72	-0.8966	2.6285	0.26839	153.78	-0.8971	2.6356	0.26681	153.85	-0.8976	2.6427	0.26524		
100	157.66	-0.9249	3.5906	0.20244	157.72	-0.9253	3.6033	0.20111	157.78	-0.9257	3.6161	0.19978		
105	160.96	-0.9453	4.9084	0.15494	161.02	-0.9456	4.9298	0.15383	161.08	-0.9460	4.9514	0.15272		
110	163.72	-0.9599	6.6509	0.12087	163.78	-0.9602	6.6848	0.11995	163.83	-0.9604	6.7191	0.11902		
115	166.03	-0.9704	8.8686	0.09634	166.08	-0.9706	8.9195	0.09556	166.13	-0.9708	8.9710	0.09479		
120	167.98	-0.9781	11.5840	0.07851	168.03	-0.9782	11.6567	0.07784	168.07	-0.9784	11.7303	0.07719		
125	169.65	-0.9837	14.7851	0.06538	169.69	-0.9838	14.8844	0.06481	169.73	-0.9840	14.9849	0.06425		
130	171.09	-0.9879	18.4221	0.05559	171.12	-0.9880	18.5525	0.05510	171.15	-0.9881	18.6842	0.05460		
135	172.35	-0.9911	22.4082	0.04820	172.38	-0.9912	22.5732	0.04777	172.41	-0.9912	22.7400	0.04733		
140	173.47	-0.9935	26.6229	0.04257	173.49	-0.9936	26.8249	0.04218	173.52	-0.9936	27.0292	0.04180		
145	174.48	-0.9954	30.9182	0.03826	174.50	-0.9954	31.1585	0.03790	174.52	-0.9954	31.4014	0.03755		
150	175.40	-0.9968	35.1279	0.03494	175.42	-0.9968	35.4059	0.03461	175.44	-0.9968	35.6870	0.03429		
155	176.26	-0.9979	39.0767	0.03240	176.27	-0.9979	39.3903	0.03210	176.29	-0.9979	39.7076	0.03180		
160	177.06	-0.9987	42.5920	0.03050	177.07	-0.9987	42.9375	0.03021	177.09	-0.9987	43.2869	0.02992		
165	177.83	-0.9993	45.5141	0.02911	177.84	-0.9993	45.8862	0.02883	177.85	-0.9993	46.2625	0.02856		
170	178.57	-0.9997	47.7069	0.02816	178.57	-0.9997	48.0989	0.02789	178.58	-0.9997	48.4955	0.02763		
175	179.29	-0.9999	49.0661	0.02761	179.29	-0.9999	49.4706	0.02735	179.29	-0.9999	49.8798	0.02709		
180	180.00	-1.0000	49.5266	0.02743	180.00	-1.0000	49.9353	0.02717	180.00	-1.0000	50.3348	0.02691		

$$x = 0.739$$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2892	4.67971
5	9.30	0.9869	0.2902	4.64915
10	18.59	0.9479	0.2935	4.55838
15	27.86	0.8841	0.2991	4.41013
20	37.10	0.7976	0.3073	4.20881
25	46.30	0.6908	0.3183	3.95044
30	55.46	0.5670	0.3327	3.67239
35	64.54	0.4298	0.3511	3.35320
40	73.54	0.2833	0.3744	3.01225
45	82.44	0.1316	0.4040	2.65946
50	91.19	-0.0207	0.4418	2.30495
55	99.76	-0.1696	0.4905	1.95863
60	108.11	-0.3109	0.5543	1.62982
65	116.18	-0.4412	0.6394	1.32677
70	123.88	-0.5575	0.7552	1.05617
75	131.14	-0.6578	0.9165	0.82269
80	137.84	-0.7413	1.1459	0.62851
85	143.91	-0.8081	1.4770	0.47307
90	149.28	-0.8597	1.9574	0.35318
95	153.91	-0.8981	2.6499	0.26367
100	157.84	-0.9262	3.6290	0.19846
105	161.14	-0.9463	4.9732	0.15162
110	163.88	-0.9607	6.7537	0.11810
115	166.18	-0.9710	9.0230	0.09401
120	168.11	-0.9786	11.8046	0.07653
125	169.76	-0.9841	15.0864	0.06369
130	171.19	-0.9882	18.8175	0.05412
135	172.44	-0.9913	22.9086	0.04690
140	173.54	-0.9937	27.2359	0.04141
145	174.54	-0.9955	31.6472	0.03720
150	175.46	-0.9969	35.9715	0.03397
155	176.30	-0.9979	40.0285	0.03150
160	177.10	-0.9987	43.6405	0.02964
165	177.86	-0.9993	46.6433	0.02828
170	178.59	-0.9997	48.8968	0.02736
175	179.30	-0.9999	50.2938	0.02683
180	180.00	-1.0000	50.7670	0.02665

$$x = 0.740$$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2890	4.67630
9.30	0.9869	0.2901	4.64575
18.59	0.9478	0.2933	4.55499
27.86	0.8841	0.2990	4.40674
37.11	0.7975	0.3071	4.20544
46.32	0.6907	0.3181	3.95708
55.47	0.5668	0.3325	3.66906
64.56	0.4295	0.3509	3.34989
73.57	0.2829	0.3742	3.00897
82.46	0.1311	0.4036	2.65623
91.22	-0.0213	0.4416	2.30177
99.80	-0.1702	0.4903	1.95553
108.16	-0.3116	0.5541	1.62682
116.23	-0.4419	0.6392	1.32388
123.94	-0.5583	0.7552	1.05343
131.19	-0.6586	0.9168	0.82013
137.90	-0.7420	1.1467	0.62617
143.98	-0.8088	1.4788	0.47098
149.34	-0.8602	1.9612	0.35135
153.98	-0.8986	2.6572	0.26211
157.90	-0.9266	3.6420	0.19715
161.19	-0.9466	4.9951	0.15052
163.94	-0.9610	6.7886	0.11719
166.23	-0.9712	9.0755	0.09325
168.16	-0.9787	11.8797	0.07588
169.80	-0.9842	15.1890	0.06313
171.22	-0.9883	18.9522	0.05363
172.46	-0.9914	23.0792	0.04647
173.57	-0.9937	27.4449	0.04103
174.56	-0.9955	31.8958	0.03685
175.47	-0.9969	36.2592	0.03365
176.32	-0.9979	40.3532	0.03120
177.11	-0.9987	43.9982	0.02935
177.86	-0.9993	47.0286	0.02801
178.59	-0.9997	49.3028	0.02710
179.30	-0.9999	50.7127	0.02657
180.00	-1.0000	51.1903	0.02640

$$x = 0.741$$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2888	4.67291
9.30	0.9868	0.2899	4.64235
18.60	0.9478	0.2932	4.55160
27.87	0.8840	0.2988	4.40336
37.12	0.7973	0.3069	4.20207
46.33	0.6905	0.3179	3.95373
55.49	0.5665	0.3323	3.66573
64.59	0.4291	0.3507	3.34659
73.60	0.2824	0.3740	3.00570
82.49	0.1306	0.4036	2.65300
91.26	-0.0219	0.4414	2.29861
99.84	-0.1709	0.4901	1.95244
108.20	-0.3123	0.5539	1.62382
116.28	-0.4427	0.6391	1.32100
123.99	-0.5590	0.7552	1.05069
131.25	-0.6594	0.9170	0.81757
137.97	-0.7428	1.1474	0.62383
144.04	-0.8094	1.4806	0.45889
149.41	-0.8608	1.9649	0.34953
154.04	-0.8991	2.6644	0.26055
157.97	-0.9270	3.6552	0.19504
161.25	-0.9469	5.0173	0.14943
163.99	-0.9612	6.8239	0.11628
166.28	-0.9714	9.1285	0.09248
168.20	-0.9789	11.9556	0.07524
169.84	-0.9843	15.2928	0.06257
171.26	-0.9884	19.0885	0.05315
172.49	-0.9914	23.2517	0.04605
173.60	-0.9938	27.6563	0.04065
174.59	-0.9955	32.1473	0.03551
175.49	-0.9969	36.5503	0.03333
176.33	-0.9980	40.6817	0.03090
177.12	-0.9987	44.3602	0.02907
177.87	-0.9993	47.4185	0.02774
178.60	-0.9997	49.7137	0.02684
179.30	-0.9999	51.1365	0.02632
180.00	-1.0000	51.6186	0.02614

$$x = 0.742$$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2886	4.66953
5	9.31	0.9868	0.2897	4.63897
10	18.60	0.9478	0.2930	4.54822
15	27.88	0.8839	0.2986	4.39999
20	37.13	0.7972	0.3067	4.19871
25	46.35	0.6903	0.3177	3.95039
30	55.51	0.5662	0.3321	3.66241
35	64.61	0.4288	0.3505	3.34329
40	73.62	0.2820	0.3738	3.00245
45	82.52	0.1301	0.4034	2.64979
50	91.29	-0.0225	0.4412	2.29545
55	99.88	-0.1716	0.4899	1.94935
60	108.24	-0.3131	0.5537	1.62082
65	116.32	-0.4434	0.6389	1.31812
70	124.04	-0.5598	0.7551	1.04796
75	131.31	-0.6601	0.9173	0.81502
80	138.03	-0.7435	1.1482	0.62150
85	144.11	-0.8101	1.4824	0.46680
90	149.47	-0.8614	1.9687	0.34771
95	154.11	-0.8996	2.6718	0.25900
100	158.03	-0.9274	3.6684	0.19453
105	161.31	-0.9473	5.0397	0.14834
110	164.04	-0.9615	6.8595	0.11537
115	166.32	-0.9716	9.1821	0.09172
120	168.24	-0.9790	12.0323	0.07459
125	169.88	-0.9844	15.3977	0.06202
130	171.29	-0.9885	19.2262	0.05267
135	172.52	-0.9915	23.4262	0.04563
140	173.62	-0.9938	27.8701	0.04027
145	174.61	-0.9956	32.4017	0.03616
150	175.51	-0.9969	36.8448	0.03301
155	176.35	-0.9980	41.0140	0.03060
160	177.13	-0.9987	44.7264	0.02879
165	177.88	-0.9993	47.8129	0.02748
170	178.60	-0.9997	50.1294	0.02658
175	179.31	-0.9999	51.5654	0.02606
180	180.00	-1.0000	52.0520	0.02589

$$x = 0.743$$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2884	4.66615
9.31	0.9868	0.2895	4.63560
18.61	0.9477	0.2928	4.54485
27.89	0.8838	0.2984	4.39663
37.15	0.7971	0.3065	4.19536
46.36	0.6901	0.3176	3.94705
55.53	0.5660	0.3319	3.65909
64.63	0.4285	0.3503	3.34001
73.65	0.2816	0.3736	2.99919
82.55	0.1296	0.4032	2.64658
91.32	-0.0231	0.4409	2.29230
99.92	-0.1722	0.4897	1.94628
108.29	-0.3138	0.5535	1.61794
116.37	-0.4442	0.6388	1.31525
124.10	-0.5606	0.7551	1.04523
131.37	-0.6609	0.9175	0.81248
138.09	-0.7442	1.1490	0.61917
144.17	-0.8108	1.4842	0.46472
149.54	-0.8620	1.9726	0.34569
154.17	-0.9001	2.6792	0.25745
158.09	-0.9278	3.6817	0.19323
161.37	-0.9476	5.0623	0.14726
164.10	-0.9617	6.8954	0.11447
166.37	-0.9718	9.2363	0.09097
168.29	-0.9792	12.1098	0.07395
169.92	-0.9846	15.5037	0.06147
171.32	-0.9886	19.3655	0.05219
172.55	-0.9916	23.6026	0.04521
173.65	-0.9939	28.0865	0.03989
174.63	-0.9956	32.6591	0.03582
175.53	-0.9970	37.1428	0.03270
176.36	-0.9980	41.3503	0.03031
177.15	-0.9988	45.0970	0.02852
177.89	-0.9993	48.2121	0.02721
178.61	-0.9997	50.5501	0.02633
179.31	-0.9999	51.9995	0.02581
180.00	-1.0000	52.4906	0.02564

$$x = 0.744$$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2883	4.66278
9.31	0.9868	0.2893	4.63223
18.61	0.9477	0.2926	4.54149
27.90	0.8838	0.2982	4.39327
37.16	0.7970	0.3064	4.19202
46.34	0.6899	0.3174	3.94373
55.55	0.5657	0.3317	3.65579
64.65	0.4281	0.3501	3.33873
73.67	0.2811	0.3734	2.99595
82.58	0.1291	0.4029	2.64338
91.36	-0.0237	0.4407	2.28915
99.96	-0.1729	0.4895	1.94320
108.33	-0.3145	0.5534	1.61485
116.42	-0.4449	0.6387	1.31238
124.15	-0.5613	0.7551	1.04251
131.43	-0.6616	0.9177	0.80994
138.15	-0.7449	1.1498	0.61685
144.23	-0.8114	1.4861	0.46265
149.60	-0.8626	1.9764	0.34409
154.23	-0.9006	2.6866	0.25591
158.15	-0.9282	3.6952	0.19193
161.43	-0.9479	5.0850	0.14618
164.15	-0.9620	6.9317	0.11357
166.42	-0.9720	9.2910	0.09021
168.33	-0.9793	12.1881	0.07332
169.96	-0.9847	15.6110	0.06093
171.36	-0.9886	19.5064	0.05172
172.58	-0.9916	23.7811	0.04479
173.67	-0.9939	28.3053	0.03952
174.65	-0.9956	32.9196	0.03548
175.55	-0.9970	37.4443	0.03239
176.38	-0.9980	41.6906	0.03002
177.16	-0.9988	45.4720	0.02824
177.90	-0.9993	48.6161	0.02695
178.61	-0.9997	50.9758	0.02607
179.31	-0.9999	52.4387	

2 x = 0.745					2 x = 0.746					2 x = 0.747				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$
0	0.00	1.0000	0.2881	4.65942	0.00	1.0000	0.2879	4.65607	0.00	1.0000	0.2877	4.65272	0.00	1.0000
5	9.31	0.9868	0.2892	4.62887	9.32	0.9868	0.2890	4.62552	9.32	0.9868	0.2888	4.62217	5	9.31
10	18.62	0.9477	0.2924	4.53813	18.63	0.9476	0.2923	4.53479	18.63	0.9476	0.2921	4.53145	10	18.62
15	27.91	0.8837	0.2980	4.38993	27.92	0.8836	0.2979	4.38659	27.93	0.8836	0.2977	4.38326	15	27.91
20	37.17	0.7966	0.3062	4.18868	37.18	0.7967	0.3060	4.18535	37.19	0.7966	0.3058	4.18204	20	37.17
25	46.39	0.6897	0.3172	3.94041	46.41	0.6895	0.3170	3.93709	46.42	0.6893	0.3168	3.93379	25	46.39
30	55.57	0.5654	0.3315	3.65249	55.59	0.5652	0.3313	3.64920	55.60	0.5649	0.3311	3.64591	30	55.57
35	64.67	0.4278	0.3499	3.33346	64.70	0.4274	0.3497	3.33019	64.72	0.4271	0.3495	3.32694	35	64.67
40	73.70	0.2807	0.3732	2.99271	73.72	0.2803	0.3729	2.98948	73.75	0.2798	0.3727	2.98626	40	73.70
45	82.61	0.1286	0.4027	2.64019	82.64	0.1281	0.4025	2.63700	82.67	0.1275	0.4023	2.63382	45	82.61
50	91.39	-0.0243	0.4405	2.28602	91.43	-0.0249	0.4403	2.28289	91.46	-0.0255	0.4401	2.27976	50	91.39
55	99.99	-0.1736	0.4893	1.94014	100.03	-0.1742	0.4890	1.93708	100.07	-0.1749	0.4888	1.93402	55	99.99
60	108.37	-0.3152	0.5532	1.61188	108.42	-0.3159	0.5530	1.60891	108.46	-0.3167	0.5528	1.60595	60	108.37
65	116.47	-0.4457	0.6385	1.30952	116.52	-0.4465	0.6384	1.30667	116.57	-0.4472	0.6382	1.30382	65	116.47
70	124.20	-0.5621	0.7551	1.03980	124.25	-0.5629	0.7551	1.03709	124.31	-0.5636	0.7551	1.03439	70	124.20
75	131.48	-0.6624	0.9180	0.80741	131.54	-0.6632	0.9182	0.80488	131.60	-0.6639	0.9185	0.80236	75	131.48
80	138.21	-0.7456	1.1505	0.61453	138.28	-0.7464	1.1513	0.61222	138.34	-0.7471	1.1521	0.60992	80	138.21
85	144.30	-0.8121	1.4879	0.46058	144.36	-0.8127	1.4898	0.45851	144.43	-0.8134	1.4916	0.45645	85	144.30
90	149.67	-0.8631	1.9803	0.34228	149.74	-0.8637	1.9842	0.34048	149.80	-0.8643	1.9881	0.33869	90	149.67
95	154.30	-0.9011	2.6941	0.25437	154.36	-0.9016	2.7017	0.25283	154.43	-0.9021	2.7093	0.25130	95	154.30
100	158.21	-0.9286	3.7087	0.19064	158.28	-0.9290	3.7224	0.18936	158.34	-0.9294	3.7362	0.18807	100	158.21
105	161.48	-0.9482	5.1080	0.14510	161.54	-0.9486	5.1312	0.14403	161.60	-0.9489	5.1546	0.14296	105	161.48
110	164.20	-0.9622	6.9684	0.11217	164.25	-0.9625	7.0054	0.11178	164.31	-0.9627	7.0428	0.11090	110	164.20
115	166.47	-0.9722	9.3463	0.08947	166.52	-0.9724	9.4022	0.08872	166.57	-0.9726	9.4586	0.08798	115	166.47
120	168.37	-0.9795	12.2674	0.07268	168.42	-0.9796	12.3474	0.07205	168.46	-0.9798	12.4284	0.07143	120	168.37
125	169.99	-0.9848	15.7194	0.06039	170.03	-0.9849	15.8290	0.05985	170.07	-0.9850	15.9399	0.05931	125	169.99
130	171.39	-0.9887	19.6489	0.05125	171.43	-0.9888	19.7930	0.05078	171.46	-0.9889	19.9388	0.05032	130	171.39
135	172.61	-0.9917	23.9617	0.04437	172.64	-0.9918	24.1444	0.04396	172.67	-0.9918	24.3291	0.04355	135	172.61
140	173.70	-0.9940	28.5267	0.03915	173.72	-0.9940	28.7507	0.03878	173.75	-0.9941	28.9773	0.03841	140	173.70
145	174.67	-0.9957	33.1830	0.03515	174.70	-0.9957	33.4497	0.03481	174.72	-0.9958	33.7194	0.03448	145	174.67
150	175.57	-0.9970	37.7494	0.03208	175.59	-0.9970	38.0581	0.03177	175.60	-0.9971	38.3705	0.03146	150	175.57
155	176.39	-0.9980	42.0350	0.02973	176.41	-0.9980	42.3835	0.02945	176.42	-0.9981	42.7362	0.02916	155	176.39
160	177.17	-0.9988	45.8515	0.02797	177.18	-0.9988	46.2355	0.02770	177.19	-0.9988	46.6242	0.02743	160	177.17
165	177.91	-0.9993	49.0249	0.02659	177.92	-0.9993	49.4386	0.02643	177.93	-0.9993	49.8574	0.02617	165	177.91
170	178.62	-0.9997	51.4067	0.02582	178.63	-0.9997	51.8427	0.02556	178.63	-0.9997	52.2841	0.02531	170	178.62
175	179.31	-0.9999	52.8833	0.02531	179.32	-0.9999	53.3332	0.02506	179.32	-0.9999	53.7886	0.02482	175	179.31
180	180.00	-1.0000	53.3836	0.02514	180.00	-1.0000	53.8382	0.02490	180.00	-1.0000	54.2983	0.02465	180	180.00

2 x = 0.748					2 x = 0.749					2 x = 0.750				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²		
0	0.00	1.0000	0.2875	4.64938	0.00	1.0000	0.2874	4.64606	0.00	1.0000	0.2872	4.64273		
5	9.32	0.9868	0.2886	4.61884	9.33	0.9868	0.2884	4.61551	9.33	0.9868	0.2883	4.61219		
10	18.64	0.9476	0.2919	4.52812	18.64	0.9475	0.2917	4.52479	18.65	0.9475	0.2915	4.52148		
15	27.93	0.8835	0.2975	4.37993	27.94	0.8834	0.2973	4.37662	27.95	0.8833	0.2971	4.37331		
20	37.21	0.7965	0.3056	4.17872	37.22	0.7963	0.3054	4.17542	37.23	0.7962	0.3052	4.17212		
25	46.44	0.6891	0.3166	3.93049	46.45	0.6889	0.3164	3.92721	46.47	0.6887	0.3162	3.92392		
30	55.62	0.5646	0.3309	3.64264	55.64	0.5644	0.3307	3.63937	55.66	0.5641	0.3305	3.63611		
35	64.74	0.4267	0.3493	3.32369	64.76	0.4264	0.3491	3.32045	64.78	0.4260	0.3488	3.31721		
40	73.77	0.2794	0.3725	2.98304	73.80	0.2790	0.3723	2.97984	73.83	0.2786	0.3721	2.97663		
45	82.70	0.1270	0.4021	2.63065	82.73	0.1265	0.4019	2.62748	82.76	0.1260	0.4017	2.62433		
50	91.49	-0.0261	0.4399	2.27664	91.53	-0.0266	0.4396	2.27353	91.56	-0.0272	0.4394	2.27043		
55	100.11	-0.1755	0.4886	1.93098	100.15	-0.1762	0.4884	1.92794	100.19	-0.1769	0.4882	1.92490		
60	108.50	-0.3174	0.5526	1.60299	108.55	-0.3181	0.5524	1.60004	108.59	-0.3188	0.5522	1.59709		
65	116.61	-0.4480	0.6381	1.30098	116.66	-0.4487	0.6380	1.29814	116.71	-0.4495	0.6378	1.29531		
70	124.36	-0.5644	0.7550	1.03169	124.42	-0.5652	0.7550	1.02900	124.47	-0.5660	0.7550	1.02631		
75	131.66	-0.6647	0.9187	0.79984	131.72	-0.6654	0.9189	0.79733	131.77	-0.6662	0.9192	0.79482		
80	138.40	-0.7478	1.1529	0.60761	138.46	-0.7485	1.1537	0.60532	138.53	-0.7492	1.1545	0.60302		
85	144.49	-0.8141	1.4935	0.45440	144.56	-0.8147	1.4954	0.45235	144.62	-0.8154	1.4973	0.45030		
90	149.87	-0.8649	1.9920	0.33690	149.93	-0.8654	1.9960	0.33511	150.00	-0.8660	2.0000	0.33333		
95	154.49	-0.9025	2.7169	0.24978	154.56	-0.9030	2.7247	0.24826	154.62	-0.9035	2.7324	0.24675		
100	158.40	-0.9298	3.7501	0.18680	158.46	-0.9302	3.7641	0.18552	158.53	-0.9306	3.7783	0.18426		
105	161.66	-0.9492	5.1783	0.14190	161.72	-0.9495	5.2021	0.14085	161.77	-0.9498	5.2262	0.13979		
110	164.36	-0.9630	7.0806	0.11001	164.42	-0.9632	7.1188	0.10914	164.47	-0.9635	7.1573	0.10826		
115	166.61	-0.9728	9.5156	0.08724	166.66	-0.9730	9.5733	0.08651	166.71	-0.9732	9.6315	0.08578		
120	168.50	-0.9799	12.5102	0.07081	168.55	-0.9801	12.5929	0.07019	168.59	-0.9802	12.6766	0.06957		
125	170.11	-0.9851	16.0520	0.05878	170.15	-0.9853	16.1654	0.05825	170.19	-0.9854	16.2800	0.05772		
130	171.49	-0.9890	20.0863	0.04985	171.53	-0.9891	20.2354	0.04939	171.56	-0.9892	20.3863	0.04894		
135	172.70	-0.9919	24.5161	0.04315	172.73	-0.9920	24.7052	0.04274	172.76	-0.9920	24.8966	0.04234		
140	173.77	-0.9941	29.2066	0.03805	173.80	-0.9942	29.4387	0.03769	173.83	-0.9942	29.6735	0.03733		
145	174.74	-0.9958	33.9924	0.03415	174.76	-0.9958	34.2687	0.03382	174.78	-0.9959	34.5483	0.03350		
150	175.62	-0.9971	38.6867	0.03116	175.64	-0.9971	39.0067	0.03086	175.66	-0.9971	39.3305	0.03056		
155	176.44	-0.9981	43.0931	0.02888	176.45	-0.9981	43.4543	0.02860	176.47	-0.9981	43.8200	0.02832		
160	177.21	-0.9988	47.0176	0.02716	177.22	-0.9988	47.4158	0.02690	177.23	-0.9988	47.8189	0.02663		
165	177.93	-0.9994	50.2812	0.02591	177.94	-0.9994	50.7102	0.02566	177.95	-0.9994	51.1444	0.02541		
170	178.64	-0.9997	52.7308	0.02507	178.64	-0.9997	53.1830	0.02482	178.65	-0.9997	53.6407	0.02457		
175	179.32	-0.9999	54.2495	0.02457	179.33	-0.9999	54.7161	0.02433	179.33	-0.9999	55.1884	0.02409		
180	180.00	-1.0000	54.7641	0.02441	180.00	-1.0000	55.2356	0.02417	180.00	-1.0000	55.7128	0.02393		

2 x = 0.751					2 x = 0.752					2 x = 0.753				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$
0	0.00	1.0000	0.2670	4.63942	0.00	1.0000	0.2668	4.63612	0.00	1.0000	0.2667	4.63282	0.00	1.0000
5	9.33	0.9868	0.2681	4.60888	9.33	0.9868	0.2679	4.60558	9.34	0.9867	0.2677	4.60228	9.35	0.9866
10	18.65	0.9475	0.2914	4.51817	18.66	0.9474	0.2912	4.51487	18.67	0.9474	0.2910	4.51158	18.68	0.9473
15	27.96	0.8833	0.2969	4.37001	27.97	0.8832	0.2968	4.36672	27.98	0.8831	0.2966	4.36343	27.99	0.8830
20	37.24	0.7961	0.3051	4.15853	37.25	0.7960	0.3049	4.15525	37.26	0.7958	0.3047	4.15228	37.27	0.7956
25	46.48	0.6886	0.3160	3.92055	46.50	0.6884	0.3158	3.91739	46.51	0.6882	0.3157	3.91413	46.52	0.6880
30	55.68	0.5639	0.3303	3.63285	55.70	0.5636	0.3301	3.62961	55.71	0.5633	0.3299	3.62637	55.72	0.5630
35	64.81	0.4257	0.3486	3.31399	64.83	0.4253	0.3484	3.31076	64.85	0.4250	0.3482	3.30755	64.86	0.4247
40	73.88	0.2781	0.3719	2.97344	73.88	0.2777	0.3717	2.97025	73.90	0.2773	0.3715	2.96707	73.91	0.2770
45	82.79	0.1255	0.4014	2.62117	82.82	0.1250	0.4012	2.61803	82.85	0.1245	0.4010	2.61489	82.87	0.1240
50	91.59	-0.0278	0.4392	2.26733	91.63	-0.0284	0.4390	2.26424	91.66	-0.0290	0.4388	2.26116	91.69	-0.0296
55	100.23	-0.1775	0.4880	1.92187	100.26	-0.1782	0.4878	1.91885	100.30	-0.1788	0.4876	1.91584	100.33	-0.1793
60	108.63	-0.3195	0.5320	1.59416	108.68	-0.3202	0.5318	1.59122	108.72	-0.3209	0.5316	1.58830	108.75	-0.3214
65	116.76	-0.4502	0.5719	1.29249	116.81	-0.4510	0.5717	1.28967	116.86	-0.4517	0.5715	1.28685	116.89	-0.4522
70	124.52	-0.5667	0.7550	1.02363	124.58	-0.5675	0.7550	1.02096	124.63	-0.5683	0.7549	1.01829	124.68	-0.5690
75	131.83	-0.6670	0.9194	0.79232	131.89	-0.6677	0.9197	0.78982	131.95	-0.6685	0.9199	0.78733	132.00	-0.6692
80	138.59	-0.7500	1.1553	0.60074	138.65	-0.7507	1.1560	0.59845	138.71	-0.7514	1.1568	0.59618	138.76	-0.7521
85	144.69	-0.8160	1.4991	0.44826	144.75	-0.8167	1.5011	0.44623	144.82	-0.8173	1.5030	0.44420	144.87	-0.8179
90	150.07	-0.8666	2.0400	0.33156	150.13	-0.8672	2.0400	0.32979	150.20	-0.8678	2.0412	0.32802	150.25	-0.8684
95	154.69	-0.9040	2.7403	0.24524	154.75	-0.9045	2.7482	0.24373	154.82	-0.9050	2.7561	0.24223	154.87	-0.9055
100	158.59	-0.9310	3.7925	0.18299	158.65	-0.9314	3.8069	0.18173	158.71	-0.9318	3.8214	0.18048	158.76	-0.9322
105	161.85	-0.9501	5.2505	0.13874	161.89	-0.9505	5.2750	0.13770	161.95	-0.9508	5.2998	0.13666	162.00	-0.9511
110	164.52	-0.9637	7.1962	0.10739	164.58	-0.9640	7.2355	0.10653	164.63	-0.9642	7.2753	0.10567	164.68	-0.9644
115	166.76	-0.9734	9.6904	0.08503	166.81	-0.9736	9.7499	0.08433	166.86	-0.9738	9.8101	0.08351	166.91	-0.9739
120	168.63	-0.9804	12.7611	0.06895	168.68	-0.9805	12.8466	0.06835	168.72	-0.9807	12.9331	0.06774	168.76	-0.9808
125	170.23	-0.9855	16.3960	0.05720	170.26	-0.9856	16.5133	0.05668	170.30	-0.9857	16.6320	0.05616	170.33	-0.9858
130	171.59	-0.9893	20.5369	0.04845	171.63	-0.9893	20.6933	0.04803	171.66	-0.9894	20.8496	0.04759	171.69	-0.9894
135	172.75	-0.9921	25.0902	0.04194	172.82	-0.9922	25.2861	0.04154	172.85	-0.9922	25.4843	0.04115	172.88	-0.9922
140	173.65	-0.9942	29.9111	0.03697	173.68	-0.9943	30.1515	0.03662	173.70	-0.9943	30.3949	0.03626	173.73	-0.9943
145	174.61	-0.9959	34.8312	0.03317	174.63	-0.9959	35.1176	0.03285	174.65	-0.9960	35.4075	0.03253	174.68	-0.9960
150	175.68	-0.9972	39.6583	0.03026	175.70	-0.9972	39.9901	0.02996	175.71	-0.9972	40.3259	0.02967	175.73	-0.9972
155	176.48	-0.9981	44.1901	0.02804	176.50	-0.9981	44.5648	0.02776	176.51	-0.9981	44.9440	0.02749	176.53	-0.9981
160	177.24	-0.9988	48.2269	0.02637	177.25	-0.9989	48.6399	0.02611	177.26	-0.9989	49.0580	0.02616	177.28	-0.9989
165	177.96	-0.9994	51.5840	0.02516	177.97	-0.9994	52.0290	0.02491	177.98	-0.9994	52.4796	0.02466	178.00	-0.9994
170	178.65	-0.9997	54.1041	0.02433	178.66	-0.9997	54.5732	0.02409	178.67	-0.9997	55.0481	0.02385	178.69	-0.9997
175	179.33	-0.9999	56.6665	0.02385	179.33	-0.9999	56.1506	0.02351	179.34	-0.9999	56.6407	0.02338	179.35	-0.9999
180	180.00	-1.0000	56.1959	0.02359	180.00	-1.0000	56.6851	0.02346	180.00	-1.0000	57.1803	0.02323	180.00	-1.0000

2 x = 0.754					2 x = 0.755					2 x = 0.756				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2865	4.62953	0.00	1.0000	0.2863	4.62624	0.00	1.0000	0.2861	4.62297		
5	9.34	0.9867	0.2876	4.59899	9.34	0.9867	0.2874	4.59571	9.35	0.9867	0.2872	4.59244		
10	18.67	0.9474	0.2908	4.50829	18.68	0.9473	0.2906	4.50502	18.68	0.9473	0.2905	4.50175		
15	27.99	0.8830	0.2964	4.36016	28.00	0.8830	0.2962	4.35689	28.01	0.8829	0.2960	4.35363		
20	37.28	0.7957	0.3045	4.15901	37.29	0.7956	0.3043	4.15576	37.30	0.7955	0.3041	4.15251		
25	46.53	0.6880	0.3155	3.91088	46.54	0.6878	0.3153	3.90763	46.56	0.6876	0.3151	3.90440		
30	55.73	0.5631	0.3298	3.62314	55.75	0.5628	0.3296	3.61992	55.77	0.5626	0.3294	3.61670		
35	64.87	0.4247	0.3486	3.30435	64.89	0.4243	0.3478	3.30115	64.92	0.4240	0.3476	3.29796		
40	73.93	0.2768	0.3713	2.96390	73.95	0.2764	0.3711	2.96074	73.98	0.2760	0.3709	2.95756		
45	82.88	0.1240	0.4008	2.61176	82.91	0.1234	0.4006	2.60864	82.94	0.1229	0.4004	2.60552		
50	91.70	-0.0296	0.4386	2.25808	91.73	-0.0302	0.4383	2.25501	91.76	-0.0308	0.4381	2.25195		
55	100.34	-0.1795	0.4874	1.91233	100.38	-0.1802	0.4871	1.90983	100.42	-0.1808	0.4869	1.90683		
60	108.76	-0.3217	0.5514	1.58536	108.81	-0.3224	0.5512	1.58246	108.85	-0.3231	0.5510	1.57955		
65	116.90	-0.4525	0.6373	1.28404	116.95	-0.4532	0.6371	1.28124	117.00	-0.4540	0.6370	1.27845		
70	124.68	-0.5690	0.7549	1.01562	124.74	-0.5698	0.7549	1.01296	124.79	-0.5706	0.7549	1.01031		
75	132.01	-0.6692	0.9202	0.78484	132.07	-0.6700	0.9204	0.78236	132.12	-0.6707	0.9207	0.77988		
80	138.78	-0.7521	1.1576	0.59390	138.84	-0.7529	1.1584	0.59164	138.90	-0.7536	1.1593	0.58937		
85	144.89	-0.8180	1.5049	0.44217	144.95	-0.8187	1.5068	0.44015	145.02	-0.8193	1.5088	0.43813		
90	150.27	-0.8683	2.0162	0.32626	150.33	-0.8689	2.0203	0.32450	150.40	-0.8695	2.0244	0.32275		
95	154.89	-0.9055	2.7641	0.24073	154.95	-0.9059	2.7722	0.23924	155.02	-0.9064	2.7803	0.23776		
100	158.78	-0.9322	3.8360	0.17923	158.84	-0.9326	3.8508	0.17798	158.90	-0.9330	3.8656	0.17674		
105	162.01	-0.9511	5.3248	0.13563	162.07	-0.9514	5.3500	0.13460	162.12	-0.9517	5.3755	0.13357		
110	164.68	-0.9645	7.3154	0.10481	164.74	-0.9647	7.3559	0.10395	164.79	-0.9650	7.3969	0.10311		
115	166.90	-0.9740	9.8709	0.08290	166.95	-0.9742	9.9323	0.08219	167.00	-0.9744	9.9945	0.08148		
120	168.76	-0.9808	13.0205	0.06714	168.81	-0.9810	13.1090	0.06654	168.85	-0.9811	13.1984	0.06595		
125	170.34	-0.9858	16.7520	0.05565	170.38	-0.9859	16.8734	0.05514	170.42	-0.9860	16.9963	0.05463		
130	171.70	-0.9895	21.0076	0.04714	171.73	-0.9896	21.1676	0.04670	171.76	-0.9897	21.3294	0.04626		
135	172.88	-0.9923	25.6850	0.04076	172.91	-0.9924	25.8880	0.04037	172.94	-0.9924	26.0935	0.04039		
140	173.93	-0.9944	30.6412	0.03591	173.95	-0.9944	30.8905	0.03557	173.98	-0.9945	31.1429	0.03522		
145	174.87	-0.9960	35.7009	0.03221	174.89	-0.9960	35.9979	0.03190	174.92	-0.9961	36.2985	0.03159		
150	175.73	-0.9972	40.6659	0.02938	175.75	-0.9973	41.0101	0.02909	175.77	-0.9973	41.3585	0.02880		
155	176.53	-0.9982	45.3280	0.02722	176.54	-0.9982	45.7167	0.02695	176.56	-0.9982	46.1103	0.02858		
160	177.28	-0.9989	49.4813	0.02559	177.29	-0.9989	49.9099	0.02534	177.30	-0.9989	50.3438	0.02836		
165	177.99	-0.9994	52.9353	0.02411	177.99	-0.9994	53.3976	0.02417	178.01	-0.9994	53.8652	0.02839		
170	178.67	-0.9997	55.5289	0.02361	178.68	-0.9997	55.0158	0.02337	178.68	-0.9997	56.5088	0.02314		
175	179.34	-0.9999	57.1368	0.02315	179.34	-0.9999	57.6393	0.02291	179.35	-0.9999	58.1480	0.02268		
180	180.00	-1.0000	57.6817	0.02259	180.00	-1.0000	58.1893	0.02276	180.00	-1.0000	58.7034	0.02253		

2 x = 0.757					2 x = 0.758					2 x = 0.759				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2859	4.61970	0.00	1.0000	0.2858	4.61644	0.00	1.0000	0.2856	4.61319		
5	9.35	0.9867	0.2870	4.58917	9.35	0.9867	0.2868	4.58591	9.35	0.9867	0.2867	4.58266		
10	18.69	0.9473	0.290	4.49849	18.70	0.9472	0.2901	4.49523	18.70	0.9472	0.2899	4.49199		
15	28.01	0.8828	0.2959	4.35037	28.02	0.8828	0.2957	4.34713	28.03	0.8827	0.2955	4.34389		
20	37.31	0.7953	0.3039	4.14926	37.32	0.7952	0.3038	4.14603	37.34	0.7951	0.3036	4.14280		
25	46.57	0.6874	0.3149	3.90117	46.59	0.6872	0.3147	3.89795	46.60	0.6870	0.3145	3.89473		
30	55.79	0.5623	0.3292	3.61349	55.81	0.5620	0.3290	3.61029	55.82	0.5617	0.3288	3.60709		
35	64.94	0.4236	0.3474	3.29477	64.96	0.4233	0.3472	3.29160	64.98	0.4229	0.3470	3.28843		
40	74.00	0.2756	0.3707	2.95443	74.03	0.2751	0.3705	2.95128	74.06	0.2747	0.3703	2.94814		
45	82.97	0.1224	0.4002	2.60241	83.00	0.1219	0.4000	2.59931	83.03	0.1214	0.3998	2.59621		
50	91.80	-0.0314	0.4379	2.24889	91.83	-0.0320	0.4377	2.24584	91.87	-0.0326	0.4375	2.24279		
55	100.46	-0.1815	0.4867	1.90384	100.49	-0.1821	0.4865	1.90086	100.53	-0.1828	0.4863	1.89788		
60	108.89	-0.3238	0.5509	1.57665	108.94	-0.3245	0.5507	1.57375	108.98	-0.3252	0.5505	1.57086		
65	117.05	-0.4548	0.6368	1.27565	117.10	-0.4555	0.6367	1.27287	117.15	-0.4563	0.6366	1.27009		
70	124.84	-0.5713	0.7549	1.00766	124.90	-0.5721	0.7548	1.00501	124.95	-0.5729	0.7548	1.00237		
75	132.18	-0.6715	0.9209	0.77741	132.24	-0.6723	0.9211	0.77494	132.30	-0.6730	0.9214	0.77248		
80	138.96	-0.7543	1.1601	0.58711	139.03	-0.7550	1.1609	0.58486	139.09	-0.7557	1.1617	0.58261		
85	145.08	-0.8200	1.5107	0.43612	145.15	-0.8206	1.5127	0.43411	145.21	-0.8213	1.5146	0.43211		
90	150.47	-0.8701	2.0286	0.32100	150.53	-0.8706	2.0328	0.31926	150.60	-0.8712	2.0370	0.31752		
95	155.08	-0.9069	2.7885	0.23627	155.15	-0.9074	2.7967	0.23480	155.21	-0.9079	2.8050	0.23332		
100	158.96	-0.9334	3.8807	0.17551	159.03	-0.9337	3.8958	0.17428	159.09	-0.9341	3.9111	0.17305		
105	162.18	-0.9520	5.4012	0.13255	162.24	-0.9524	5.4272	0.13153	162.30	-0.9527	5.4534	0.13052		
110	164.84	-0.9652	7.4383	0.10226	164.90	-0.9655	7.4801	0.10142	164.95	-0.9657	7.5224	0.10058		
115	167.05	-0.9746	10.0573	0.08078	167.10	-0.9748	10.1208	0.08008	167.15	-0.9749	10.1850	0.07938		
120	168.89	-0.9813	13.2888	0.06536	168.94	-0.9814	13.3803	0.06477	168.98	-0.9816	13.4728	0.06418		
125	170.46	-0.9862	17.1205	0.05412	170.49	-0.9863	17.2463	0.05362	170.53	-0.9864	17.3735	0.05312		
130	171.80	-0.9898	21.4932	0.04582	171.83	-0.9899	21.6589	0.04539	171.87	-0.9899	21.8267	0.04495		
135	172.97	-0.9925	26.3015	0.03960	173.00	-0.9925	26.5120	0.03921	173.03	-0.9926	26.7251	0.03883		
140	174.00	-0.9945	31.3983	0.03488	174.03	-0.9946	31.6569	0.03454	174.06	-0.9946	31.9187	0.03420		
145	174.94	-0.9961	36.6029	0.03127	174.96	-0.9961	36.9111	0.03097	174.98	-0.9962	37.2231	0.03066		
150	175.79	-0.9973	41.7113	0.02852	175.81	-0.9973	42.0685	0.02823	175.82	-0.9973	42.4302	0.02795		
155	176.57	-0.9982	46.5088	0.02641	176.59	-0.9982	46.9123	0.02615	176.60	-0.9982	47.3208	0.02589		
160	177.31	-0.9989	50.7832	0.02483	177.32	-0.9989	51.2281	0.02458	177.34	-0.9989	51.6787	0.02434		
165	178.01	-0.9994	54.3387	0.02369	178.02	-0.9994	54.8182	0.02345	178.03	-0.9994	55.3038	0.02321		
170	178.69	-0.9997	57.0080	0.02291	178.70	-0.9997	57.5135	0.02267	178.70	-0.9997	58.0255	0.02244		
175	179.35	-0.9999	58.6631	0.02245	179.35	-0.9999	59.1848	0.02223	179.35	-0.9999	59.7131	0.02200		
180	180.00	-1.0000	59.2239	0.02231	180.00	-1.0000	59.7511	0.02208	180.00	-1.0000	60.2850	0.02185		

2 x = 0.760					2 x = 0.761					2 x = 0.762				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2854	4.60995	0.00	1.0000	0.2852	4.60671	0.00	1.0000	0.2851	4.60348		
5	9.36	0.9867	0.2865	4.57942	9.36	0.9867	0.2863	4.57618	9.36	0.9867	0.2861	4.57295		
10	18.71	0.9472	0.2898	4.48875	18.71	0.9471	0.2896	4.48552	18.72	0.9471	0.2894	4.48229		
15	28.04	0.8826	0.2953	4.34066	28.05	0.8825	0.2951	4.33743	28.06	0.8825	0.2950	4.33421		
20	37.35	0.7950	0.3034	4.13958	37.36	0.7948	0.3032	4.13636	37.37	0.7947	0.3030	4.13316		
25	46.62	0.6868	0.3143	3.89153	46.63	0.6867	0.3141	3.88833	46.65	0.6865	0.3140	3.88514		
30	55.84	0.5615	0.3286	3.60391	55.86	0.5612	0.3284	3.60073	55.88	0.5610	0.3282	3.59755		
35	65.00	0.4226	0.3468	3.28526	65.02	0.4222	0.3466	3.28211	65.05	0.4219	0.3464	3.27896		
40	74.08	0.2743	0.3700	2.94501	74.11	0.2738	0.3698	2.94189	74.13	0.2734	0.3696	2.93877		
45	83.06	0.1209	0.3995	2.59312	83.09	0.1204	0.3993	2.59004	83.12	0.1199	0.3991	2.58696		
50	91.90	-0.0331	0.4373	2.23976	91.93	-0.0337	0.4371	2.23673	91.97	-0.0343	0.4368	2.23370		
55	100.57	-0.1835	0.4861	1.89491	100.61	-0.1841	0.4859	1.89195	100.65	-0.1848	0.4857	1.88899		
60	109.02	-0.3260	0.5503	1.56798	109.07	-0.3267	0.5501	1.56510	109.11	-0.3274	0.5499	1.56222		
65	117.19	-0.4570	0.6364	1.26731	117.24	-0.4578	0.6363	1.26454	117.29	-0.4585	0.6361	1.26178		
70	125.01	-0.5737	0.7548	0.99974	125.06	-0.5744	0.7548	0.99711	125.11	-0.5752	0.7548	0.99449		
75	132.36	-0.6738	0.9216	0.77002	132.42	-0.6745	0.9219	0.76757	132.48	-0.6753	0.9221	0.76512		
80	139.15	-0.7565	1.1625	0.58036	139.22	-0.7572	1.1633	0.57812	139.28	-0.7579	1.1641	0.57589		
85	145.28	-0.8219	1.5166	0.43011	145.35	-0.8226	1.5186	0.42811	145.41	-0.8233	1.5206	0.42612		
90	150.67	-0.8718	2.0412	0.31579	150.73	-0.8724	2.0455	0.31406	150.80	-0.8729	2.0498	0.31234		
95	155.28	-0.9084	2.8134	0.23186	155.35	-0.9088	2.8219	0.23039	155.41	-0.9093	2.8304	0.22893		
100	159.15	-0.9345	3.9265	0.17183	159.22	-0.9349	3.9420	0.17061	159.28	-0.9353	3.9577	0.16940		
105	162.36	-0.9530	5.4799	0.12951	162.42	-0.9533	5.5067	0.12850	162.48	-0.9536	5.5337	0.12750		
110	165.01	-0.9659	7.5651	0.09975	165.06	-0.9662	7.6082	0.09892	165.11	-0.9664	7.6518	0.09809		
115	167.19	-0.9751	10.2499	0.07869	167.24	-0.9753	10.3155	0.07800	167.29	-0.9755	10.3819	0.07731		
120	169.02	-0.9817	13.5664	0.06360	169.07	-0.9819	13.6611	0.06302	169.11	-0.9820	13.7569	0.06245		
125	170.57	-0.9865	17.5022	0.05263	170.61	-0.9866	17.6324	0.05213	170.65	-0.9867	17.7643	0.05164		
130	171.90	-0.9900	21.9964	0.04452	171.93	-0.9901	22.1683	0.04410	171.97	-0.9902	22.3422	0.04367		
135	173.06	-0.9927	26.9408	0.03846	173.09	-0.9927	27.1591	0.03808	173.12	-0.9928	27.3802	0.03771		
140	174.08	-0.9947	32.1837	0.03386	174.11	-0.9947	32.4520	0.03353	174.13	-0.9948	32.7237	0.03320		
145	175.00	-0.9962	37.5390	0.03035	175.02	-0.9962	37.8589	0.03005	175.05	-0.9963	38.1828	0.02975		
150	175.84	-0.9974	42.7964	0.02767	175.86	-0.9974	43.1673	0.02739	175.88	-0.9974	43.5429	0.02712		
155	176.62	-0.9983	47.7346	0.02563	176.63	-0.9983	48.1536	0.02537	176.65	-0.9983	48.5780	0.02511		
160	177.35	-0.9989	52.1350	0.02409	177.36	-0.9989	52.5971	0.02385	177.37	-0.9989	53.0652	0.02360		
165	178.04	-0.9994	55.7956	0.02297	178.05	-0.9994	56.2937	0.02274	178.06	-0.9994	56.7982	0.02251		
170	178.71	-0.9997	58.5440	0.02222	178.71	-0.9997	59.0691	0.02199	178.72	-0.9997	59.6010	0.02176		
175	179.36	-0.9999	60.2482	0.02178	179.36	-0.9999	60.7902	0.02155	179.36	-0.9999	61.3391	0.02133		
180	180.00	-1.0000	60.8257	0.02163	180.00	-1.0000	61.3733	0.02141	180.00	-1.0000	61.9280	0.02119		

2 x = 0.763					2 x = 0.764					2 x = 0.765				
FSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2849	4.60026	0.00	1.0000	0.2847	4.59704	0.00	1.0000	0.2846	4.59384		
5	9.37	0.9867	0.2860	4.56973	9.37	0.9867	0.2858	4.56552	9.37	0.9867	0.2856	4.56332		
10	18.72	0.9471	0.2892	4.47908	18.73	0.9470	0.2890	4.47587	18.74	0.9470	0.2889	4.47267		
15	28.07	0.8824	0.2948	4.33101	28.07	0.8823	0.2946	4.32780	28.08	0.8823	0.2944	4.32461		
20	37.38	0.7946	0.3029	4.12996	37.39	0.7945	0.3027	4.12677	37.41	0.7943	0.3025	4.12358		
25	46.66	0.6863	0.3138	3.93195	46.68	0.6861	0.3136	3.87878	46.69	0.6859	0.3134	3.87551		
30	55.90	0.5607	0.3230	3.59439	55.91	0.5604	0.3228	3.59123	55.93	0.5602	0.3226	3.58808		
35	65.07	0.4216	0.3463	3.27582	65.09	0.4212	0.3461	3.27268	65.11	0.4209	0.3459	3.26956		
40	74.16	0.2730	0.3694	2.93566	74.18	0.2726	0.3692	2.93255	74.21	0.2721	0.3690	2.92946		
45	83.15	0.1194	0.3989	2.58389	83.17	0.1188	0.3987	2.58083	83.20	0.1183	0.3985	2.57777		
50	92.00	-0.0349	0.4366	2.23058	92.03	-0.0355	0.4364	2.22767	92.07	-0.0361	0.4362	2.22466		
55	100.69	-0.1854	0.4854	1.88803	100.72	-0.1861	0.4852	1.88309	100.76	-0.1868	0.4850	1.88015		
60	109.15	-0.3281	0.5497	1.55936	109.20	-0.3288	0.5495	1.55650	109.24	-0.3295	0.5493	1.55364		
65	117.34	-0.4593	0.6360	1.25902	117.39	-0.4600	0.6359	1.25627	117.44	-0.4608	0.6357	1.25352		
70	125.17	-0.5760	0.7547	0.99187	125.22	-0.5767	0.7547	0.98925	125.27	-0.5775	0.7547	0.98665		
75	132.54	-0.6761	0.9224	0.75267	132.60	-0.6768	0.9226	0.75024	132.65	-0.6776	0.9229	0.75780		
80	139.34	-0.7586	1.1650	0.57336	139.41	-0.7593	1.1658	0.57143	139.47	-0.7601	1.1666	0.56921		
85	145.48	-0.8239	1.5226	0.42414	145.55	-0.8246	1.5246	0.42216	145.61	-0.8252	1.5267	0.42013		
90	150.87	-0.8735	2.0541	0.31062	150.94	-0.8741	2.0585	0.30890	151.00	-0.8748	2.0628	0.30719		
95	155.48	-0.9098	2.8389	0.22748	155.55	-0.9103	2.8476	0.22603	155.61	-0.9108	2.8563	0.22458		
100	159.34	-0.9357	3.9735	0.16819	159.41	-0.9361	3.9895	0.16698	159.47	-0.9365	4.0056	0.16570		
105	162.54	-0.9539	5.5609	0.12650	162.60	-0.9542	5.5885	0.12551	162.65	-0.9545	5.6163	0.12452		
110	165.17	-0.9667	7.6959	0.09727	165.22	-0.9669	7.7405	0.09546	165.27	-0.9672	7.7855	0.09554		
115	167.34	-0.9757	10.4491	0.07663	167.39	-0.9759	10.5169	0.07595	167.44	-0.9761	10.5856	0.07523		
120	169.15	-0.9821	13.8538	0.06187	169.20	-0.9823	13.9518	0.06130	169.24	-0.9824	14.0510	0.06074		
125	170.69	-0.9868	17.8977	0.05115	170.72	-0.9869	18.0327	0.05057	170.76	-0.9870	18.1693	0.05019		
130	172.00	-0.9903	22.5183	0.04325	172.03	-0.9904	22.6965	0.04283	172.07	-0.9904	22.8769	0.04212		
135	173.15	-0.9929	27.6040	0.03734	173.17	-0.9929	27.8306	0.03697	173.20	-0.9930	28.0601	0.03651		
140	174.16	-0.9948	32.9939	0.03287	174.18	-0.9949	33.2774	0.03254	174.21	-0.9949	33.5596	0.03221		
145	175.07	-0.9963	38.5108	0.02945	175.09	-0.9963	38.8431	0.02910	175.11	-0.9964	39.1795	0.02888		
150	175.90	-0.9974	43.9232	0.02684	175.91	-0.9975	44.3085	0.02657	175.93	-0.9975	44.6987	0.02630		
155	176.66	-0.9983	49.0078	0.02485	176.68	-0.9983	49.4432	0.02460	176.69	-0.9983	49.8842	0.02435		
160	177.38	-0.9990	53.5392	0.02336	177.39	-0.9990	54.0194	0.02312	177.41	-0.9990	54.5059	0.02288		
165	178.07	-0.9994	57.3092	0.02228	178.07	-0.9994	57.8268	0.02205	178.08	-0.9994	58.3512	0.02182		
170	178.72	-0.9998	60.1398	0.02154	178.73	-0.9998	60.6556	0.02132	178.74	-0.9998	61.2385	0.02110		
175	179.37	-0.9999	61.8951	0.02111	179.37	-0.9999	62.4584	0.02090	179.37	-0.9999	63.0290	0.02058		
180	180.00	-1.0000	62.4899	0.02097	180.00	-1.0000	63.0591	0.02075	180.00	-1.0000	63.6358	0.02054		

2 x = 0.766					2 x = 0.767					2 x = 0.768				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2844	4.59064	0.00	1.0000	0.2842	4.58745	0.00	1.0000	0.2840	4.58426		
5	9.37	0.9866	0.2854	4.56012	9.38	0.9866	0.2853	4.55693	9.38	0.9866	0.2851	4.55374		
10	18.74	0.9470	0.2887	4.46947	18.75	0.9469	0.2885	4.46628	18.75	0.9469	0.2883	4.46309		
15	28.09	0.8822	0.2942	4.32142	28.10	0.8821	0.2941	4.31824	28.11	0.8820	0.2939	4.31507		
20	37.42	0.7942	0.3023	4.12041	37.43	0.7941	0.3021	4.11724	37.44	0.7940	0.3019	4.11407		
25	46.71	0.6857	0.3132	3.87244	46.72	0.6855	0.3130	3.86929	46.74	0.6853	0.3128	3.86614		
30	55.95	0.5599	0.3274	3.58493	55.97	0.5596	0.3272	3.58180	55.99	0.5594	0.3271	3.57867		
35	65.13	0.4205	0.3457	3.26644	65.15	0.4202	0.3455	3.26332	65.18	0.4198	0.3453	3.26022		
40	74.23	0.2717	0.3688	2.92637	74.26	0.2713	0.3686	2.92329	74.29	0.2709	0.3684	2.92021		
45	83.23	0.1178	0.3983	2.57472	83.26	0.1173	0.3981	2.57158	83.29	0.1168	0.3979	2.56864		
50	92.10	-0.0367	0.4360	2.22166	92.14	-0.0373	0.4358	2.21867	92.17	-0.0379	0.4356	2.21568		
55	100.80	-0.1874	0.4848	1.87721	100.84	-0.1881	0.4846	1.87426	100.88	-0.1887	0.4844	1.87135		
60	109.28	-0.3303	0.5491	1.55079	109.33	-0.3310	0.5489	1.54784	109.37	-0.3317	0.5487	1.54491		
65	117.49	-0.4615	0.6356	1.25078	117.54	-0.4623	0.6354	1.24804	117.58	-0.4631	0.6353	1.24531		
70	125.33	-0.5783	0.7547	0.98404	125.38	-0.5790	0.7547	0.98144	125.44	-0.5798	0.7546	0.97885		
75	132.71	-0.6783	0.9231	0.75537	132.77	-0.6791	0.9234	0.75295	132.83	-0.6799	0.9236	0.75053		
80	139.53	-0.7608	1.1675	0.56599	139.60	-0.7615	1.1683	0.56478	139.66	-0.7622	1.1691	0.56257		
85	145.68	-0.8259	1.5237	0.41821	145.74	-0.8265	1.5307	0.41524	145.81	-0.8272	1.5328	0.41249		
90	151.07	-0.8752	2.0672	0.30548	151.14	-0.8758	2.0717	0.30378	151.21	-0.8764	2.0761	0.30208		
95	155.68	-0.9112	2.8650	0.22314	155.74	-0.9117	2.8739	0.22170	155.81	-0.9122	2.8828	0.22027		
100	159.53	-0.9369	4.0218	0.16459	159.60	-0.9373	4.0382	0.16340	159.66	-0.9376	4.0548	0.16221		
105	162.71	-0.9548	5.6444	0.12354	162.77	-0.9551	5.6728	0.12256	162.83	-0.9554	5.7015	0.12159		
110	165.33	-0.9674	7.8310	0.09483	165.38	-0.9676	7.8771	0.09403	165.44	-0.9679	7.9236	0.09323		
115	167.49	-0.9762	10.6551	0.07461	167.54	-0.9764	10.7253	0.07394	167.58	-0.9766	10.7966	0.07328		
120	169.28	-0.9826	14.1514	0.06018	169.33	-0.9827	14.2530	0.05952	169.37	-0.9828	14.3558	0.05905		
125	170.80	-0.9871	18.3076	0.04971	170.84	-0.9872	18.4476	0.04924	170.88	-0.9874	18.5893	0.04876		
130	172.10	-0.9905	23.0596	0.04200	172.14	-0.9906	23.2445	0.04159	172.17	-0.9907	23.4318	0.04119		
135	173.23	-0.9930	28.2924	0.03624	173.26	-0.9931	28.5277	0.03580	173.29	-0.9932	28.7660	0.03553		
140	174.23	-0.9949	33.8453	0.03189	174.26	-0.9950	34.1347	0.03157	174.29	-0.9950	34.4278	0.03125		
145	175.13	-0.9964	39.5203	0.02857	175.15	-0.9964	39.8655	0.02828	175.18	-0.9965	40.2151	0.02799		
150	175.95	-0.9975	45.0939	0.02603	175.97	-0.9975	45.4943	0.02576	175.99	-0.9975	45.8999	0.02550		
155	176.71	-0.9984	50.3309	0.02410	176.72	-0.9984	50.7834							

2 x = 0.769					2 x = 0.770					2 x = 0.771				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2839	4.58108	0.00	1.0000	0.2837	4.57791	0.00	1.0000	0.2835	4.57475		
5	9.38	0.9866	0.2849	4.55057	9.39	0.9866	0.2848	4.54740	9.39	0.9866	0.2846	4.54424		
10	18.76	0.9469	0.2882	4.45993	18.76	0.9468	0.2880	4.45677	18.77	0.9468	0.2878	4.45361		
15	28.12	0.8820	0.2937	4.31190	28.13	0.8819	0.2935	4.30875	28.14	0.8818	0.2934	4.30559		
20	37.45	0.7939	0.3018	4.11092	37.46	0.7937	0.3016	4.10777	37.48	0.7936	0.3014	4.10463		
25	46.75	0.6851	0.3127	3.86300	46.77	0.6850	0.3125	3.85986	46.78	0.6848	0.3123	3.85673		
30	56.01	0.5591	0.3269	3.57554	56.02	0.5588	0.3267	3.57243	56.04	0.5586	0.3265	3.56932		
35	65.20	0.4195	0.3451	3.25712	65.22	0.4191	0.3449	3.25402	65.24	0.4188	0.3447	3.25094		
40	74.31	0.2704	0.3682	2.91714	74.34	0.2700	0.3680	2.91408	74.36	0.2698	0.3678	2.91102		
45	83.32	0.1163	0.3976	2.56561	83.35	0.1158	0.3974	2.56258	83.38	0.1153	0.3972	2.55957		
50	92.20	-0.0384	0.4353	2.21270	92.24	-0.0390	0.4351	2.20973	92.27	-0.0396	0.4349	2.20676		
55	100.92	-0.1894	0.4842	1.86844	100.96	-0.1901	0.4840	1.86553	100.99	-0.1907	0.4838	1.86263		
60	109.41	-0.3324	0.5485	1.54227	109.46	-0.3331	0.5484	1.53944	109.50	-0.3338	0.5482	1.53662		
65	117.63	-0.4638	0.6351	1.24259	117.68	-0.4646	0.6350	1.23986	117.73	-0.4653	0.6349	1.23715		
70	125.49	-0.5806	0.7546	0.97626	125.55	-0.5814	0.7546	0.97368	125.60	-0.5821	0.7546	0.97110		
75	132.89	-0.6806	0.9239	0.74811	132.95	-0.6814	0.9242	0.74570	133.01	-0.6821	0.9244	0.74330		
80	139.72	-0.7629	1.1700	0.56037	139.79	-0.7637	1.1708	0.55817	139.85	-0.7644	1.1717	0.55597		
85	145.88	-0.8278	1.5349	0.41232	145.95	-0.8285	1.5369	0.41036	146.01	-0.8292	1.5390	0.40841		
90	151.27	-0.8769	2.0806	0.30039	151.34	-0.8775	2.0851	0.29870	151.41	-0.8781	2.0897	0.29702		
95	155.88	-0.9127	2.8918	0.21884	155.95	-0.9132	2.9008	0.21742	156.01	-0.9136	2.9100	0.21600		
100	159.72	-0.9380	4.0715	0.16103	159.79	-0.9384	4.0884	0.15985	159.85	-0.9388	4.1054	0.15867		
105	162.89	-0.9558	5.7305	0.12062	162.95	-0.9561	5.7597	0.11965	163.01	-0.9564	5.7893	0.11869		
110	165.49	-0.9681	7.9706	0.09243	165.55	-0.9683	8.0182	0.09163	165.60	-0.9686	8.0663	0.09084		
115	167.63	-0.9768	10.8682	0.07262	167.68	-0.9770	10.9409	0.07196	167.73	-0.9772	11.0145	0.07131		
120	169.41	-0.9830	14.4598	0.05851	169.46	-0.9831	14.5651	0.05796	169.50	-0.9833	14.6716	0.05741		
125	170.92	-0.9875	18.7328	0.04829	170.96	-0.9876	18.8780	0.04783	170.99	-0.9877	19.0251	0.04736		
130	172.20	-0.9908	23.6214	0.04078	172.24	-0.9908	23.8134	0.04038	172.27	-0.9909	24.0079	0.03998		
135	173.32	-0.9932	29.0073	0.03517	173.35	-0.9933	29.2517	0.03482	173.38	-0.9933	29.4992	0.03447		
140	174.31	-0.9951	34.7246	0.03093	174.34	-0.9951	35.0254	0.03062	174.36	-0.9952	35.3300	0.03031		
145	175.20	-0.9965	40.5693	0.02770	175.22	-0.9965	40.9282	0.02742	175.24	-0.9966	41.2917	0.02714		
150	176.01	-0.9976	46.3109	0.02524	176.02	-0.9976	46.7272	0.02498	176.04	-0.9976	47.1490	0.02472		
155	176.75	-0.9984	51.7064	0.02336	176.77	-0.9984	52.1771	0.02312	176.78	-0.9984	52.6540	0.02287		
160	177.45	-0.9990	56.5161	0.02195	177.46	-0.9990	57.0354	0.02172	177.48	-0.9990	57.5816	0.02149		
165	178.12	-0.9995	60.5183	0.02093	178.13	-0.9995	61.0782	0.02071	178.14	-0.9995	61.6455	0.02049		
170	178.76	-0.9998	63.5237	0.02023	178.76	-0.9998	64.1141	0.02002	178.77	-0.9998	64.7124	0.01981		
175	179.38	-0.9999	65.3876	0.01983	179.39	-0.9999	65.9970	0.01962	179.39	-0.9999	66.6145	0.01941		
180	180.00	-1.0000	66.0192	0.01970	180.00	-1.0000	66.6350	0.01949	180.00	-1.0000	67.2591	0.01928		

2 x = 0.772					2 x = 0.773					2 x = 0.774				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2833	4.57159	0.00	1.0000	0.2832	4.56845	0.00	1.0000	0.2830	4.56530		
5	9.39	0.9866	0.2844	4.54108	9.39	0.9866	0.2842	4.53793	9.40	0.9866	0.2841	4.53479		
10	18.78	0.9468	0.2876	4.45046	18.78	0.9468	0.2875	4.44732	18.79	0.9467	0.2873	4.44418		
15	28.14	0.8818	0.2932	4.30245	28.15	0.8817	0.2930	4.29931	28.16	0.8816	0.2928	4.29618		
20	37.49	0.7935	0.3012	4.10150	37.50	0.7934	0.3010	4.09837	37.51	0.7932	0.3009	4.09525		
25	46.80	0.6846	0.3121	3.85361	46.81	0.6844	0.3119	3.85050	46.83	0.6842	0.3117	3.84739		
30	56.06	0.5583	0.3263	3.56621	56.08	0.5581	0.3261	3.56312	56.10	0.5578	0.3259	3.56003		
35	65.26	0.4185	0.3445	3.24786	65.28	0.4181	0.3443	3.24478	65.31	0.4178	0.3441	3.24172		
40	74.39	0.2691	0.3676	2.90797	74.41	0.2687	0.3674	2.90493	74.44	0.2683	0.3672	2.90189		
45	83.41	0.1148	0.3970	2.55655	83.44	0.1142	0.3968	2.55355	83.47	0.1137	0.3966	2.55055		
50	92.30	-0.0402	0.4347	2.20380	92.34	-0.0408	0.4345	2.20084	92.37	-0.0414	0.4343	2.19789		
55	101.03	-0.1914	0.4836	1.85973	101.07	-0.1920	0.4833	1.85684	101.11	-0.1927	0.4831	1.85395		
60	109.55	-0.3346	0.5480	1.53380	109.59	-0.3353	0.5478	1.53099	109.63	-0.3360	0.5476	1.52819		
65	117.78	-0.4661	0.6347	1.23444	117.83	-0.4668	0.6346	1.23173	117.88	-0.4676	0.6344	1.22903		
70	125.65	-0.5829	0.7546	0.96852	125.71	-0.5837	0.7545	0.96596	125.76	-0.5844	0.7545	0.96339		
75	133.07	-0.6829	0.9247	0.74089	133.13	-0.6837	0.9246	0.73850	133.19	-0.6844	0.9252	0.73610		
80	139.92	-0.7651	1.1725	0.55378	139.98	-0.7658	1.1734	0.55160	140.04	-0.7665	1.1742	0.54941		
85	146.08	-0.8298	1.5411	0.40647	146.15	-0.8305	1.5432	0.40453	146.21	-0.8311	1.5453	0.40259		
90	151.48	-0.8786	2.0943	0.29534	151.55	-0.8792	2.0989	0.29366	151.61	-0.8798	2.1035	0.29199		
95	156.08	-0.9141	2.9192	0.21459	156.15	-0.9146	2.9284	0.21318	156.21	-0.9151	2.9378	0.21177		
100	159.92	-0.9392	4.1225	0.15750	159.98	-0.9396	4.1399	0.15634	160.04	-0.9400	4.1574	0.15518		
105	163.07	-0.9567	5.8192	0.11773	163.13	-0.9570	5.8494	0.11677	163.19	-0.9573	5.8798	0.11582		
110	165.65	-0.9688	8.1149	0.09006	165.71	-0.9691	8.1640	0.08928	165.76	-0.9693	8.2138	0.08850		
115	167.78	-0.9773	11.0889	0.07066	167.83	-0.9775	11.1642	0.07001	167.88	-0.9777	11.2404	0.06937		
120	169.55	-0.9834	14.7795	0.05687	169.59	-0.9835	14.8886	0.05633	169.63	-0.9837	14.9992	0.05579		
125	171.03	-0.9878	19.1740	0.04690	171.07	-0.9879	19.3248	0.04644	171.11	-0.9880	19.4774	0.04599		
130	172.30	-0.9910	24.2048	0.03958	172.34	-0.9911	24.4043	0.03919	172.37	-0.9912	24.6063	0.03879		
135	173.41	-0.9934	29.7500	0.03412	173.44	-0.9935	30.0040	0.03377	173.47	-0.9935	30.2614	0.03343		
140	174.39	-0.9952	35.6386	0.02999	174.41	-0.9952	35.9513	0.02969	174.44	-0.9953	36.2681	0.02938		
145	175.26	-0.9966	41.6600	0.02686	175.28	-0.9966	42.0333	0.02658	175.31	-0.9966	42.4114	0.02630		
150	176.06	-0.9976	47.5764	0.02446	176.08	-0.9977	48.0095	0.02420	176.10	-0.9977	48.4485	0.02395		
155	176.80	-0.9984	53.1372	0.02263	176.81	-0.9985	53.6269	0.02240	176.83	-0.9985	54.1232	0.02216		
160	177.49	-0.999												

2 x = 0.775					2 x = 0.776					2 x = 0.777				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2828	4.56217	0.00	1.0000	0.2827	4.55904	0.00	1.0000	0.2825	4.55592		
5	9.40	0.9866	0.2839	4.53156	9.40	0.9866	0.2837	4.52854	9.41	0.9866	0.2836	4.52542		
10	18.79	0.9467	0.2871	4.44105	18.80	0.9467	0.2870	4.43793	18.80	0.9466	0.2868	4.43481		
15	28.17	0.8815	0.2927	4.29306	28.18	0.8815	0.2925	4.28995	28.19	0.8814	0.2923	4.28684		
20	37.52	0.7931	0.3007	4.09214	37.54	0.7930	0.3005	4.08903	37.55	0.7929	0.3003	4.08593		
25	46.84	0.6840	0.3116	3.84429	46.86	0.6839	0.3114	3.84120	46.87	0.6836	0.3112	3.83812		
30	56.11	0.5575	0.3257	3.55695	56.13	0.5573	0.3255	3.55387	56.15	0.5570	0.3254	3.55080		
35	65.33	0.4174	0.3439	3.23866	65.35	0.4171	0.3437	3.23561	65.37	0.4167	0.3435	3.23256		
40	74.46	0.2679	0.3670	2.89983	74.49	0.2674	0.3668	2.89584	74.51	0.2670	0.3666	2.89282		
45	83.50	0.1132	0.3964	2.54756	83.53	0.1127	0.3962	2.54457	83.56	0.1122	0.3960	2.54159		
50	92.41	-0.0420	0.4341	2.19495	92.44	-0.0426	0.4339	2.19201	92.47	-0.0432	0.4336	2.18908		
55	101.15	-0.1933	0.4829	1.85107	101.19	-0.1940	0.4827	1.84819	101.23	-0.1947	0.4825	1.84532		
60	109.68	-0.3367	0.5474	1.52539	109.72	-0.3374	0.5472	1.52259	109.76	-0.3381	0.5470	1.51980		
65	117.93	-0.4683	0.6343	1.22634	117.98	-0.4691	0.6342	1.22365	118.02	-0.4698	0.6340	1.22096		
70	125.82	-0.5852	0.7545	0.96083	125.87	-0.5860	0.7545	0.95828	125.93	-0.5867	0.7545	0.95573		
75	133.25	-0.6852	0.9254	0.73372	133.31	-0.6859	0.9257	0.73133	133.37	-0.6867	0.9259	0.72895		
80	140.11	-0.7673	1.1751	0.54724	140.17	-0.7680	1.1760	0.54506	140.24	-0.7687	1.1768	0.54289		
85	146.28	-0.8318	1.5475	0.40066	146.35	-0.8324	1.5496	0.39873	146.42	-0.8331	1.5518	0.39680		
90	151.68	-0.8803	2.1082	0.29032	151.75	-0.8809	2.1129	0.28866	151.82	-0.8815	2.1176	0.28700		
95	156.28	-0.9155	2.9472	0.21037	156.35	-0.9160	2.9567	0.20897	156.42	-0.9165	2.9663	0.20758		
100	160.11	-0.9403	4.1750	0.15402	160.17	-0.9407	4.1929	0.15287	160.24	-0.9411	4.2109	0.15172		
105	163.25	-0.9576	5.9107	0.11488	163.31	-0.9579	5.9419	0.11393	163.37	-0.9582	5.9733	0.11300		
110	165.82	-0.9695	8.2640	0.08772	165.87	-0.9698	8.3149	0.08695	165.93	-0.9700	8.3663	0.08619		
115	167.93	-0.9779	11.3175	0.06873	167.98	-0.9781	11.3956	0.06809	168.02	-0.9782	11.4745	0.06746		
120	169.68	-0.9838	15.1110	0.05526	169.72	-0.9839	15.2243	0.05473	169.76	-0.9841	15.3390	0.05420		
125	171.15	-0.9881	19.6320	0.04553	171.19	-0.9882	19.7886	0.04508	171.23	-0.9883	19.9472	0.04464		
130	172.41	-0.9912	24.8109	0.03840	172.44	-0.9913	25.0182	0.03801	172.47	-0.9914	25.2282	0.03763		
135	173.50	-0.9936	30.5221	0.03309	173.53	-0.9936	30.7862	0.03275	173.56	-0.9937	31.0539	0.03241		
140	174.46	-0.9953	36.5891	0.02903	174.49	-0.9954	36.9144	0.02877	174.51	-0.9954	37.2440	0.02847		
145	175.33	-0.9967	42.7947	0.02603	175.35	-0.9967	43.1830	0.02575	175.37	-0.9967	43.5767	0.02548		
150	176.11	-0.9977	48.8933	0.02370	176.13	-0.9977	49.3441	0.02345	176.15	-0.9977	49.8010	0.02320		
155	176.84	-0.9985	54.6262	0.02193	176.86	-0.9985	55.1360	0.02169	176.87	-0.9985	55.6528	0.02146		
160	177.52	-0.9991	59.7390	0.02050	177.54	-0.9991	60.3006	0.02028	177.55	-0.9991	60.8710	0.02015		
165	178.17	-0.9995	63.9923	0.01933	178.18	-0.9995	64.5990	0.01912	178.19	-0.9995	65.2141	0.01921		
170	178.79	-0.9998	67.1874	0.01838	178.80	-0.9998	67.8273	0.01818	178.80	-0.9998	68.4760	0.01857		
175	179.40	-0.9999	69.1691	0.01760	179.40	-0.9999	69.8296	0.01840	179.41	-0.9999	70.4992	0.01820		
180	180.00	-1.0000	69.8406	0.01648	180.00	-1.0000	70.5082	0.01828	180.00	-1.0000	71.1849	0.01808		

2 x = 0.778					2 x = 0.779					2 x = 0.780				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2823	4.55281	0.00	1.0000	0.2821	4.54970	0.00	1.0000	0.2820	4.54661		
5	9.41	0.9865	0.2834	4.52230	9.41	0.9865	0.2832	4.51920	9.41	0.9865	0.2830	4.51610		
10	18.81	0.9466	0.2866	4.43171	18.82	0.9466	0.2864	4.42861	18.82	0.9465	0.2863	4.42551		
15	28.20	0.8813	0.2921	4.29374	28.21	0.8813	0.2920	4.28054	28.21	0.8812	0.2918	4.27755		
20	37.56	0.7927	0.3001	4.08284	37.57	0.7926	0.3000	4.07975	37.58	0.7925	0.2998	4.07668		
25	46.89	0.6834	0.3110	3.83504	46.90	0.6833	0.3108	3.83197	46.92	0.6831	0.3106	3.82890		
30	56.17	0.5567	0.3252	3.54774	56.19	0.5565	0.3250	3.54469	56.21	0.5562	0.3248	3.54164		
35	65.39	0.4164	0.3433	3.22952	65.41	0.4161	0.3431	3.22649	65.44	0.4157	0.3429	3.22346		
40	74.54	0.2666	0.3664	2.88931	74.56	0.2662	0.3662	2.88621	74.59	0.2657	0.3660	2.88314		
45	83.59	0.1117	0.3958	2.53862	83.62	0.1112	0.3956	2.53555	83.65	0.1107	0.3954	2.53259		
50	92.51	-0.0437	0.4334	2.18615	92.54	-0.0443	0.4332	2.18323	92.57	-0.0449	0.4330	2.18032		
55	101.26	-0.1953	0.4823	1.84246	101.30	-0.1960	0.4821	1.83950	101.34	-0.1966	0.4819	1.83675		
60	109.81	-0.3388	0.5468	1.51702	109.85	-0.3396	0.5466	1.51424	109.89	-0.3403	0.5464	1.51147		
65	118.07	-0.4706	0.6339	1.21628	118.12	-0.4714	0.6337	1.21351	118.17	-0.4721	0.6336	1.21074		
70	125.98	-0.5875	0.7544	0.95318	126.04	-0.5883	0.7544	0.95064	126.09	-0.5891	0.7544	0.94810		
75	133.43	-0.6874	0.9262	0.72658	133.49	-0.6882	0.9265	0.72421	133.55	-0.6890	0.9267	0.72184		
80	140.30	-0.7694	1.1777	0.54073	140.37	-0.7701	1.1786	0.53857	140.43	-0.7709	1.1794	0.53641		
85	146.48	-0.8337	1.5539	0.39488	146.55	-0.8344	1.5561	0.39297	146.62	-0.8350	1.5583	0.39106		
90	151.89	-0.8820	2.1224	0.28535	151.96	-0.8826	2.1272	0.28370	152.03	-0.8832	2.1320	0.28205		
95	156.48	-0.9170	2.9759	0.20619	156.55	-0.9174	2.9857	0.20481	156.62	-0.9179	2.9955	0.20343		
100	160.30	-0.9415	4.2291	0.15058	160.37	-0.9419	4.2474	0.14944	160.43	-0.9422	4.2659	0.14831		
105	163.43	-0.9585	6.0052	0.11206	163.49	-0.9588	6.0373	0.11113	163.55	-0.9591	6.0698	0.11021		
110	165.98	-0.9702	8.4184	0.08542	166.04	-0.9704	8.4710	0.08466	166.09	-0.9707	8.5242	0.08391		
115	168.07	-0.9784	11.5544	0.06683	168.12	-0.9786	11.6353	0.06621	168.17	-0.9788	11.7172	0.06559		
120	169.81	-0.9842	15.4551	0.05357	169.85	-0.9844	15.5727	0.05315	169.89	-0.9845	15.6918	0.05263		
125	171.26	-0.9884	20.1078	0.04419	171.30	-0.9885	20.2705	0.04375	171.34	-0.9886	20.4353	0.04331		
130	172.51	-0.9915	25.4410	0.03724	172.54	-0.9915	25.6566	0.03686	172.57	-0.9916	25.8750	0.03649		
135	173.59	-0.9937	31.3251	0.03207	173.62	-0.9938	31.5999	0.03174	173.65	-0.9939	31.8784	0.03141		
140	174.54	-0.9955	37.5796	0.02818	174.56	-0.9955	37.9166	0.02788	174.59	-0.9955	38.2598	0.02759		
145	175.39	-0.9968	43.9766	0.02521	175.41	-0.9968	44.3800	0.02494	175.44	-0.9968	44.7899	0.02468		
150	176.17	-0.9975	50.2642	0.02295	176.19	-0.9976	50.7337	0.02271	176.21	-0.9976	51.2096	0.02246		
155	176.89	-0.9985	56.1767	0.02123	176.90	-0.9985	56.7077	0.02100	176.92	-0.9986	57.246			

$x = 0.781$					$x = 0.782$					$x = 0.783$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	S^2
0	0.00	1.0000	0.2818	4.54351	0.00	1.0000	0.2816	4.54043	0.00	1.0000	0.2815	4.53735	0.00	1.0000
5	9.42	0.9865	0.2829	4.51301	9.42	0.9865	0.2827	4.50993	9.42	0.9865	0.2825	4.50685	9.42	0.9865
10	18.83	0.9465	0.2861	4.42242	18.83	0.9465	0.2859	4.41934	18.84	0.9464	0.2858	4.41627	18.84	0.9464
15	28.22	0.8811	0.2916	4.27447	28.23	0.8810	0.2914	4.27140	28.24	0.8810	0.2913	4.26833	28.24	0.8810
20	37.59	0.7924	0.2996	4.07361	37.60	0.7922	0.2994	4.07054	37.62	0.7921	0.2993	4.06748	37.62	0.7921
25	46.93	0.6829	0.3105	3.82594	46.95	0.6827	0.3103	3.82279	46.96	0.6825	0.3101	3.81975	46.96	0.6825
30	56.22	0.5560	0.3246	3.53860	56.24	0.5557	0.3244	3.53556	56.26	0.5554	0.3242	3.53254	56.26	0.5554
35	65.46	0.4154	0.3427	3.22044	65.48	0.4150	0.3425	3.21743	65.50	0.4147	0.3423	3.21442	65.50	0.4147
40	74.61	0.2653	0.3658	2.88032	74.64	0.2649	0.3656	2.87784	74.67	0.2645	0.3654	2.87486	74.67	0.2645
45	83.67	0.1102	0.3951	2.52974	83.70	0.1097	0.3949	2.52679	83.73	0.1092	0.3947	2.52384	83.73	0.1092
50	92.61	-0.0455	0.4328	2.17741	92.64	-0.0461	0.4326	2.17461	92.68	-0.0467	0.4324	2.17161	92.68	-0.0467
55	101.38	-0.1973	0.4817	1.83390	101.42	-0.1980	0.4815	1.83106	101.46	-0.1986	0.4813	1.82823	101.46	-0.1986
60	109.94	-0.3410	0.5462	1.50870	109.98	-0.3417	0.5460	1.50594	110.02	-0.3424	0.5458	1.50318	110.02	-0.3424
65	118.22	-0.4729	0.6334	1.21027	118.27	-0.4736	0.6333	1.20761	118.32	-0.4744	0.6332	1.20496	118.32	-0.4744
70	126.14	-0.5898	0.7544	0.94557	126.20	-0.5906	0.7544	0.94305	126.25	-0.5914	0.7543	0.94053	126.25	-0.5914
75	133.61	-0.6897	0.9270	0.71948	133.67	-0.6905	0.9272	0.71712	133.73	-0.6912	0.9275	0.71477	133.73	-0.6912
80	140.50	-0.7716	1.1803	0.53426	140.56	-0.7723	1.1812	0.53211	140.63	-0.7730	1.1821	0.52997	140.63	-0.7730
85	146.69	-0.8357	1.5605	0.38915	146.76	-0.8363	1.5627	0.38724	146.82	-0.8370	1.5649	0.38534	146.82	-0.8370
90	152.10	-0.8837	2.1369	0.28041	152.17	-0.8849	2.1418	0.27877	152.24	-0.8869	2.1467	0.27714	152.24	-0.8869
95	156.69	-0.9184	3.0054	0.20206	156.76	-0.9188	3.0154	0.20068	156.82	-0.9193	3.0255	0.19932	156.82	-0.9193
100	160.50	-0.9426	4.2847	0.14717	160.56	-0.9430	4.3035	0.14605	160.63	-0.9434	4.3226	0.14493	160.63	-0.9434
105	163.61	-0.9594	6.1027	0.10929	163.67	-0.9597	6.1359	0.10837	163.73	-0.9599	6.1695	0.10746	163.73	-0.9599
110	166.14	-0.9709	8.5781	0.08316	166.20	-0.9711	8.6326	0.08241	166.25	-0.9714	8.6877	0.08166	166.25	-0.9714
115	168.22	-0.9789	11.8001	0.06497	168.27	-0.9791	11.8840	0.06435	168.32	-0.9793	11.9690	0.06374	168.32	-0.9793
120	169.94	-0.9846	15.8124	0.05212	169.98	-0.9848	15.9345	0.05160	170.02	-0.9849	16.0582	0.05110	170.02	-0.9849
125	171.38	-0.9887	20.6023	0.04288	171.42	-0.9888	20.7715	0.04244	171.46	-0.9889	20.9428	0.04201	171.46	-0.9889
130	172.61	-0.9917	26.0963	0.03611	172.64	-0.9918	26.3706	0.03574	172.68	-0.9918	26.5479	0.03537	172.68	-0.9918
135	173.67	-0.9939	32.1607	0.03108	173.70	-0.9940	32.4468	0.03076	173.73	-0.9940	32.7367	0.03043	173.73	-0.9940
140	174.61	-0.9956	38.6076	0.02729	174.64	-0.9956	38.9602	0.02700	174.67	-0.9957	39.3176	0.02672	174.67	-0.9957
145	175.46	-0.9969	45.2054	0.02442	175.48	-0.9969	45.6266	0.02415	175.50	-0.9969	46.0537	0.02389	175.50	-0.9969
150	176.22	-0.9978	51.6921	0.02222	176.24	-0.9978	52.1814	0.02198	176.26	-0.9979	52.6774	0.02174	176.26	-0.9979
155	176.93	-0.9986	57.7920	0.02055	176.95	-0.9986	58.3454	0.02033	176.96	-0.9986	58.9066	0.02011	176.96	-0.9986
160	177.59	-0.9991	63.2321	0.01930	177.60	-0.9991	63.8431	0.01909	177.62	-0.9991	64.4627	0.01988	177.62	-0.9991
165	178.22	-0.9995	67.7606	0.01840	178.23	-0.9995	68.4196	0.01819	178.24	-0.9995	69.0878	0.01798	178.24	-0.9995
170	178.83	-0.9998	71.1620	0.01778	178.83	-0.9998	71.8571	0.01758	178.84	-0.9998	72.5621	0.01739	178.84	-0.9998
175	179.42	-0.9999	73.2719	0.01742	179.42	-0.9999	73.9894	0.01723	179.42	-0.9999	74.7171	0.01704	179.42	-0.9999
180	180.00	-1.0000	73.9869	0.01731	180.00	-1.0000	74.7120	0.01712	180.00	-1.0000	75.4475	0.01693	180.00	-1.0000

2 x = 0.784					2 x = 0.785					2 x = 0.786				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2813	4.53428	0.00	1.0000	0.2811	4.53122	0.00	1.0000	0.2810	4.52816		
5	9.43	0.9865	0.2824	4.50378	9.43	0.9865	0.2822	4.50072	9.43	0.9865	0.2820	4.49766		
10	18.84	0.9464	0.2856	4.41321	18.85	0.9464	0.2854	4.41015	18.86	0.9463	0.2852	4.40709		
15	28.25	0.8809	0.2911	4.26527	28.26	0.8808	0.2909	4.26222	28.27	0.8808	0.2907	4.25918		
20	37.63	0.7920	0.2991	4.06443	37.64	0.7919	0.2989	4.06139	37.65	0.7917	0.2987	4.05835		
25	46.98	0.6823	0.3099	3.81671	46.99	0.6821	0.3097	3.81358	47.00	0.6819	0.3095	3.81065		
30	56.28	0.5552	0.3240	3.52951	56.30	0.5549	0.3239	3.52650	56.31	0.5546	0.3237	3.52349		
35	65.52	0.4143	0.3421	3.21142	65.54	0.4140	0.3420	3.20843	65.56	0.4137	0.3418	3.20544		
40	74.69	0.2640	0.3652	2.87188	74.72	0.2636	0.3650	2.86892	74.74	0.2632	0.3648	2.86596		
45	83.76	0.1086	0.3945	2.52091	83.79	0.1081	0.3943	2.51798	83.82	0.1076	0.3941	2.51505		
50	92.71	-0.0473	0.4322	2.16872	92.74	-0.0479	0.4320	2.16594	92.78	-0.0485	0.4317	2.16298		
55	101.49	-0.1993	0.4810	1.82540	101.53	-0.1999	0.4808	1.82257	101.57	-0.2006	0.4806	1.81975		
60	110.07	-0.3431	0.5457	1.50943	110.11	-0.3439	0.5455	1.50659	110.16	-0.3446	0.5453	1.50374		
65	118.37	-0.4751	0.6330	1.20291	118.42	-0.4759	0.6329	1.19967	118.47	-0.4766	0.6327	1.19703		
70	126.31	-0.5921	0.7543	0.93801	126.36	-0.5929	0.7543	0.93549	126.42	-0.5937	0.7543	0.93299		
75	133.79	-0.6920	0.9278	0.71242	133.85	-0.6928	0.9280	0.71008	133.91	-0.6935	0.9283	0.70774		
80	140.69	-0.7737	1.1830	0.52783	140.76	-0.7745	1.1839	0.52569	140.82	-0.7752	1.1848	0.52356		
85	146.89	-0.8377	1.5671	0.38345	146.96	-0.8383	1.5694	0.38156	147.03	-0.8390	1.5716	0.37967		
90	152.31	-0.8854	2.1517	0.27551	152.38	-0.8860	2.1567	0.27388	152.44	-0.8866	2.1617	0.27226		
95	156.89	-0.9198	3.0356	0.19795	156.96	-0.9202	3.0459	0.19660	157.03	-0.9207	3.0562	0.19524		
100	160.69	-0.9437	4.3419	0.14381	160.76	-0.9441	4.3614	0.14269	160.82	-0.9445	4.3810	0.14158		
105	163.79	-0.9602	6.2035	0.10655	163.85	-0.9605	6.2378	0.10564	163.91	-0.9608	6.2725	0.10474		
110	166.31	-0.9716	8.7435	0.08092	166.36	-0.9718	8.8000	0.08019	166.42	-0.9720	8.8571	0.07945		
115	168.37	-0.9795	12.0550	0.06313	168.42	-0.9796	12.1421	0.06253	168.47	-0.9798	12.2303	0.06193		
120	170.07	-0.9850	16.1835	0.05059	170.11	-0.9851	16.3104	0.05009	170.16	-0.9853	16.4390	0.04959		
125	171.49	-0.9890	21.1165	0.04158	171.53	-0.9891	21.2925	0.04116	171.57	-0.9892	21.4708	0.04074		
130	172.71	-0.9919	26.7782	0.03500	172.74	-0.9920	27.0117	0.03463	172.78	-0.9921	27.2483	0.03427		
135	173.76	-0.9941	33.0307	0.03011	173.79	-0.9941	33.3287	0.02979	173.82	-0.9942	33.6308	0.02947		
140	174.69	-0.9957	39.6800	0.02643	174.72	-0.9958	40.0474	0.02615	174.74	-0.9958	40.4199	0.02586		
145	175.52	-0.9969	46.4867	0.02364	175.54	-0.9970	46.9258	0.02338	175.56	-0.9970	47.3711	0.02313		
150	176.28	-0.9979	53.1804	0.02151	176.30	-0.9979	53.6904	0.02127	176.31	-0.9979	54.2077	0.02104		
155	176.98	-0.9986	59.4757	0.01989	176.99	-0.9986	60.0529	0.01967	177.00	-0.9986	60.6382	0.01945		
160	177.63	-0.9993	65.0910	0.01827	177.64	-0.9992	65.7189	0.01894	177.65	-0.9992	66.3744	0.01827		
165	178.25	-0.9995	69.7655	0.01700	178.26	-0.9995	70.4529	0.01760	178.27	-0.9995	71.1501	0.01740		
170	178.84	-0.9998	73.2770	0.01720	178.85	-0.9998	74.0021	0.01701	178.86	-0.9998	74.7375	0.01682		
175	179.43	-0.9999	75.4551	0.01685	179.43	-1.0000	76.2037	0.01667	179.43	-1.0000	76.9629	0.01648		
180	180.00	-1.0000	76.1933	0.01674	180.00	-1.0000	76.9498	0.01655	180.00	-1.0000	77.7171	0.01637		

$\frac{2}{x} = 0.787$
 $\frac{2}{x} = 0.789$
 $\frac{2}{x} = 0.789$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2808	4.52511	0.00	1.0000	0.2806	4.52206	0.00	1.0000	0.2805	4.51903
5	9.43	0.9865	0.2819	4.49451	9.44	0.9865	0.2817	4.49157	9.44	0.9865	0.2815	4.48854
10	18.86	0.9463	0.2851	4.40405	18.87	0.9463	0.2849	4.40101	18.87	0.9462	0.2847	4.39798
15	28.27	0.8807	0.2906	4.26514	28.28	0.8806	0.2904	4.26310	28.29	0.8806	0.2902	4.25008
20	37.66	0.7916	0.2986	4.05532	37.67	0.7915	0.2984	4.05230	37.69	0.7914	0.2982	4.04928
25	47.02	0.6816	0.3094	3.80733	47.03	0.6816	0.3092	3.80452	47.05	0.6814	0.3090	3.80162
30	56.33	0.5544	0.3235	3.52049	56.35	0.5541	0.3233	3.51749	56.37	0.5539	0.3231	3.51450
35	65.59	0.4133	0.3416	3.20246	65.61	0.4130	0.3414	3.19949	65.63	0.4126	0.3412	3.19652
40	74.77	0.2627	0.3646	2.86301	74.79	0.2623	0.3644	2.86006	74.82	0.2619	0.3642	2.85712
45	83.85	0.1071	0.3939	2.51214	83.88	0.1066	0.3937	2.50922	83.91	0.1061	0.3935	2.50632
50	92.81	-0.0490	0.4315	2.16009	92.84	-0.0496	0.4313	2.15722	92.88	-0.0502	0.4311	2.15436
55	101.61	-0.2012	0.4804	1.81694	101.65	-0.2019	0.4802	1.81413	101.69	-0.2026	0.4800	1.81133
60	110.20	-0.3453	0.5451	1.49221	110.24	-0.3460	0.5449	1.48948	110.29	-0.3467	0.5447	1.48675
65	118.52	-0.4774	0.6326	1.19439	118.56	-0.4781	0.6324	1.19176	118.61	-0.4789	0.6323	1.18914
70	126.47	-0.5944	0.7542	0.93048	126.53	-0.5952	0.7542	0.92798	126.58	-0.5960	0.7542	0.92549
75	133.97	-0.6943	0.9285	0.70540	134.03	-0.6950	0.9288	0.70307	134.09	-0.6958	0.9291	0.70074
80	140.89	-0.7759	1.1856	0.52143	140.95	-0.7766	1.1865	0.51931	141.02	-0.7773	1.1875	0.51719
85	147.10	-0.8396	1.5739	0.37779	147.17	-0.8403	1.5762	0.37591	147.24	-0.8409	1.5785	0.37403
90	152.51	-0.8871	2.1668	0.27065	152.58	-0.8877	2.1719	0.26903	152.65	-0.8883	2.1770	0.26743
95	157.10	-0.9212	3.0666	0.19389	157.17	-0.9216	3.0772	0.19255	157.24	-0.9221	3.0878	0.19121
100	160.89	-0.9449	4.4009	0.14048	160.95	-0.9452	4.4209	0.13938	161.02	-0.9456	4.4412	0.13828
105	163.97	-0.9611	6.3076	0.10384	164.03	-0.9614	6.3431	0.10295	164.09	-0.9617	6.3790	0.10206
110	166.47	-0.9723	8.9149	0.07872	166.53	-0.9725	8.9735	0.07800	166.58	-0.9727	9.0327	0.07727
115	168.52	-0.9800	12.3196	0.06133	168.56	-0.9801	12.4100	0.06073	168.61	-0.9803	12.5016	0.06014
120	170.20	-0.9854	16.3693	0.04909	170.24	-0.9855	16.7013	0.04859	170.29	-0.9857	16.8350	0.04810
125	171.61	-0.9893	21.6515	0.04032	171.65	-0.9894	21.8347	0.03990	171.69	-0.9895	22.0203	0.03948
130	172.81	-0.9921	27.4882	0.03391	172.84	-0.9922	27.7314	0.03355	172.88	-0.9923	28.0000	0.03320
135	173.85	-0.9942	33.9371	0.02916	173.88	-0.9943	34.2476	0.02885	173.91	-0.9944	34.5625	0.02853
140	174.77	-0.9958	40.7977	0.02559	174.79	-0.9959	41.1807	0.02531	174.82	-0.9959	41.5692	0.02503
145	175.59	-0.9970	47.8226	0.02287	175.61	-0.9971	48.2806	0.02262	175.63	-0.9971	48.7451	0.02237
150	176.33	-0.9980	54.7323	0.02081	176.35	-0.9980	55.2644	0.02058	176.37	-0.9980	55.8041	0.02035
155	177.02	-0.9986	61.2319	0.01924	177.03	-0.9987	61.8341	0.01902	177.05	-0.9987	62.4449	0.01881
160	177.66	-0.9992	67.0300	0.01806	177.67	-0.9992	67.6949	0.01786	177.69	-0.9992	68.3695	0.01766
165	178.27	-0.9995	71.8572	0.01721	178.28	-0.9995	72.5746	0.01702	178.29	-0.9995	73.3023	0.01683
170	178.86	-0.9998	75.4836	0.01663	178.87	-0.9998	76.2403	0.01645	178.87	-0.9998	77.0081	0.01626
175	179.43	-1.0000	77.7331	0.01630	179.44	-1.0000	78.5144	0.01611	179.44	-1.0000	79.3070	0.01593
180	180.00	-1.0000	78.4955	0.01610	180.00	-1.0000	79.2850	0.01601	180.00	-1.0000	80.0861	0.01583

 $\frac{2}{x} = 0.790$
 $\frac{2}{x} = 0.791$
 $\frac{2}{x} = 0.792$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2803	4.51600	0.00	1.0000	0.2801	4.51298	0.00	1.0000	0.2800	4.50996
5	9.44	0.9864	0.2814	4.48651	9.45	0.9864	0.2812	4.48349	9.45	0.9864	0.2810	4.48047
10	18.88	0.9462	0.2846	4.39495	18.88	0.9462	0.2844	4.39193	18.89	0.9461	0.2842	4.38892
15	28.30	0.8805	0.2901	4.24706	28.31	0.8804	0.2899	4.24405	28.32	0.8803	0.2897	4.24104
20	37.70	0.7912	0.2980	4.04627	37.71	0.7911	0.2979	4.04327	37.72	0.7910	0.2977	4.04027
25	47.06	0.6812	0.3088	3.79962	47.08	0.6810	0.3097	3.79563	47.09	0.6808	0.3085	3.79264
30	56.39	0.5536	0.3229	3.51152	56.40	0.5533	0.3227	3.50855	56.42	0.5531	0.3226	3.50558
35	65.65	0.4123	0.3410	3.19356	65.67	0.4120	0.3408	3.19050	65.69	0.4118	0.3406	3.18755
40	74.84	0.2615	0.3640	2.85418	74.87	0.2610	0.3636	2.85125	74.89	0.2606	0.3636	2.84833
45	83.94	0.1056	0.3933	2.50342	83.97	0.1051	0.3931	2.50052	84.00	0.1046	0.3929	2.49764
50	92.91	-0.0508	0.4309	2.15150	92.95	-0.0514	0.4307	2.14866	92.98	-0.0520	0.4305	2.14581
55	101.73	-0.2032	0.4798	1.80852	101.76	-0.2039	0.4796	1.80574	101.80	-0.2045	0.4794	1.80296
60	110.33	-0.3474	0.5445	1.48403	110.37	-0.3482	0.5443	1.48121	110.42	-0.3489	0.5441	1.47860
65	118.66	-0.4797	0.6321	1.18651	118.71	-0.4804	0.6320	1.18390	118.76	-0.4812	0.6319	1.18129
70	126.64	-0.5968	0.7542	0.92300	126.69	-0.5975	0.7542	0.92051	126.75	-0.5983	0.7541	0.91803
75	134.15	-0.6966	0.9293	0.69942	134.21	-0.6973	0.9296	0.69610	134.27	-0.6981	0.9299	0.69379
80	141.08	-0.7781	1.1884	0.51507	141.15	-0.7788	1.1893	0.51296	141.21	-0.7795	1.1902	0.51085
85	147.31	-0.8415	1.5808	0.37216	147.37	-0.8422	1.5831	0.37029	147.44	-0.8429	1.5854	0.36843
90	152.73	-0.8888	2.1822	0.26582	152.80	-0.8894	2.1874	0.26422	152.87	-0.8899	2.1926	0.26263
95	157.31	-0.9226	3.0985	0.18987	157.37	-0.9230	3.1093	0.18853	157.44	-0.9235	3.1202	0.18721
100	161.08	-0.9460	4.4617	0.13719	161.15	-0.9464	4.4824	0.13610	161.21	-0.9467	4.5033	0.13501
105	164.15	-0.9620	6.4153	0.10117	164.21	-0.9623	6.4520	0.10029	164.27	-0.9626	6.4892	0.09941
110	166.64	-0.9729	9.0926	0.07656	166.69	-0.9732	9.1533	0.07584	166.75	-0.9734	9.2148	0.07513
115	168.66	-0.9805	12.5944	0.05955	168.71	-0.9807	12.6931	0.05897	168.76	-0.9809	12.7805	0.05839
120	170.33	-0.9858	16.9705	0.04761	170.37	-0.9859	17.1078	0.04713	170.42	-0.9860	17.2470	0.04665
125	171.73	-0.9895	22.2085	0.03907	171.76	-0.9897	22.3992	0.03866	171.80	-0.9898	22.5926	0.03826
130	172.91	-0.9924	28.2279	0.03284	172.95	-0.9924	28.4814	0.03249	172.98	-0.9925	28.7384	0.03214
135	173.94	-0.9944	34.8819	0.02823	173.97	-0.9945	35.2057	0.02792	174.00	-0.9945	35.5342	0.02762
140	174.84	-0.9960	41.3632	0.02476	174.87	-0.9960	42.3628	0.02449	174.89	-0.9962	42.7682	0.02422
145	175.65	-0.9971	49.2162	0.02213	175.67	-0.9971	49.6941	0.02188	175.69	-0.9972	50.1789	0.02164
150	176.39	-0.9980	56.3510	0.02012	176.40	-0.9980	56.9070	0.01990	176.42	-0.9981	57.4705	0.01968
155	177.06	-0.9987	63.0646	0.01860	177.08	-0.9987	63.6933	0.01839	177.09	-0.9987	64.3312	0.01819
160	177.70	-0.9992	69.0538	0.01746	177.71	-0.9992	69.7481	0.01727	177.72	-0.9992	70.4526	0.01707
165	178.30	-0.9996	74.0406	0.01664	178.31	-0.9996	74.7897	0.01645	178.32	-0.9996	75.5498	0.01626
170	178.88	-0.9998	77.7871	0.01608	178.88	-0.9998	78.5774	0.01590	178.89	-0.9998	79.3794	0.01572
175	179.44	-1.0000	80.1112	0.01575	179.45	-1.0000	80.9271	0.01557	179.45	-1.0000	81.7551	0.01540
180	180.00	-1.0000	80.8988	0.01565	180.00	-1.0000	81.7235	0.01547	180.00	-1.0000	82.5603	0.01529

x = 0.793					x = 0.794					x = 0.795				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2798	4.50695	0.00	1.0000	0.2796	4.50395	0.00	1.0000	0.2795	4.50095		
5	9.45	0.9864	0.2809	4.47646	9.45	0.9864	0.2807	4.47346	9.46	0.9864	0.2805	4.47046		
10	18.90	0.9461	0.2841	4.38592	18.90	0.9461	0.2839	4.38292	18.91	0.9460	0.2837	4.37993		
15	28.33	0.8803	0.2895	4.23804	28.33	0.8802	0.2894	4.23505	28.34	0.8801	0.2892	4.23206		
20	37.73	0.7909	0.2975	4.03728	37.74	0.7908	0.2973	4.03430	37.76	0.7906	0.2972	4.03132		
25	47.11	0.6806	0.3083	3.78966	47.12	0.6804	0.3081	3.78669	47.14	0.6803	0.3079	3.78372		
30	56.44	0.5528	0.3224	3.50261	56.46	0.5526	0.3222	3.49966	56.48	0.5523	0.3220	3.49671		
35	65.72	0.4113	0.3404	3.18471	65.74	0.4109	0.3402	3.18178	65.76	0.4106	0.3400	3.17885		
40	74.92	0.2602	0.3634	2.84542	74.94	0.2598	0.3632	2.84251	74.97	0.2593	0.3630	2.83960		
45	84.03	0.1041	0.3927	2.49475	84.06	0.1036	0.3925	2.49188	84.09	0.1030	0.3923	2.48901		
50	93.01	-0.0526	0.4303	2.14297	93.05	-0.0532	0.4301	2.14014	93.08	-0.0537	0.4299	2.13731		
55	101.84	-0.2052	0.4792	1.80017	101.88	-0.2059	0.4790	1.79740	101.92	-0.2065	0.4787	1.79463		
60	110.46	-0.3496	0.5439	1.47590	110.51	-0.3503	0.5437	1.47320	110.55	-0.3510	0.5435	1.47050		
65	118.81	-0.4819	0.6317	1.17868	118.86	-0.4827	0.6316	1.17608	118.91	-0.4834	0.6314	1.17348		
70	126.80	-0.5991	0.7541	0.91555	126.86	-0.5998	0.7541	0.91308	126.91	-0.6006	0.7541	0.91011		
75	134.33	-0.6988	0.9301	0.69147	134.40	-0.6996	0.9304	0.68917	134.46	-0.7004	0.9306	0.68687		
80	141.28	-0.7802	1.1911	0.50875	141.35	-0.7809	1.1920	0.50665	141.41	-0.7816	1.1929	0.50455		
85	147.51	-0.8435	1.5878	0.36657	147.58	-0.8442	1.5901	0.36471	147.65	-0.8448	1.5925	0.36286		
90	152.94	-0.8905	2.1979	0.26103	153.01	-0.8911	2.2033	0.25945	153.08	-0.8916	2.2086	0.25786		
95	157.51	-0.9240	3.1312	0.18588	157.58	-0.9244	3.1422	0.18456	157.65	-0.9249	3.1534	0.18324		
100	161.28	-0.9471	4.5244	0.13393	161.35	-0.9475	4.5457	0.13286	161.41	-0.9478	4.5673	0.13178		
105	164.33	-0.9629	6.5268	0.09854	164.40	-0.9631	6.5648	0.09767	164.46	-0.9634	6.6032	0.09681		
110	166.80	-0.9736	9.2770	0.07442	166.86	-0.9738	9.3400	0.07372	166.91	-0.9740	9.4037	0.07302		
115	168.81	-0.9810	12.8800	0.05781	168.86	-0.9812	12.9777	0.05773	168.91	-0.9813	13.0767	0.05666		
120	170.46	-0.9862	17.3881	0.04617	170.51	-0.9863	17.5310	0.04569	170.55	-0.9864	17.6759	0.04522		
125	171.84	-0.9899	22.7887	0.03785	171.88	-0.9900	22.9875	0.03745	171.92	-0.9901	23.1890	0.03705		
130	173.01	-0.9926	28.9990	0.03180	173.05	-0.9926	29.2634	0.03145	173.08	-0.9927	29.5315	0.03111		
135	174.03	-0.9946	35.8673	0.02731	174.06	-0.9946	36.2053	0.02701	174.09	-0.9947	36.5481	0.02671		
140	174.92	-0.9961	43.1794	0.02395	174.94	-0.9961	43.5966	0.02368	174.97	-0.9961	44.0198	0.02342		
145	175.72	-0.9972	50.6708	0.02140	175.74	-0.9972	51.1698	0.02116	175.76	-0.9973	51.6762	0.02092		
150	176.44	-0.9981	58.0422	0.01945	176.46	-0.9981	58.6224	0.01923	176.48	-0.9981	59.2110	0.01902		
155	177.11	-0.9987	64.9784	0.01778	177.12	-0.9987	65.6352	0.01778	177.14	-0.9988	66.3017	0.01757		
160	177.73	-0.9992	71.1675	0.01688	177.74	-0.9992	71.8929	0.01668	177.76	-0.9992	72.6291	0.01649		
165	178.33	-0.9996	76.3211	0.01608	178.33	-0.9996	77.1039	0.01589	178.34	-0.9996	77.8983	0.01571		
170	178.90	-0.9998	80.1932	0.01554	178.90	-0.9998	81.0191	0.01536	178.91	-0.9998	81.8573	0.01518		
175	179.45	-1.0000	82.5953	0.01522	179.45	-1.0000	83.4480	0.01505	179.46	-1.0000	84.3134	0.01487		
180	180.00	-1.0000	83.4094	0.01512	180.00	-1.0000	84.2712	0.01495	180.00	-1.0000	85.1459	0.01477		

x = 0.796					x = 0.797					x = 0.798				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2793	4.49796	0.00	1.0000	0.2791	4.49498	0.00	1.0000	0.2790	4.49200		
5	9.46	0.9864	0.2804	4.46748	9.46	0.9864	0.2802	4.46449	9.47	0.9864	0.2800	4.46152		
10	18.91	0.9460	0.2836	4.37694	18.92	0.9460	0.2834	4.37396	18.92	0.9460	0.2832	4.37099		
15	28.35	0.8801	0.2890	4.22908	28.36	0.8800	0.2889	4.22611	28.37	0.8799	0.2887	4.22314		
20	37.77	0.7905	0.2970	4.02835	37.78	0.7904	0.2968	4.02538	37.79	0.7903	0.2966	4.02242		
25	47.15	0.6801	0.3078	3.78077	47.17	0.6799	0.3076	3.77781	47.18	0.6797	0.3074	3.77487		
30	56.49	0.5520	0.3218	3.49376	56.51	0.5518	0.3216	3.49083	56.53	0.5515	0.3215	3.48789		
35	65.78	0.4102	0.3398	3.17592	65.80	0.4099	0.3397	3.17300	65.82	0.4096	0.3395	3.17009		
40	74.99	0.2589	0.3628	2.83670	75.02	0.2585	0.3626	2.83381	75.04	0.2581	0.3624	2.83093		
45	84.11	0.1025	0.3921	2.48614	84.14	0.1020	0.3919	2.48328	84.17	0.1015	0.3917	2.48043		
50	93.11	-0.0543	0.4296	2.13449	93.15	-0.0549	0.4294	2.13168	93.18	-0.0555	0.4292	2.12887		
55	101.96	-0.2072	0.4785	1.79187	102.00	-0.2078	0.4783	1.78911	102.03	-0.2085	0.4781	1.78635		
60	110.59	-0.3517	0.5433	1.46781	110.64	-0.3524	0.5431	1.46513	110.68	-0.3532	0.5429	1.46245		
65	118.96	-0.4842	0.6313	1.17089	119.01	-0.4849	0.6311	1.16830	119.06	-0.4857	0.6310	1.16572		
70	126.97	-0.6014	0.7540	0.90815	127.03	-0.6022	0.7540	0.90569	127.08	-0.6029	0.7540	0.90323		
75	134.52	-0.7011	0.9309	0.68457	134.58	-0.7019	0.9312	0.68227	134.64	-0.7027	0.9314	0.67998		
80	141.48	-0.7824	1.1939	0.50246	141.54	-0.7831	1.1948	0.50037	141.61	-0.7838	1.1957	0.49829		
85	147.72	-0.8455	1.5948	0.36101	147.79	-0.8461	1.5972	0.35917	147.86	-0.8468	1.5996	0.35733		
90	153.15	-0.8922	2.2140	0.25628	153.22	-0.8927	2.2195	0.25470	153.29	-0.8933	2.2250	0.25313		
95	157.72	-0.9254	3.1647	0.18193	157.79	-0.9258	3.1761	0.18062	157.86	-0.9263	3.1876	0.17932		
100	161.48	-0.9482	4.5891	0.13072	161.54	-0.9486	4.6111	0.12965	161.61	-0.9489	4.6333	0.12859		
105	164.52	-0.9637	6.6421	0.09594	164.58	-0.9640	6.6815	0.09509	164.64	-0.9643	6.7213	0.09423		
110	166.97	-0.9743	9.4683	0.07232	167.03	-0.9745	9.5337	0.07163	167.08	-0.9747	9.5999	0.07094		
115	168.96	-0.9815	13.1710	0.05609	169.01	-0.9817	13.2786	0.05553	169.06	-0.9818	13.3816	0.05497		
120	170.59	-0.9866	17.8228	0.04475	170.64	-0.9867	17.9718	0.04428	170.68	-0.9868	18.1228	0.04381		
125	171.96	-0.9902	23.3934	0.03665	172.00	-0.9903	23.6007	0.03626	172.03	-0.9903	23.8109	0.03587		
130	173.11	-0.9928	29.8034	0.03077	173.15	-0.9929	30.0792	0.03043	173.18	-0.9929	30.3591	0.03010		
135	174.11	-0.9947	36.8958	0.02642	174.14	-0.9948	37.2487	0.02612	174.17	-0.9948	37.6067	0.02583		
140	174.99	-0.9962	44.4492	0.02315	175.02	-0.9962	44.8850	0.02289	175.04	-0.9963	45.3272	0.02263		
145	175.78	-0.9973	52.1900	0.02068	175.80	-0.9973	52.7114	0.02045	175.82	-0.9973	53.2406	0.02021		
150	176.49	-0.9981	59.8084	0.01880	176.51	-0.9981	60.4147	0.01858	176.53	-0.9982	61.0301	0.01837		
155	177.15	-0.9988	66.9781	0.01737	177.17	-0.9988	67.6647	0.01714	177.18	-0.9988	68.3615	0.01697		
160	177.77	-0.9992	73.7063	0.0163160										

x = 0.799					x = 0.800					x = 0.801				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2788	4.48903	0.00	1.0000	0.2786	4.48607	0.00	1.0000	0.2785	4.48311		
5	9.47	0.9864	0.2799	4.45855	9.47	0.9864	0.2797	4.45559	9.47	0.9864	0.2795	4.45263		
10	18.93	0.9459	0.2831	4.36803	18.94	0.9459	0.2829	4.36507	18.94	0.9459	0.2827	4.36211		
15	28.38	0.8795	0.2885	4.22018	28.39	0.8798	0.2884	4.21723	28.39	0.8797	0.2882	4.21428		
20	37.80	0.7901	0.2965	4.01947	37.81	0.7900	0.2963	4.01653	37.82	0.7899	0.2961	4.01359		
25	47.20	0.6795	0.3072	3.77193	47.21	0.6793	0.3070	3.76899	47.22	0.6791	0.3069	3.76606		
30	56.55	0.5513	0.3212	3.48497	56.57	0.5510	0.3211	3.48205	56.58	0.5507	0.3209	3.47914		
35	65.84	0.4092	0.3393	3.16719	65.87	0.4089	0.3391	3.16429	65.89	0.4085	0.3389	3.16139		
40	75.07	0.2577	0.3622	2.82805	75.09	0.2572	0.3620	2.82517	75.12	0.2568	0.3618	2.82230		
45	84.20	0.1010	0.3915	2.47756	84.23	0.1005	0.3913	2.47474	84.26	0.1000	0.3910	2.47191		
50	93.22	-0.0561	0.4290	2.12506	93.25	-0.0567	0.4288	2.12327	93.28	-0.0573	0.4286	2.12047		
55	102.07	-0.2091	0.4779	1.73351	102.11	-0.2098	0.4777	1.73086	102.15	-0.2105	0.4775	1.72813		
60	110.72	-0.3539	0.5428	1.45977	110.77	-0.3546	0.5426	1.45711	110.81	-0.3553	0.5424	1.45444		
65	119.11	-0.4665	0.6308	1.13314	119.16	-0.4672	0.6307	1.13057	119.21	-0.4680	0.6305	1.12790		
70	127.14	-0.6037	0.7540	0.90078	127.19	-0.6045	0.7539	0.89834	127.25	-0.6053	0.7539	0.89589		
75	134.70	-0.7034	0.9317	0.67769	134.76	-0.7042	0.9320	0.67541	134.82	-0.7049	0.9322	0.67313		
80	141.68	-0.7845	1.1967	0.49621	141.74	-0.7852	1.1976	0.49413	141.81	-0.7860	1.1985	0.49206		
85	147.93	-0.8474	1.6021	0.35549	148.00	-0.8481	1.6045	0.35366	148.07	-0.8487	1.6069	0.35183		
90	153.36	-0.8939	2.2305	0.25156	153.43	-0.8944	2.2361	0.25000	153.51	-0.8950	2.2417	0.24844		
95	157.93	-0.9267	3.1992	0.17802	158.00	-0.9272	3.2109	0.17672	158.07	-0.9277	3.2228	0.17543		
100	161.68	-0.9493	4.6558	0.12754	161.74	-0.9497	4.6786	0.12648	161.81	-0.9500	4.7016	0.12544		
105	164.70	-0.9646	6.7617	0.09338	164.76	-0.9648	6.8025	0.09254	164.82	-0.9651	6.8437	0.09169		
110	167.14	-0.9749	9.6670	0.07025	167.19	-0.9751	9.7350	0.06957	167.25	-0.9753	9.8038	0.06889		
115	169.11	-0.9820	13.4800	0.05441	169.16	-0.9821	13.5918	0.05385	169.21	-0.9823	13.6990	0.05330		
120	170.72	-0.9859	18.2759	0.04335	170.77	-0.9870	18.4311	0.04289	170.81	-0.9872	18.5885	0.04244		
125	172.07	-0.9904	24.0242	0.03548	172.11	-0.9905	24.2405	0.03510	172.15	-0.9906	24.4599	0.03471		
130	173.22	-0.9930	30.6430	0.02977	173.25	-0.9931	30.9310	0.02944	173.28	-0.9931	31.2233	0.02911		
135	174.20	-0.9949	37.9699	0.02554	174.23	-0.9949	38.3366	0.02525	174.26	-0.9950	38.7127	0.02497		
140	175.07	-0.9963	45.7759	0.02238	175.09	-0.9963	46.2314	0.02212	175.12	-0.9964	46.6937	0.02187		
145	175.84	-0.9974	53.7777	0.01996	175.87	-0.9974	54.3229	0.01975	175.89	-0.9974	54.8764	0.01952		
150	176.55	-0.9982	61.6547	0.01816	176.57	-0.9982	62.2888	0.01795	176.58	-0.9982	62.9325	0.01774		
155	177.20	-0.9988	69.0589	0.01678	177.21	-0.9988	69.7870	0.01658	177.22	-0.9988	70.5161	0.01659		
160	177.80	-0.9993	75.6861	0.01574	177.81	-0.9993	76.4795	0.01555	177.82	-0.9993	77.2850	0.01538		
165	178.38	-0.9996	81.1972	0.01500	178.39	-0.9996	82.0535	0.01482	178.39	-0.9996	82.9229	0.01465		
170	178.93	-0.9998	85.3383	0.01449	178.94	-0.9998	86.2419	0.01432	178.94	-0.9998	87.1594	0.01415		
175	179.47	-1.0000	87.9076	0.01419	179.47	-1.0000	88.8406	0.01403	179.47	-1.0000	89.7879	0.01386		
180	180.00	-1.0000	88.7784	0.01410	180.00	-1.0000	89.7214	0.01393	180.00	-1.0000	90.6788	0.01377		

x = 0.802					x = 0.803					x = 0.804				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2783	4.48010	0.00	1.0000	0.2781	4.47722	0.00	1.0000	0.2780	4.47428		
5	9.48	0.9864	0.2794	4.44933	9.48	0.9863	0.2792	4.44674	9.48	0.9863	0.2790	4.44390		
10	18.95	0.9458	0.2826	4.35917	18.95	0.9458	0.2824	4.35623	18.96	0.9458	0.2822	4.35330		
15	28.40	0.8796	0.2880	4.21134	28.41	0.8796	0.2878	4.20841	28.42	0.8795	0.2877	4.20548		
20	37.84	0.7898	0.2959	4.01036	37.85	0.7896	0.2958	4.00773	37.86	0.7895	0.2956	4.00481		
25	47.24	0.6789	0.3067	3.76314	47.25	0.6788	0.3065	3.76023	47.27	0.6786	0.3063	3.75732		
30	56.60	0.5503	0.3205	3.47523	56.62	0.5502	0.3205	3.47333	56.64	0.5499	0.3204	3.47044		
35	65.91	0.4082	0.3387	3.15851	65.93	0.4079	0.3385	3.15563	65.95	0.4075	0.3383	3.15275		
40	75.14	0.2564	0.3616	2.81944	75.17	0.2560	0.3614	2.81659	75.20	0.2555	0.3612	2.81374		
45	84.29	0.0995	0.3908	2.46908	84.32	0.0990	0.3906	2.46625	84.35	0.0985	0.3904	2.46344		
50	93.32	-0.0579	0.4284	2.11709	93.35	-0.0584	0.4282	2.11490	93.38	-0.0590	0.4280	2.11213		
55	102.19	-0.2111	0.4773	1.77539	102.23	-0.2118	0.4771	1.77267	102.27	-0.2124	0.4769	1.76994		
60	110.86	-0.3560	0.5422	1.45179	110.90	-0.3567	0.5420	1.44913	110.94	-0.3575	0.5418	1.44647		
65	119.26	-0.4887	0.6304	1.15544	119.31	-0.4895	0.6302	1.15288	119.36	-0.4902	0.6301	1.15032		
70	127.30	-0.6060	0.7539	0.89346	127.36	-0.6068	0.7539	0.89102	127.41	-0.6076	0.7538	0.88859		
75	134.89	-0.7057	0.9325	0.67085	134.95	-0.7065	0.9328	0.66859	135.01	-0.7072	0.9331	0.66632		
80	141.88	-0.7867	1.1995	0.48999	141.94	-0.7874	1.2004	0.48792	142.01	-0.7881	1.2014	0.48586		
85	148.14	-0.8494	1.6094	0.35001	148.21	-0.8500	1.6119	0.34819	148.28	-0.8507	1.6143	0.34637		
90	153.58	-0.8955	2.2473	0.24368	153.65	-0.8961	2.2530	0.24533	153.72	-0.8967	2.2588	0.24378		
95	158.14	-0.9281	3.2347	0.17414	158.21	-0.9286	3.2468	0.17286	158.28	-0.9290	3.2589	0.17158		
100	161.88	-0.9504	4.7248	0.12439	161.94	-0.9508	4.7483	0.12335	162.01	-0.9511	4.7721	0.12232		
105	164.89	-0.9654	6.8855	0.09035	164.95	-0.9657	6.9278	0.09002	165.01	-0.9660	6.9707	0.08919		
110	167.30	-0.9755	9.8735	0.08322	167.36	-0.9758	9.9442	0.08755	167.41	-0.9760	10.0157	0.08638		
115	169.26	-0.9825	13.8077	0.05275	169.31	-0.9826	13.9179	0.05221	169.36	-0.9828	14.0297	0.05156		
120	170.86	-0.9873	18.7482	0.04198	170.90	-0.9874	18.9101	0.04153	170.94	-0.9875	19.0744	0.04109		
125	172.19	-0.9907	24.6825	0.03433	172.23	-0.9908	24.9083	0.03395	172.27	-0.9909	25.1375	0.03358		
130	173.32	-0.9932	31.5199	0.02878	173.35	-0.9933	31.8208	0.02846	173.38	-0.9933	32.1263	0.02814		
135	174.29	-0.9950	39.0924	0.02469	174.32	-0.9951	39.4778	0.02440	174.35	-0.9951	39.8691	0.02412		
140	175.14	-0.9964	47.1630	0.02162	175.17	-0.9964	47.6394	0.02137	175.20	-0.9965	48.1230	0.02112		
145	175.91	-0.9975	55.4382	0.01930	175.93	-0.9975	56.0086	0.01907	175.95	-0.9975	56.5878	0.01885		
150	176.60	-0.9982	63.5861	0.01753	176.62	-0.9983	64.2496	0.01733	176.64	-0.9983	64.9234	0.01712		
155	177.24	-0.9988	71.2564	0.01620	177.25	-0.9989	72.0081	0.01601	177.27	-0.9989	72.7714	0.01592		
160	177.84	-0.9993	78.1030	0.0152.										

x = 0.805					x = 0.806					x = 0.807				
FSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2778	4.47135	0.00	1.0000	0.2777	4.46842	0.00	1.0000	0.2775	4.46551		
5	9.48	0.9863	0.2789	4.44087	9.49	0.9863	0.2787	4.43795	9.49	0.9863	0.2785	4.43503		
10	18.96	0.9457	0.2821	4.35037	18.97	0.9457	0.2819	4.34745	18.97	0.9457	0.2817	4.34453		
15	28.43	0.8794	0.2875	4.20256	28.44	0.8793	0.2873	4.19965	28.44	0.8793	0.2872	4.19674		
20	37.87	0.7894	0.2954	4.00190	37.88	0.7893	0.2953	3.99899	37.89	0.7892	0.2951	3.99609		
25	47.28	0.6784	0.3062	3.75442	47.30	0.6782	0.3060	3.75152	47.31	0.6780	0.3058	3.74863		
30	56.65	0.5497	0.3202	3.46755	56.67	0.5494	0.3200	3.46467	56.69	0.5492	0.3198	3.46179		
35	65.97	0.4072	0.3381	3.14988	65.99	0.4068	0.3380	3.14702	66.01	0.4065	0.3378	3.14416		
40	75.22	0.2551	0.3610	2.81089	75.25	0.2547	0.3608	2.80805	75.27	0.2543	0.3606	2.80522		
45	84.38	0.0980	0.3902	2.46062	84.41	0.0975	0.3900	2.45782	84.44	0.0970	0.3898	2.45502		
50	93.42	-0.0596	0.4278	2.10936	93.45	-0.0602	0.4276	2.10659	93.48	-0.0608	0.4274	2.10385		
55	102.30	-0.2131	0.4767	1.76723	102.34	-0.2138	0.4765	1.76451	102.38	-0.2144	0.4762	1.76181		
60	110.99	-0.3582	0.5416	1.44383	111.03	-0.3589	0.5414	1.44119	111.08	-0.3596	0.5412	1.43855		
65	119.41	-0.4910	0.6299	1.14777	119.46	-0.4917	0.6298	1.14523	119.50	-0.4925	0.6297	1.14268		
70	127.47	-0.6083	0.7538	0.88617	127.53	-0.6091	0.7538	0.88374	127.58	-0.6099	0.7538	0.88133		
75	135.07	-0.7080	0.9333	0.66406	135.13	-0.7087	0.9336	0.66180	135.19	-0.7095	0.9339	0.65954		
80	142.08	-0.7888	1.2023	0.48380	142.15	-0.7896	1.2033	0.48174	142.21	-0.7903	1.2043	0.47969		
85	148.36	-0.8513	1.6168	0.34455	148.43	-0.8520	1.6194	0.34274	148.50	-0.8526	1.6219	0.34094		
90	153.79	-0.8972	2.2646	0.24224	153.87	-0.8978	2.2704	0.24069	153.94	-0.8983	2.2763	0.23916		
95	158.36	-0.9295	3.2712	0.17030	158.43	-0.9299	3.2836	0.16903	158.50	-0.9304	3.2961	0.16776		
100	162.08	-0.9515	4.7961	0.12129	162.15	-0.9518	4.8204	0.12026	162.21	-0.9522	4.8449	0.11923		
105	165.07	-0.9662	7.0140	0.08836	165.13	-0.9665	7.0579	0.08754	165.19	-0.9668	7.1023	0.08672		
110	167.47	-0.9762	10.0883	0.06622	167.53	-0.9764	10.1618	0.06555	167.58	-0.9766	10.2362	0.06490		
115	169.41	-0.9830	14.1430	0.05112	169.46	-0.9831	14.2578	0.05059	169.50	-0.9833	14.3743	0.05005		
120	170.99	-0.9877	19.2410	0.04064	171.03	-0.9878	19.4100	0.04020	171.08	-0.9879	19.5815	0.03976		
125	172.30	-0.9910	25.3700	0.03320	172.34	-0.9911	25.6060	0.03283	172.38	-0.9912	25.8455	0.03246		
130	173.42	-0.9934	32.4363	0.02782	173.45	-0.9935	32.7511	0.02750	173.48	-0.9935	33.0705	0.02719		
135	174.38	-0.9952	40.2662	0.02385	174.41	-0.9952	40.6695	0.02357	174.44	-0.9953	41.0789	0.02330		
140	175.22	-0.9965	48.6141	0.02088	175.25	-0.9966	49.1127	0.02063	175.27	-0.9966	49.6190	0.02039		
145	175.97	-0.9975	57.1759	0.01863	175.99	-0.9976	57.7731	0.01841	176.01	-0.9976	58.3796	0.01819		
150	176.65	-0.9983	65.6077	0.01692	176.67	-0.9983	66.3026	0.01672	176.69	-0.9983	67.0084	0.01652		
155	177.28	-0.9989	73.5466	0.01563	177.30	-0.9989	74.2339	0.01544	177.31	-0.9989	75.1336	0.01526		
160	177.87	-0.9993	80.6337	0.01466	177.88	-0.9993	81.5038	0.01449	177.89	-0.9993	82.3876	0.01431		
165	178.43	-0.9996	86.5373	0.01396	178.44	-0.9996	87.4765	0.01379	178.44	-0.9996	88.4306	0.01363		
170	178.96	-0.9998	90.9739	0.01349	178.97	-0.9998	91.9652	0.01333	178.97	-0.9998	92.9721	0.01317		
175	179.48	-1.0000	93.7267	0.01321	179.49	-1.0000	94.7503	0.01305	179.49	-1.0000	95.7901	0.01290		
180	180.00	-1.0000	94.6597	0.01312	180.00	-1.0000	95.6943	0.01297	180.00	-1.0000	96.7452	0.01281		

x = 0.808					x = 0.809					x = 0.810				
FSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2773	4.46259	0.00	1.0000	0.2772	4.45969	0.00	1.0000	0.2770	4.45679		
5	9.49	0.9863	0.2784	4.43212	9.50	0.9863	0.2782	4.42922	9.50	0.9863	0.2781	4.42632		
10	18.98	0.9456	0.2816	4.34163	18.99	0.9456	0.2814	4.33873	18.99	0.9456	0.2812	4.33583		
15	28.45	0.8792	0.2870	4.19383	28.46	0.8791	0.2868	4.19094	28.47	0.8791	0.2867	4.18805		
20	37.90	0.7890	0.2949	3.99320	37.92	0.7889	0.2948	3.99031	37.93	0.7888	0.2946	3.98743		
25	47.33	0.6778	0.3056	3.74575	47.34	0.6776	0.3055	3.74287	47.36	0.6774	0.3053	3.74000		
30	56.71	0.5489	0.3196	3.45892	56.73	0.5486	0.3195	3.45606	56.74	0.5484	0.3193	3.45320		
35	66.04	0.4062	0.3376	3.14131	66.06	0.4058	0.3374	3.13847	66.08	0.4055	0.3372	3.13563		
40	75.30	0.2538	0.3605	2.80239	75.32	0.2534	0.3603	2.79957	75.35	0.2530	0.3601	2.79676		
45	84.47	0.0964	0.3896	2.45222	84.49	0.0959	0.3894	2.44943	84.52	0.0954	0.3892	2.44665		
50	93.52	-0.0614	0.4271	2.10108	93.55	-0.0620	0.4269	2.09833	93.59	-0.0625	0.4267	2.09558		
55	102.42	-0.2151	0.4760	1.75911	102.46	-0.2157	0.4758	1.75641	102.50	-0.2164	0.4756	1.75372		
60	111.12	-0.3603	0.5410	1.43592	111.16	-0.3610	0.5408	1.43330	111.21	-0.3618	0.5406	1.43068		
65	119.55	-0.4933	0.6295	1.14015	119.60	-0.4940	0.6294	1.13761	119.65	-0.4948	0.6292	1.13509		
70	127.64	-0.6107	0.7537	0.87891	127.69	-0.6114	0.7537	0.87650	127.75	-0.6122	0.7537	0.87410		
75	135.26	-0.7103	0.9341	0.65729	135.32	-0.7110	0.9344	0.65504	135.38	-0.7118	0.9347	0.65280		
80	142.28	-0.7910	1.2052	0.47765	142.35	-0.7917	1.2062	0.47560	142.42	-0.7925	1.2072	0.47356		
85	148.57	-0.8533	1.6244	0.33913	148.64	-0.8539	1.6270	0.33733	148.71	-0.8546	1.6296	0.33544		
90	154.01	-0.8989	2.2822	0.23762	154.09	-0.8994	2.2881	0.23609	154.16	-0.9000	2.2942	0.23457		
95	158.57	-0.9309	3.3088	0.16650	158.64	-0.9313	3.3215	0.16524	158.71	-0.9318	3.3344	0.16398		
100	162.28	-0.9526	4.8698	0.11821	162.35	-0.9529	4.8949	0.11720	162.42	-0.9533	4.9203	0.11619		
105	165.26	-0.9671	7.1473	0.08591	165.32	-0.9674	7.1929	0.08509	165.38	-0.9676	7.2391	0.08429		
110	167.64	-0.9768	10.3117	0.06424	167.69	-0.9770	10.3882	0.06359	167.75	-0.9772	10.4658	0.06295		
115	169.55	-0.9834	14.4925	0.04952	169.60	-0.9836	14.6123	0.04900	169.65	-0.9837	14.7338	0.04847		
120	171.12	-0.9880	19.7555	0.03932	171.16	-0.9881	19.9321	0.03889	171.21	-0.9882	20.1113	0.03846		
125	172.42	-0.9913	26.0886	0.03210	172.46	-0.9913	26.3353	0.03174	172.50	-0.9914	26.5858	0.03137		
130	173.52	-0.9936	33.3949	0.02687	173.55	-0.9937	33.7242	0.02656	173.59	-0.9937	34.0586	0.02626		
135	174.47	-0.9953	41.4946	0.02303	174.49	-0.9954	41.9168	0.02276	174.52	-0.9954	42.3455	0.02249		
140	175.30	-0.9966	50.1332	0.02015	175.32	-0.9967	50.6554	0.01991	175.35	-0.9967	51.1859	0.01967		
145	176.04	-0.9976	58.9957	0.01797	176.06	-0.9976	59.6214	0.01776	176.08	-0.9977	60.2570	0.01755		
150	176.71	-0.9983	67.7253	0.01632	176.73	-0.9984	68.4536	0.01613	176.74	-0.9984	69.1935	0.01593		
155	177.33	-0.9989	75.9460	0.01507	177.34	-0.9989	76.7712	0.01497	177.36	-0.9989	77.6097	0.01477		

2 x = 0.811					2 x = 0.812					2 x = 0.813				
FSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²		
0	0.00	1.0000	0.2768	4.45390	0.00	1.0000	0.2767	4.45101	0.00	1.0000	0.2765	4.44813		
5	9.50	0.9863	0.2779	4.42343	9.50	0.9863	0.2777	4.42054	9.51	0.9863	0.2776	4.41766		
10	19.00	0.9455	0.2811	4.33294	19.00	0.9455	0.2809	4.33006	19.01	0.9455	0.2807	4.32718		
15	28.48	0.8790	0.2865	4.18516	28.49	0.8789	0.2863	4.18229	28.50	0.8789	0.2862	4.17942		
20	37.94	0.7887	0.2944	3.98455	37.95	0.7885	0.2942	3.98168	37.96	0.7884	0.2941	3.97882		
25	47.37	0.6773	0.3051	3.73713	47.38	0.6771	0.3049	3.73427	47.40	0.6769	0.3048	3.73142		
30	56.76	0.5481	0.3191	3.45033	56.78	0.5479	0.3189	3.44750	56.80	0.5476	0.3187	3.44466		
35	66.10	0.4051	0.3370	3.13279	66.12	0.4048	0.3368	3.12997	66.14	0.4045	0.3366	3.12715		
40	75.37	0.2526	0.3599	2.79595	75.40	0.2521	0.3597	2.79114	75.42	0.2517	0.3595	2.78835		
45	84.55	0.0949	0.3890	2.44587	84.58	0.0944	0.3888	2.44109	84.61	0.0939	0.3886	2.43833		
50	93.62	-0.0631	0.4265	2.09294	93.65	-0.0637	0.4263	2.09011	93.69	-0.0643	0.4261	2.08738		
55	102.54	-0.2170	0.4754	1.75103	102.57	-0.2177	0.4752	1.74835	102.61	-0.2184	0.4750	1.74568		
60	111.25	-0.3625	0.5404	1.42805	111.30	-0.3632	0.5402	1.42545	111.34	-0.3639	0.5400	1.42284		
65	119.70	-0.4955	0.6291	1.13256	119.75	-0.4963	0.6289	1.13004	119.80	-0.4970	0.6288	1.12753		
70	127.81	-0.6130	0.7537	0.87170	127.86	-0.6138	0.7536	0.86930	127.92	-0.6145	0.7536	0.86691		
75	135.44	-0.7126	0.9349	0.65056	135.51	-0.7133	0.9352	0.64832	135.57	-0.7141	0.9355	0.64609		
80	142.48	-0.7932	1.2082	0.47153	142.55	-0.7939	1.2091	0.46949	142.62	-0.7946	1.2101	0.46746		
85	148.78	-0.8552	1.6321	0.33375	148.85	-0.8559	1.6347	0.33196	148.93	-0.8565	1.6374	0.33017		
90	154.23	-0.9006	2.3002	0.23304	154.30	-0.9011	2.3063	0.23153	154.38	-0.9017	2.3125	0.23001		
95	158.78	-0.9322	3.3474	0.16273	158.85	-0.9327	3.3606	0.16148	158.93	-0.9331	3.3738	0.16024		
100	162.48	-0.9536	4.9460	0.11518	162.55	-0.9540	4.9720	0.11418	162.62	-0.9543	4.9983	0.11318		
105	165.44	-0.9679	7.2356	0.08348	165.51	-0.9682	7.3332	0.08258	165.57	-0.9684	7.3811	0.08189		
110	167.81	-0.9774	10.5444	0.06230	167.86	-0.9776	10.6241	0.06166	167.92	-0.9778	10.7049	0.06103		
115	169.70	-0.9839	14.8571	0.04795	169.75	-0.9841	14.9822	0.04744	169.80	-0.9842	15.1091	0.04592		
120	171.25	-0.9884	20.2931	0.03803	171.30	-0.9885	20.4777	0.03761	171.34	-0.9886	20.6650	0.03718		
125	172.54	-0.9915	26.8401	0.03102	172.57	-0.9916	27.0983	0.03066	172.61	-0.9917	27.3605	0.03031		
130	173.62	-0.9938	34.3982	0.02595	173.65	-0.9939	34.7430	0.02565	173.69	-0.9939	35.0933	0.02535		
135	174.55	-0.9955	42.7810	0.02222	174.58	-0.9955	43.2233	0.02196	174.61	-0.9956	43.6726	0.02170		
140	175.37	-0.9967	51.7248	0.01944	175.40	-0.9968	52.2722	0.01921	175.42	-0.9968	52.8283	0.01897		
145	176.10	-0.9977	60.9028	0.01734	176.12	-0.9977	61.5589	0.01713	176.14	-0.9977	62.2255	0.01692		
150	176.76	-0.9984	69.9452	0.01574	176.78	-0.9984	70.7089	0.01555	176.80	-0.9984	71.4851	0.01536		
155	177.37	-0.9989	78.4615	0.01453	177.38	-0.9989	79.3272	0.01435	177.40	-0.9990	80.2070	0.01418		
160	177.94	-0.9994	86.0661	0.01363	177.95	-0.9994	87.0230	0.01346	177.96	-0.9994	87.9956	0.01330		
165	178.48	-0.9996	92.4018	0.01298	178.49	-0.9997	93.4350	0.01282	178.50	-0.9997	94.4850	0.01265		
170	179.00	-0.9998	97.1636	0.01253	179.00	-0.9998	98.2542	0.01238	179.01	-0.9999	99.3626	0.01223		
175	179.50	-1.0000	100.1185	0.01228	179.50	-1.0000	101.2447	0.01213	179.51	-1.0000	102.3893	0.01198		
180	180.00	-1.0000	101.1201	0.01219	180.00	-1.0000	102.2584	0.01204	180.00	-1.0000	103.4153	0.01189		

2 x = 0.814					2 x = 0.815					2 x = 0.816				
PSI	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²	θ	$\cos \theta$	G	S ²		
0	0.00	1.0000	0.2764	4.44526	0.00	1.0000	0.2762	4.44239	0.00	1.0000	0.2760	4.43953		
5	9.51	0.9863	0.2774	4.41479	9.51	0.9862	0.2772	4.41192	9.52	0.9862	0.2771	4.40905		
10	19.01	0.9454	0.2806	4.32431	19.02	0.9454	0.2804	4.32145	19.02	0.9454	0.2803	4.31819		
15	28.50	0.8788	0.2860	4.17555	28.51	0.8787	0.2858	4.17269	28.52	0.8786	0.2857	4.16944		
20	37.97	0.7893	0.2939	3.97596	37.98	0.7892	0.2937	3.97311	38.00	0.7891	0.2936	3.97026		
25	47.41	0.6767	0.3046	3.72857	47.43	0.6765	0.3044	3.72573	47.44	0.6763	0.3042	3.72290		
30	56.81	0.5473	0.3186	3.44183	56.83	0.5471	0.3184	3.43900	56.85	0.5468	0.3182	3.43618		
35	66.16	0.4041	0.3365	3.12433	66.19	0.4038	0.3363	3.12152	66.21	0.4034	0.3361	3.11872		
40	75.48	0.2513	0.3593	2.78555	75.47	0.2509	0.3591	2.78277	75.50	0.2504	0.3589	2.77999		
45	84.64	0.0934	0.3884	2.43556	84.67	0.0929	0.3882	2.43281	84.70	0.0924	0.3880	2.43006		
50	93.72	-0.0649	0.4259	2.08466	93.75	-0.0655	0.4257	2.08194	93.79	-0.0661	0.4255	2.07923		
55	102.65	-0.2190	0.4748	1.74300	102.69	-0.2197	0.4746	1.74034	102.73	-0.2203	0.4744	1.73758		
60	111.38	-0.3646	0.5398	1.42024	111.43	-0.3653	0.5396	1.41764	111.47	-0.3660	0.5395	1.41505		
65	119.85	-0.4978	0.6286	1.12501	119.90	-0.4985	0.6285	1.12251	119.95	-0.4993	0.6283	1.12001		
70	127.97	-0.6153	0.7536	0.86452	128.03	-0.6161	0.7535	0.86213	128.09	-0.6169	0.7535	0.85975		
75	135.63	-0.7148	0.9358	0.64386	135.69	-0.7156	0.9360	0.64153	135.76	-0.7164	0.9363	0.63941		
80	142.69	-0.7953	1.2111	0.46544	142.76	-0.7961	1.2121	0.46341	142.82	-0.7968	1.2131	0.46139		
85	149.00	-0.8572	1.6400	0.32839	149.07	-0.8578	1.6426	0.32661	149.14	-0.8585	1.6453	0.32484		
90	154.45	-0.9022	2.3187	0.22850	154.53	-0.9028	2.3250	0.22699	154.60	-0.9033	2.3313	0.22549		
95	159.00	-0.9336	3.3873	0.15900	159.07	-0.9340	3.4008	0.15776	159.14	-0.9345	3.4145	0.15653		
100	162.69	-0.9547	5.0250	0.11218	162.76	-0.9550	5.0519	0.11119	162.82	-0.9554	5.0791	0.11020		
105	165.63	-0.9687	7.4297	0.08109	165.69	-0.9690	7.4789	0.08030	165.76	-0.9693	7.5288	0.07952		
110	167.97	-0.9781	10.7869	0.06040	168.03	-0.9783	10.8700	0.05977	168.09	-0.9785	10.9542	0.05914		
115	169.85	-0.9844	15.2379	0.04641	169.90	-0.9845	15.3685	0.04590	169.95	-0.9847	15.5011	0.04440		
120	171.38	-0.9887	20.8552	0.03676	171.43	-0.9888	21.0482	0.03635	171.47	-0.9889	21.2443	0.03593		
125	172.65	-0.9918	27.6267	0.02996	172.69	-0.9919	27.8970	0.02961	172.73	-0.9920	28.1716	0.02926		
130	173.72	-0.9940	35.4490	0.02505	173.75	-0.9941	35.8104	0.02475	173.79	-0.9941	36.1775	0.02445		
135	174.64	-0.9956	44.1291	0.02144	174.67	-0.9957	44.5929	0.02118	174.70	-0.9957	45.0642	0.02092		
140	175.45	-0.9968	53.3934	0.01874	175.47	-0.9969	53.9676	0.01852	175.50	-0.9969	54.5512	0.01829		
145	176.16	-0.9978	62.9029	0.01671	176.19	-0.9978	63.5914	0.01651	176.21	-0.9978	64.2911	0.01630		
150	176.81	-0.9985	72.2738	0.01517	176.83	-0.9985	73.0755	0.01498	176.85	-0.9985	73.8903	0.01480		
155	177.41	-0.9990	81.1010	0.01400	177.43	-0.9990	82.0098	0.01383	177.44	-0.9990	82.9335	0.01365		
160	177.97	-0.9994	88.9680	0.01313	177.98	-0.9994	89.9887	0.01297	178.00	-0.9994	91.0100	0.01280		
165	178.50	-0.9997	95.5522	0.01250	178.51	-0.9997	96.6370	0.01235	178.52	-0.9997	97.7398	0.01219		
170	179.01	-0.9999	100.4892	0.01207	179.02	-0.9999	101.6343	0.01192	179.02	-0.9999	102.7985	0.01177		
175	179.51	-1.0000	103.5528	0.01183	179.51	-1.0000	104.7354	0.01168	179.52	-1.0000	105.9377	0.01153		
180	180.00	-1.0000	104.5912	0.01175	180.00	-1.0000	105.7866	0.01160	180.00	-1.0000	107.0018	0.01145		

x = 0.817					x = 0.818					x = 0.819				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2759	4.43667	0.00	1.0000	0.2757	4.43382	0.00	1.0000	0.2756	4.43098		
5	9.52	0.9862	0.2769	4.40621	9.52	0.9862	0.2768	4.40336	9.52	0.9862	0.2766	4.40052		
10	19.03	0.9453	0.2801	4.31574	19.04	0.9453	0.2799	4.31289	19.04	0.9453	0.2798	4.31006		
15	28.53	0.8786	0.2855	4.16799	28.54	0.8785	0.2854	4.16515	28.55	0.8784	0.2852	4.16232		
20	38.01	0.7879	0.2934	3.96742	38.02	0.7878	0.2932	3.96459	38.03	0.7877	0.2931	3.96176		
25	47.46	0.6761	0.3041	3.72007	47.47	0.6760	0.3039	3.71725	47.49	0.6758	0.3037	3.71443		
30	56.87	0.5466	0.3180	3.43337	56.89	0.5463	0.3178	3.43056	56.90	0.5460	0.3177	3.42775		
35	66.23	0.4031	0.3358	3.11592	66.25	0.4028	0.3357	3.11313	66.27	0.4024	0.3355	3.11034		
40	75.52	0.2500	0.3587	2.77721	75.55	0.2496	0.3585	2.77444	75.57	0.2492	0.3583	2.77168		
45	84.73	0.0919	0.3878	2.42731	84.76	0.0914	0.3876	2.42457	84.79	0.0909	0.3874	2.42183		
50	93.82	-0.0666	0.4253	2.07652	93.86	-0.0672	0.4251	2.07382	93.89	-0.0678	0.4249	2.07112		
55	102.77	-0.2210	0.4742	1.73502	102.81	-0.2216	0.4740	1.73237	102.84	-0.2223	0.4738	1.72972		
60	111.52	-0.3668	0.5393	1.41246	111.56	-0.3675	0.5391	1.40987	111.60	-0.3682	0.5389	1.40729		
65	120.00	-0.5001	0.6282	1.11751	120.05	-0.5008	0.6280	1.11501	120.10	-0.5016	0.6279	1.11252		
70	128.14	-0.6176	0.7535	0.85737	128.20	-0.6184	0.7533	0.85500	128.26	-0.6192	0.7534	0.85263		
75	135.82	-0.7171	0.9366	0.63719	135.88	-0.7179	0.9369	0.63497	135.94	-0.7187	0.9371	0.63276		
80	142.89	-0.7975	1.2141	0.45938	142.96	-0.7982	1.2151	0.45737	143.03	-0.7989	1.2161	0.45536		
85	149.22	-0.8591	1.6480	0.32307	149.29	-0.8598	1.6507	0.32130	149.36	-0.8604	1.6534	0.31953		
90	154.67	-0.9039	2.3376	0.22399	154.75	-0.9044	2.3440	0.22249	154.82	-0.9050	2.3505	0.22100		
95	159.22	-0.9349	3.4283	0.15530	159.29	-0.9354	3.4423	0.15407	159.36	-0.9358	3.4564	0.15285		
100	162.89	-0.9558	5.1067	0.10922	162.96	-0.9561	5.1346	0.10824	163.03	-0.9565	5.1629	0.10726		
105	165.82	-0.9695	7.5793	0.07874	165.88	-0.9698	7.6305	0.07795	165.94	-0.9701	7.6824	0.07719		
110	168.14	-0.9787	11.0397	0.05852	168.20	-0.9789	11.1264	0.05790	168.26	-0.9791	11.2144	0.05728		
115	170.00	-0.9848	15.6357	0.04490	170.05	-0.9850	15.7723	0.04440	170.10	-0.9851	15.9109	0.04390		
120	171.52	-0.9891	21.4433	0.03552	171.56	-0.9892	21.6454	0.03511	171.60	-0.9893	21.8507	0.03471		
125	172.77	-0.9920	28.4506	0.02892	172.81	-0.9921	28.7339	0.02858	172.84	-0.9922	29.0218	0.02824		
130	173.82	-0.9942	36.5505	0.02416	173.86	-0.9943	36.9296	0.02387	173.89	-0.9943	37.3147	0.02358		
135	174.73	-0.9958	45.5431	0.02067	174.76	-0.9958	46.0298	0.02042	174.79	-0.9959	46.5244	0.02017		
140	175.52	-0.9969	55.1443	0.01807	175.55	-0.9970	55.7471	0.01784	175.57	-0.9970	56.3599	0.01762		
145	176.23	-0.9978	65.0023	0.01610	176.25	-0.9979	65.7252	0.01590	176.27	-0.9979	66.4602	0.01570		
150	176.87	-0.9985	74.7185	0.01461	176.89	-0.9985	75.5606	0.01443	176.90	-0.9985	76.4167	0.01425		
155	177.46	-0.9990	83.8725	0.01349	177.47	-0.9990	84.8272	0.01332	177.49	-0.9990	85.7979	0.01315		
160	178.01	-0.9994	92.0483	0.01265	178.02	-0.9994	93.1039	0.01249	178.03	-0.9994	94.1773	0.01233		
165	178.53	-0.9997	98.8610	0.01204	178.54	-0.9997	100.0010	0.01189	178.55	-0.9997	101.1602	0.01173		
170	179.03	-0.9999	103.9821	0.01163	179.04	-0.9999	105.1855	0.01148	179.04	-0.9999	106.4093	0.01133		
175	179.52	-1.0000	107.1601	0.01139	179.52	-1.0000	108.4030	0.01124	179.52	-1.0000	109.6669	0.01110		
180	180.00	-1.0000	108.2374	0.01131	180.00	-1.0000	109.4936	0.01116	180.00	-1.0000	110.7711	0.01102		

x = 0.820					x = 0.821					x = 0.822				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2754	4.42814	0.00	1.0000	0.2752	4.42531	0.00	1.0000	0.2751	4.42249		
5	9.53	0.9862	0.2764	4.39768	9.53	0.9862	0.2763	4.39485	9.53	0.9862	0.2761	4.39203		
10	19.05	0.9453	0.2796	4.30722	19.05	0.9452	0.2794	4.30440	19.06	0.9452	0.2793	4.30157		
15	28.55	0.8784	0.2850	4.15949	28.56	0.8783	0.2849	4.15667	28.57	0.8782	0.2847	4.15385		
20	38.04	0.7876	0.2929	3.95994	38.05	0.7874	0.2927	3.95613	38.06	0.7873	0.2926	3.95332		
25	47.50	0.6756	0.3036	3.71152	47.52	0.6754	0.3034	3.70881	47.53	0.6752	0.3032	3.70601		
30	56.92	0.5458	0.3175	3.42495	56.94	0.5455	0.3173	3.42216	56.96	0.5453	0.3171	3.41938		
35	66.29	0.4021	0.3353	3.10756	66.31	0.4017	0.3352	3.10478	66.33	0.4014	0.3350	3.10201		
40	75.60	0.2488	0.3581	2.76892	75.62	0.2483	0.3579	2.76616	75.65	0.2479	0.3577	2.76342		
45	84.82	0.0904	0.3872	2.41910	84.84	0.0899	0.3870	2.41638	84.87	0.0894	0.3868	2.41366		
50	93.92	-0.0684	0.4247	2.06943	93.96	-0.0690	0.4245	2.06674	93.99	-0.0696	0.4243	2.06406		
55	102.88	-0.2230	0.4736	1.72708	102.92	-0.2236	0.4733	1.72445	102.96	-0.2243	0.4731	1.72181		
60	111.65	-0.3689	0.5387	1.40472	111.69	-0.3696	0.5385	1.40215	111.74	-0.3703	0.5383	1.39958		
65	120.15	-0.5023	0.6277	1.11004	120.20	-0.5031	0.6276	1.10756	120.26	-0.5038	0.6274	1.10508		
70	128.31	-0.6200	0.7534	0.85026	128.37	-0.6207	0.7534	0.84790	128.43	-0.6215	0.7533	0.84554		
75	136.01	-0.7194	0.9374	0.63055	136.07	-0.7202	0.9377	0.62835	136.13	-0.7210	0.9380	0.62615		
80	143.10	-0.7997	1.2171	0.45335	143.17	-0.8004	1.2181	0.45135	143.24	-0.8011	1.2192	0.44935		
85	149.43	-0.8610	1.6561	0.31777	149.51	-0.8617	1.6589	0.31602	149.58	-0.8623	1.6616	0.31426		
90	154.90	-0.9055	2.3570	0.21951	154.97	-0.9061	2.3636	0.21803	155.05	-0.9066	2.3702	0.21654		
95	159.43	-0.9363	3.4706	0.15163	159.51	-0.9367	3.4851	0.15042	159.58	-0.9372	3.4996	0.14921		
100	163.10	-0.9568	5.1915	0.10629	163.17	-0.9572	5.2204	0.10532	163.24	-0.9575	5.2497	0.10435		
105	166.01	-0.9703	7.7350	0.07642	166.07	-0.9706	7.7883	0.07565	166.13	-0.9709	7.8424	0.07489		
110	168.31	-0.9793	11.3036	0.05667	168.37	-0.9795	11.3941	0.05606	168.43	-0.9797	11.4859	0.05546		
115	170.15	-0.9853	16.0517	0.04341	170.20	-0.9854	16.1946	0.04292	170.26	-0.9856	16.3397	0.04243		
120	171.65	-0.9894	22.0592	0.03430	171.69	-0.9895	22.2710	0.03390	171.74	-0.9896	22.4861	0.03350		
125	172.88	-0.9923	29.3142	0.02790	172.92	-0.9924	29.6114	0.02757	172.96	-0.9925	29.9134	0.02723		
130	173.92	-0.9944	37.7051	0.02330	173.96	-0.9944	38.1039	0.02301	173.99	-0.9945	38.5083	0.02273		
135	174.82	-0.9959	47.0272	0.01992	174.84	-0.9960	47.5384	0.01957	174.87	-0.9960	48.0580	0.01943		
140	175.60	-0.9970	56.9828	0.01740	175.62	-0.9971	57.6162	0.01718	175.65	-0.9971	58.2602	0.01697		
145	176.29	-0.9979	67.2074	0.01551	176.31	-0.9979	67.9673	0.01531	176.33	-0.9980	68.7399	0.01512		
150	176.92	-0.9986	77.2871	0.01407	176.94	-0.9986	78.1723	0.01389	176.96	-0.9986	79.0725	0.01371		
155	177.50	-0.9990	86.7850	0.01298	177.52	-0.9991	87.7888	0.01282	177.53	-0.9991	88.8097	0.0125		

2 x = 0.823					2 x = 0.824					2 x = 0.825				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2749	4.41967	0.00	1.0000	0.2748	4.41586	0.00	1.0000	0.2746	4.41405		
5	9.53	0.9862	0.2760	4.38921	9.54	0.9862	0.2758	4.38540	9.54	0.9862	0.2756	4.38359		
10	19.06	0.9452	0.2791	4.29876	19.07	0.9451	0.2790	4.29595	19.07	0.9451	0.2788	4.29315		
15	28.58	0.8782	0.2845	4.15104	28.59	0.8781	0.2844	4.14824	28.60	0.8780	0.2842	4.14544		
20	38.08	0.7872	0.2924	3.95051	38.09	0.7871	0.2922	3.94772	38.10	0.7869	0.2921	3.94492		
25	47.54	0.6750	0.3030	3.70322	47.56	0.6748	0.3029	3.70043	47.57	0.6746	0.3027	3.69765		
30	56.97	0.5450	0.3169	3.41659	56.99	0.5448	0.3168	3.41382	57.01	0.5445	0.3166	3.41105		
35	66.36	0.4011	0.3348	3.09925	66.38	0.4007	0.3346	3.09649	66.40	0.4004	0.3344	3.09374		
40	75.67	0.2475	0.3576	2.76067	75.70	0.2471	0.3574	2.75794	75.72	0.2466	0.3572	2.75521		
45	84.90	0.0889	0.3866	2.41095	84.93	0.0883	0.3864	2.40824	84.96	0.0878	0.3862	2.40554		
50	94.02	-0.0702	0.4240	2.06039	94.06	-0.0707	0.4238	2.05772	94.09	-0.0713	0.4236	2.05505		
55	103.00	-0.2249	0.4729	1.71919	103.04	-0.2256	0.4727	1.71657	103.08	-0.2262	0.4725	1.71395		
60	111.78	-0.3711	0.5381	1.39702	111.83	-0.3718	0.5379	1.39447	111.87	-0.3725	0.5377	1.39191		
65	120.31	-0.5046	0.6273	1.10261	120.36	-0.5054	0.6271	1.10014	120.41	-0.5061	0.6270	1.09767		
70	128.48	-0.6223	0.7533	0.84319	128.54	-0.6231	0.7533	0.84084	128.60	-0.6238	0.7532	0.83849		
75	136.20	-0.7217	0.9382	0.62395	136.26	-0.7225	0.9385	0.62176	136.32	-0.7233	0.9388	0.61957		
80	143.31	-0.8016	1.2202	0.44735	143.37	-0.8026	1.2212	0.44536	143.44	-0.8033	1.2222	0.44337		
85	149.65	-0.8630	1.6644	0.31251	149.73	-0.8636	1.6672	0.31076	149.80	-0.8643	1.6700	0.30902		
90	155.12	-0.9072	2.3769	0.21507	155.20	-0.9077	2.3837	0.21359	155.27	-0.9083	2.3905	0.21212		
95	159.65	-0.9376	3.5143	0.14801	159.73	-0.9381	3.5292	0.14680	159.80	-0.9385	3.5442	0.14561		
100	163.31	-0.9578	5.2794	0.10339	163.37	-0.9582	5.3094	0.10244	163.44	-0.9585	5.3398	0.10148		
105	166.20	-0.9711	7.8972	0.07413	166.26	-0.9714	7.9527	0.07337	166.32	-0.9716	8.0090	0.07262		
110	168.48	-0.9799	11.5791	0.05486	168.54	-0.9801	11.6737	0.05426	168.60	-0.9803	11.7697	0.05366		
115	170.31	-0.9857	16.4870	0.04195	170.36	-0.9859	16.6367	0.04147	170.41	-0.9860	16.7886	0.04099		
120	171.78	-0.9897	22.7047	0.03311	171.83	-0.9898	22.9267	0.03272	171.87	-0.9899	23.1524	0.03233		
125	173.00	-0.9925	30.2203	0.02690	173.04	-0.9926	30.5323	0.02658	173.08	-0.9927	30.8493	0.02625		
130	174.02	-0.9946	38.9194	0.02245	174.06	-0.9946	39.3373	0.02217	174.09	-0.9947	39.7622	0.02189		
135	174.90	-0.9960	48.5864	0.01918	174.93	-0.9961	49.1236	0.01894	174.96	-0.9961	49.6700	0.01870		
140	175.67	-0.9971	58.9150	0.01675	175.70	-0.9972	59.5810	0.01654	175.72	-0.9972	60.2584	0.01633		
145	176.36	-0.9980	69.5257	0.01492	176.38	-0.9980	70.3249	0.01473	176.40	-0.9980	71.1379	0.01454		
150	176.97	-0.9986	79.9881	0.01354	176.99	-0.9986	80.9194	0.01336	177.01	-0.9986	81.8668	0.01319		
155	177.54	-0.9991	89.8481	0.01249	177.56	-0.9991	90.9044	0.01233	177.57	-0.9991	91.9790	0.01217		
160	178.08	-0.9994	98.6565	0.01171	178.09	-0.9994	99.8248	0.01156	178.10	-0.9994	101.0134	0.01141		
165	178.58	-0.9997	105.9976	0.01114	178.59	-0.9997	107.2595	0.01100	178.60	-0.9997	108.5434	0.01085		
170	179.06	-0.9999	111.5166	0.01076	179.07	-0.9999	112.8489	0.01062	179.07	-0.9999	114.2045	0.01048		
175	179.53	-1.0000	114.9418	0.01054	179.54	-1.0000	116.3179	0.01040	179.54	-1.0000	117.7180	0.01026		
180	180.00	-1.0000	116.1029	0.01047	180.00	-1.0000	117.4938	0.01033	180.00	-1.0000	118.9091	0.01019		

2 x = 0.826					2 x = 0.827					2 x = 0.828				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2744	4.41125	0.00	1.0000	0.2743	4.40845	0.00	1.0000	0.2741	4.40566		
5	9.54	0.9862	0.2755	4.33079	9.55	0.9862	0.2753	4.32800	9.55	0.9861	0.2752	4.32521		
10	19.08	0.9451	0.2786	4.29035	19.09	0.9450	0.2785	4.28756	19.09	0.9450	0.2783	4.28477		
15	28.60	0.8779	0.2840	4.14255	28.61	0.8779	0.2839	4.13985	28.62	0.8778	0.2837	4.13708		
20	38.11	0.7868	0.2919	3.94214	38.12	0.7867	0.2917	3.93936	38.13	0.7866	0.2916	3.93659		
25	47.59	0.6745	0.3025	3.69487	47.60	0.6743	0.3024	3.69210	47.62	0.6741	0.3022	3.68934		
30	57.03	0.5442	0.3164	3.40829	57.05	0.5440	0.3162	3.40553	57.06	0.5437	0.3161	3.40278		
35	66.42	0.4000	0.3342	3.09099	66.44	0.3997	0.3341	3.08825	66.46	0.3994	0.3339	3.08551		
40	75.75	0.2462	0.3570	2.75248	75.77	0.2458	0.3568	2.74976	75.80	0.2454	0.3566	2.74705		
45	84.99	0.0873	0.3860	2.40294	85.02	0.0868	0.3858	2.40015	85.05	0.0863	0.3856	2.39746		
50	94.12	-0.0719	0.4234	2.05239	94.16	-0.0725	0.4232	2.04973	94.19	-0.0731	0.4230	2.04708		
55	103.11	-0.2269	0.4723	1.71134	103.15	-0.2276	0.4721	1.70873	103.19	-0.2282	0.4719	1.70612		
60	111.91	-0.3732	0.5375	1.38937	111.96	-0.3739	0.5373	1.38682	112.00	-0.3746	0.5371	1.38428		
65	120.46	-0.5069	0.6268	1.09521	120.51	-0.5076	0.6266	1.09276	120.56	-0.5084	0.6265	1.09030		
70	128.65	-0.6246	0.7532	0.83615	128.71	-0.6254	0.7532	0.83381	128.77	-0.6262	0.7532	0.83147		
75	136.39	-0.7240	0.9391	0.61738	136.45	-0.7248	0.9393	0.61520	136.51	-0.7256	0.9396	0.61301		
80	143.51	-0.8040	1.2233	0.44139	143.58	-0.8047	1.2243	0.43940	143.65	-0.8054	1.2254	0.43742		
85	149.88	-0.8649	1.6728	0.30728	149.95	-0.8656	1.6757	0.30554	150.02	-0.8662	1.6785	0.30331		
90	155.35	-0.9088	2.3973	0.21065	155.42	-0.9094	2.4042	0.20919	155.50	-0.9099	2.4112	0.20703		
95	159.88	-0.9389	3.5594	0.14441	159.95	-0.9394	3.5748	0.14322	160.02	-0.9398	3.5903	0.14204		
100	163.51	-0.9589	5.3706	0.10054	163.58	-0.9592	5.4018	0.09959	163.65	-0.9596	5.4334	0.09865		
105	166.39	-0.9719	8.0661	0.07189	166.45	-0.9722	8.1241	0.07113	166.51	-0.9724	8.1828	0.07039		
110	168.65	-0.9805	11.8672	0.05307	168.71	-0.9806	11.9661	0.05249	168.77	-0.9808	12.0665	0.05190		
115	170.46	-0.9862	16.9430	0.04052	170.51	-0.9863	17.0998	0.04005	170.56	-0.9864	17.2591	0.03958		
120	171.91	-0.9901	23.3817	0.03194	171.96	-0.9902	23.6148	0.03155	172.00	-0.9903	23.8517	0.03117		
125	173.11	-0.9928	31.1717	0.02593	173.15	-0.9929	31.4994	0.02561	173.19	-0.9929	31.8327	0.02529		
130	174.12	-0.9947	40.1943	0.02152	174.16	-0.9948	40.6337	0.02135	174.19	-0.9949	41.0806	0.02108		
135	174.99	-0.9962	50.2256	0.01847	175.02	-0.9962	50.7908	0.01823	175.05	-0.9963	51.3657	0.01800		
140	175.75	-0.9972	60.9474	0.01612	175.77	-0.9973	61.6483	0.01591	175.80	-0.9973	62.3614	0.01571		
145	176.42	-0.9980	71.9649	0.01433	176.44	-0.9981	72.8063	0.01417	176.46	-0.9981	73.6624	0.01399		
150	177.03	-0.9987	82.8307	0.01302	177.05	-0.9987	83.8114	0.01285	177.06	-0.9987	84.8093	0.01268		
155	177.59	-0.9991	93.0724	0.01201	177.60	-0.9991	94.1849	0.01185	177.62	-0.9991				

x = 0.829					x = 0.830					x = 0.831				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2740	4.40288	0.00	1.0000	0.2738	4.40010	0.00	1.0000	0.2737	4.39733		
5	9.55	0.9861	0.2750	4.37243	9.55	0.9861	0.2749	4.36955	9.56	0.9861	0.2747	4.36688		
10	19.10	0.9450	0.2782	4.28199	19.10	0.9449	0.2780	4.27922	19.11	0.9449	0.2778	4.27645		
15	28.63	0.8777	0.2836	4.13430	28.64	0.8777	0.2834	4.13154	28.65	0.8776	0.2832	4.12877		
20	38.14	0.7865	0.2914	3.93382	38.16	0.7863	0.2912	3.93106	38.17	0.7862	0.2911	3.92830		
25	47.63	0.6739	0.3020	3.68658	47.65	0.6737	0.3018	3.68383	47.66	0.6735	0.3017	3.68108		
30	57.08	0.5435	0.3159	3.40003	57.10	0.5432	0.3157	3.39729	57.12	0.5429	0.3155	3.39455		
35	66.48	0.3990	0.3337	3.08278	66.50	0.3987	0.3335	3.08006	66.52	0.3984	0.3333	3.07734		
40	75.82	0.2450	0.3564	2.74434	75.85	0.2445	0.3562	2.74163	75.87	0.2441	0.3560	2.73893		
45	85.08	0.0858	0.3854	2.39478	85.11	0.0853	0.3852	2.39210	85.14	0.0848	0.3850	2.38943		
50	94.23	-0.0737	0.4228	2.04444	94.26	-0.0743	0.4226	2.04179	94.29	-0.0748	0.4224	2.03916		
55	103.23	-0.2289	0.4717	1.70353	103.27	-0.2295	0.4715	1.70093	103.31	-0.2302	0.4713	1.69834		
60	112.05	-0.3754	0.5359	1.38175	112.09	-0.3761	0.5367	1.37922	112.14	-0.3768	0.5365	1.37669		
65	120.61	-0.5092	0.6263	1.08786	120.66	-0.5099	0.6262	1.08541	120.71	-0.5107	0.6260	1.08297		
70	128.82	-0.6269	0.7531	0.82914	128.88	-0.6277	0.7531	0.82681	128.94	-0.6285	0.7531	0.82448		
75	136.58	-0.7263	0.9399	0.61084	136.64	-0.7271	0.9402	0.60866	136.71	-0.7278	0.9405	0.60649		
80	143.72	-0.8062	1.2264	0.43545	143.79	-0.8069	1.2275	0.43347	143.86	-0.8076	1.2285	0.43150		
85	150.10	-0.8669	1.6814	0.30208	150.17	-0.8675	1.6843	0.30035	150.25	-0.8682	1.6873	0.29862		
90	155.57	-0.9105	2.4183	0.20627	155.65	-0.9110	2.4254	0.20482	155.73	-0.9116	2.4325	0.20337		
95	160.10	-0.9403	3.6060	0.14085	160.17	-0.9407	3.6219	0.13967	160.25	-0.9412	3.6380	0.13850		
100	163.72	-0.9599	5.4654	0.09771	163.79	-0.9603	5.4978	0.09670	163.86	-0.9606	5.5307	0.09585		
105	166.58	-0.9727	8.2424	0.06966	166.64	-0.9729	8.3029	0.06892	166.71	-0.9732	8.3642	0.06819		
110	168.82	-0.9810	12.1685	0.05132	168.88	-0.9812	12.2720	0.05074	168.94	-0.9814	12.3772	0.05016		
115	170.61	-0.9866	17.4210	0.03911	170.66	-0.9867	17.5855	0.03865	170.71	-0.9869	17.7527	0.03819		
120	172.05	-0.9904	24.0925	0.03079	172.09	-0.9905	24.3373	0.03042	172.14	-0.9906	24.5863	0.03004		
125	173.23	-0.9930	32.1716	0.02498	173.27	-0.9931	32.5162	0.02466	173.31	-0.9932	32.8667	0.02435		
130	174.23	-0.9949	41.5352	0.02081	174.26	-0.9950	41.9976	0.02055	174.29	-0.9950	42.4680	0.02028		
135	175.08	-0.9963	51.9506	0.01777	175.11	-0.9964	52.5458	0.01754	175.14	-0.9964	53.1513	0.01731		
140	175.82	-0.9973	63.0870	0.01550	175.85	-0.9974	63.8254	0.01530	175.87	-0.9974	64.5768	0.01510		
145	176.48	-0.9981	74.5336	0.01380	176.50	-0.9981	75.4202	0.01362	176.52	-0.9982	76.3226	0.01344		
150	177.08	-0.9987	85.8249	0.01251	177.10	-0.9987	86.8585	0.01235	177.12	-0.9987	87.9106	0.01218		
155	177.63	-0.9991	96.4693	0.01154	177.65	-0.9992	97.6421	0.01139	177.66	-0.9992	98.8359	0.01124		
160	178.14	-0.9995	105.9806	0.01082	178.16	-0.9995	107.2781	0.01067	178.17	-0.9995	108.5990	0.01053		
165	178.63	-0.9997	113.9090	0.01029	178.64	-0.9997	115.3107	0.01015	178.65	-0.9997	116.7377	0.01002		
170	179.10	-0.9999	119.8702	0.00994	179.10	-0.9999	121.3503	0.00980	179.11	-0.9999	122.8572	0.00967		
175	179.55	-1.0000	123.5701	0.00973	179.55	-1.0000	125.0990	0.00960	179.56	-1.0000	126.6555	0.00947		
180	180.00	-1.0000	124.8243	0.00956	180.00	-1.0000	126.3698	0.00953	180.00	-1.0000	127.9431	0.00941		

x = 0.832					x = 0.833					x = 0.834				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2735	4.39457	0.00	1.0000	0.2733	4.39181	0.00	1.0000	0.2732	4.38906		
5	9.56	0.9861	0.2745	4.36412	9.56	0.9861	0.2744	4.36136	9.57	0.9861	0.2742	4.35861		
10	19.11	0.9449	0.2777	4.27369	19.12	0.9448	0.2775	4.27093	19.12	0.9448	0.2774	4.26818		
15	28.66	0.8775	0.2831	4.12601	28.66	0.8775	0.2829	4.12326	28.67	0.8774	0.2827	4.12052		
20	38.18	0.7861	0.2909	3.92555	38.19	0.7860	0.2907	3.92280	38.20	0.7859	0.2906	3.92006		
25	47.67	0.6733	0.3015	3.67834	47.69	0.6732	0.3013	3.67560	47.70	0.6730	0.3012	3.67287		
30	57.13	0.5427	0.3154	3.39182	57.15	0.5424	0.3152	3.38910	57.17	0.5422	0.3150	3.38638		
35	66.55	0.3980	0.3331	3.07462	66.57	0.3977	0.3330	3.07192	66.59	0.3973	0.3328	3.06921		
40	75.90	0.2437	0.3558	2.73624	75.92	0.2433	0.3556	2.73355	75.95	0.2428	0.3555	2.73087		
45	85.16	0.0843	0.3848	2.38676	85.19	0.0838	0.3846	2.38410	85.22	0.0833	0.3844	2.38144		
50	94.33	-0.0754	0.4222	2.03653	94.36	-0.0760	0.4220	2.03390	94.39	-0.0766	0.4218	2.03128		
55	103.35	-0.2308	0.4711	1.69576	103.39	-0.2315	0.4709	1.69318	103.42	-0.2322	0.4707	1.69061		
60	112.18	-0.3775	0.5363	1.37417	112.22	-0.3782	0.5361	1.37166	112.27	-0.3789	0.5359	1.36914		
65	120.76	-0.5114	0.6259	1.08054	120.81	-0.5122	0.6257	1.07810	120.86	-0.5129	0.6256	1.07567		
70	129.00	-0.6293	0.7530	0.82216	129.05	-0.6300	0.7530	0.81985	129.11	-0.6308	0.7530	0.81753		
75	136.77	-0.7286	0.9407	0.60433	136.83	-0.7294	0.9410	0.60216	136.90	-0.7301	0.9413	0.60000		
80	143.93	-0.8083	1.2296	0.42954	144.00	-0.8091	1.2306	0.42757	144.07	-0.8098	1.2317	0.42561		
85	150.32	-0.8688	1.6902	0.29690	150.40	-0.8695	1.6931	0.29518	150.47	-0.8701	1.6961	0.29347		
90	155.80	-0.9121	2.4397	0.20192	155.88	-0.9127	2.4470	0.20048	155.96	-0.9132	2.4544	0.19904		
95	160.32	-0.9416	3.6542	0.13733	160.40	-0.9420	3.6706	0.13616	160.47	-0.9425	3.6872	0.13500		
100	163.93	-0.9609	5.5640	0.09492	164.00	-0.9613	5.5977	0.09400	164.07	-0.9616	5.6318	0.09308		
105	166.77	-0.9735	8.4264	0.06747	166.83	-0.9737	8.4895	0.06675	166.90	-0.9740	8.5536	0.06603		
110	169.00	-0.9816	12.4840	0.04959	169.05	-0.9818	12.5925	0.04902	169.11	-0.9820	12.7027	0.04846		
115	170.76	-0.9870	17.9226	0.03773	170.81	-0.9872	18.0952	0.03728	170.86	-0.9873	18.2708	0.03683		
120	172.18	-0.9907	24.8394	0.02967	172.22	-0.9908	25.0968	0.02930	172.27	-0.9909	25.3586	0.02894		
125	173.35	-0.9933	33.2233	0.02404	173.39	-0.9933	33.5860	0.02374	173.42	-0.9934	33.9551	0.02343		
130	174.33	-0.9951	42.9467	0.02002	174.36	-0.9952	43.4337	0.01976	174.39	-0.9952	43.9234	0.01950		
135	175.16	-0.9964	53.7676	0.01708	175.19	-0.9965	54.3948	0.01686	175.22	-0.9965	55.0332	0.01664		
140	175.90	-0.9974	65.3416	0.01490	175.92	-0.9975	66.1201	0.01470	175.95	-0.9975	66.9126	0.01451		
145	176.55	-0.9982	77.2412	0.01326	176.57	-0.9982	78.1763	0.01308	176.59	-0.9982	79.1284	0.01291		
150	177.13	-0.9987	88.9817	0.01202	177.15	-0.9988	90.0721	0.01186	177.17	-0.9988	91.1824	0.01170		
155	177.67	-0.9992	100.0813	0.01086	177.69	-0.9992	101.2888	0.01093	177.70	-0.9992	102.5489	0.01079		
160	178.18	-0												

x = 0.835					x = 0.836					x = 0.837				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2730	4.38531	0.00	1.0000	0.2729	4.38357	0.00	1.0000	0.2727	4.38083		
5	9.57	0.9861	0.2741	4.35587	9.57	0.9861	0.2739	4.35312	9.57	0.9861	0.2738	4.35038		
10	19.13	0.9448	0.2772	4.26544	19.14	0.9447	0.2771	4.25270	19.14	0.9447	0.2769	4.25997		
15	28.68	0.8773	0.2826	4.11778	28.69	0.8772	0.2824	4.11504	28.70	0.8772	0.2823	4.11231		
20	38.21	0.7857	0.2904	3.81733	38.22	0.7856	0.2902	3.81460	38.23	0.7856	0.2901	3.81188		
25	47.77	0.6724	0.3010	3.57014	47.73	0.6726	0.3008	3.56743	47.75	0.6724	0.3007	3.56471		
30	57.19	0.5419	0.3148	3.38357	57.20	0.5416	0.3147	3.38096	57.22	0.5414	0.3145	3.37826		
35	66.61	0.3970	0.3326	3.08552	66.63	0.3967	0.3324	3.08302	66.65	0.3963	0.3322	3.08014		
40	75.97	0.2424	0.3553	2.72019	76.00	0.2420	0.3551	2.72552	76.02	0.2416	0.3549	2.72285		
45	85.25	0.0828	0.3842	2.37579	85.28	0.0823	0.3840	2.37515	85.31	0.0818	0.3838	2.37351		
50	94.43	-0.0772	0.4212	2.02858	94.46	-0.0778	0.4214	2.02605	94.49	-0.0784	0.4212	2.02345		
55	103.46	-0.2328	0.4704	1.68804	103.50	-0.2335	0.4702	1.68547	103.54	-0.2341	0.4700	1.68291		
60	112.31	-0.3797	0.5357	1.36804	112.36	-0.3804	0.5355	1.36413	112.40	-0.3811	0.5353	1.36163		
65	120.91	-0.5137	0.6254	1.07325	120.96	-0.5145	0.6253	1.07033	121.01	-0.5152	0.6251	1.06841		
70	129.17	-0.6316	0.7529	0.81522	129.23	-0.6324	0.7529	0.81291	129.28	-0.6332	0.7528	0.81061		
75	136.96	-0.7309	0.9416	0.59784	137.03	-0.7317	0.9419	0.59569	137.09	-0.7325	0.9421	0.59354		
80	144.15	-0.8105	1.2328	0.42365	144.22	-0.8112	1.2338	0.42170	144.29	-0.8120	1.2349	0.41975		
85	150.55	-0.8708	1.6991	0.29175	150.62	-0.8714	1.7021	0.29005	150.70	-0.8721	1.7052	0.28834		
90	156.03	-0.9138	2.4618	0.19750	156.11	-0.9143	2.4693	0.19517	156.19	-0.9149	2.4769	0.19474		
95	160.55	-0.9429	3.7040	0.13394	160.62	-0.9434	3.7210	0.13253	160.70	-0.9438	3.7382	0.13153		
100	164.15	-0.9620	5.6665	0.09217	164.22	-0.9623	5.7016	0.09125	164.29	-0.9626	5.7371	0.09035		
105	166.96	-0.9742	8.6186	0.06531	167.03	-0.9745	8.6846	0.06460	167.09	-0.9747	8.7516	0.06390		
110	169.17	-0.9822	12.8146	0.04790	169.23	-0.9824	12.9284	0.04734	169.28	-0.9826	13.0439	0.04679		
115	170.91	-0.9874	18.4493	0.03638	170.96	-0.9876	18.6307	0.03594	171.01	-0.9877	18.8153	0.03550		
120	172.31	-0.9910	25.6249	0.02857	172.36	-0.9911	25.8958	0.02821	172.40	-0.9912	26.1714	0.02785		
125	173.46	-0.9935	34.3306	0.02313	173.50	-0.9936	34.7128	0.02283	173.54	-0.9937	35.1018	0.02254		
130	174.43	-0.9953	44.4339	0.01925	174.46	-0.9953	44.9475	0.01899	174.49	-0.9954	45.4703	0.01874		
135	175.25	-0.9966	55.6831	0.01541	175.28	-0.9966	56.3448	0.01520	175.31	-0.9967	57.0185	0.01503		
140	175.97	-0.9975	67.7195	0.01311	176.00	-0.9976	68.5411	0.01412	176.02	-0.9976	69.3778	0.01393		
145	176.61	-0.9982	80.0978	0.01273	176.63	-0.9983	81.0850	0.01255	176.65	-0.9983	82.0905	0.01239		
150	177.19	-0.9988	92.3131	0.01154	177.20	-0.9988	93.4646	0.01138	177.22	-0.9988	94.6374	0.01123		
155	177.72	-0.9992	103.8321	0.01064	177.73	-0.9992	105.1391	0.01049	177.75	-0.9992	106.4704	0.01035		
160	178.21	-0.9995	114.1274	0.00997	178.22	-0.9995	115.5737	0.00983	178.23	-0.9995	116.9471	0.00969		
165	178.68	-0.9997	122.7107	0.00948	178.69	-0.9997	124.2735	0.00935	178.70	-0.9997	125.8655	0.00922		
170	179.13	-0.9999	129.1650	0.00915	179.14	-0.9999	130.8155	0.00903	179.14	-0.9999	132.4969	0.00890		
175	179.57	-1.0000	133.1714	0.00896	179.57	-1.0000	134.8763	0.00884	179.57	-1.0000	136.6132	0.00872		
180	180.00	-1.0000	134.5295	0.00890	180.00	-1.0000	136.2530	0.00878	180.00	-1.0000	138.0087	0.00866		

x = 0.838					x = 0.839					x = 0.840				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2726	4.37810	0.00	1.0000	0.2724	4.37537	0.00	1.0000	0.2723	4.37265		
5	9.58	0.9861	0.2736	4.34755	9.58	0.9861	0.2734	4.34493	9.58	0.9860	0.2733	4.34221		
10	19.15	0.9447	0.2767	4.25724	19.15	0.9447	0.2766	4.25452	19.16	0.9446	0.2764	4.25180		
15	28.71	0.8771	0.2821	4.10959	28.71	0.8770	0.2819	4.10687	28.72	0.8770	0.2818	4.10416		
20	38.25	0.7854	0.2899	3.90916	38.26	0.7852	0.2898	3.90645	38.27	0.7851	0.2896	3.90375		
25	47.76	0.6722	0.3005	3.66200	47.77	0.6721	0.3003	3.65930	47.79	0.6719	0.3002	3.65660		
30	57.24	0.5418	0.3143	3.37556	57.26	0.5409	0.3141	3.37287	57.27	0.5406	0.3140	3.37019		
35	66.67	0.3960	0.3321	3.08594	66.69	0.3956	0.3319	3.08329	66.71	0.3953	0.3317	3.08061		
40	76.05	0.2412	0.3547	2.72019	76.07	0.2407	0.3545	2.71753	76.09	0.2403	0.3543	2.71488		
45	85.34	0.0813	0.3837	2.37037	85.37	0.0808	0.3835	2.36824	85.40	0.0803	0.3833	2.36561		
50	94.53	-0.0789	0.4210	2.02034	94.56	-0.0795	0.4208	2.01825	94.60	-0.0801	0.4206	2.01565		
55	103.58	-0.2348	0.4698	1.68035	103.62	-0.2354	0.4696	1.67780	103.66	-0.2361	0.4694	1.67525		
60	112.45	-0.3818	0.5351	1.35914	112.49	-0.3825	0.5349	1.35665	112.54	-0.3832	0.5348	1.35416		
65	121.06	-0.5160	0.6250	1.06600	121.11	-0.5167	0.6248	1.06359	121.17	-0.5175	0.6246	1.06119		
70	129.34	-0.6339	0.7528	0.80831	129.40	-0.6347	0.7528	0.80601	129.46	-0.6355	0.7527	0.80372		
75	137.16	-0.7332	0.9424	0.59139	137.22	-0.7340	0.9427	0.58925	137.29	-0.7348	0.9430	0.58710		
80	144.36	-0.8127	1.2360	0.41780	144.43	-0.8134	1.2371	0.41585	144.50	-0.8141	1.2382	0.41391		
85	150.77	-0.8727	1.7082	0.28654	150.85	-0.8734	1.7113	0.28494	150.93	-0.8740	1.7144	0.28325		
90	156.27	-0.9154	2.4845	0.19332	156.34	-0.9160	2.4922	0.19189	156.42	-0.9165	2.5000	0.19048		
95	160.77	-0.9442	3.7556	0.13038	160.85	-0.9447	3.7732	0.12923	160.93	-0.9451	3.7910	0.12809		
100	164.36	-0.9630	5.7732	0.08945	164.43	-0.9633	5.8098	0.08855	164.50	-0.9636	5.8468	0.08765		
105	167.16	-0.9750	8.8197	0.06319	167.22	-0.9752	8.8887	0.06249	167.29	-0.9755	8.9589	0.06180		
110	169.34	-0.9827	13.1614	0.04623	169.40	-0.9829	13.2808	0.04569	169.46	-0.9831	13.4022	0.04514		
115	171.06	-0.9879	19.0029	0.03506	171.11	-0.9880	19.1938	0.03462	171.17	-0.9881	19.3880	0.03419		
120	172.45	-0.9913	26.4519	0.02750	172.49	-0.9914	26.7373	0.02714	172.54	-0.9915	27.0278	0.02679		
125	173.58	-0.9937	35.4977	0.02224	173.62	-0.9938	35.9007	0.02195	173.66	-0.9939	36.3110	0.02166		
130	174.53	-0.9954	46.0026	0.01849	174.56	-0.9955	46.5446	0.01825	174.60	-0.9956	47.0965	0.01800		
135	175.34	-0.9967	57.7045	0.01576	175.37	-0.9967	58.4033	0.01555	175.40	-0.9968	59.1150	0.01534		
140	176.05	-0.9976	70.2296	0.01374	176.07	-0.9976	71.0979	0.01355	176.09	-0.9977	71.9821	0.01336		
145	176.67	-0.9983	83.1146	0.01222	176.69	-0.9983	84.1579	0.01205	176.71	-0.9984	85.2208	0.01188		
150	177.24	-0.9988	95.8321	0.01107	177.26	-0.9989	97.0493	0.01092	177.27	-0.9989	98.2894	0.01077		
155	177.76	-0.9992	107.8266	0.01021	177.77	-0.9992	109.2084	0.01006	177.79	-0.9993	110.6164	0.00992		
160	178.25	-0.9995</												

$x = 0.841$					$x = 0.842$					$x = 0.843$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.2721	4.36994	0.00	1.0000	0.2719	4.36723	0.00	1.0000	0.2718	4.36453	0.00	1.0000
5	9.58	0.9860	0.2731	4.33950	9.59	0.9860	0.2730	4.33679	9.59	0.9860	0.2728	4.33409	9.59	0.9860
10	19.16	0.9446	0.2763	4.24909	19.17	0.9446	0.2761	4.24639	19.17	0.9445	0.2760	4.24369	19.17	0.9445
15	28.73	0.8769	0.2816	4.10146	28.74	0.8768	0.2815	4.09876	28.75	0.8768	0.2813	4.09606	28.75	0.8768
20	38.28	0.7850	0.2894	3.90105	38.29	0.7849	0.2893	3.89835	38.30	0.7848	0.2891	3.89566	38.30	0.7848
25	47.80	0.6717	0.3000	3.65391	47.82	0.6715	0.2998	3.65123	47.83	0.6713	0.2997	3.64855	47.83	0.6713
30	57.29	0.5404	0.3138	3.36751	57.31	0.5401	0.3136	3.36483	57.33	0.5398	0.3134	3.36216	57.33	0.5398
35	66.74	0.3950	0.3315	3.05044	66.76	0.3946	0.3313	3.04778	66.78	0.3943	0.3312	3.04513	66.78	0.3943
40	76.12	0.2399	0.3541	2.71224	76.14	0.2395	0.3540	2.70960	76.17	0.2391	0.3538	2.70696	76.17	0.2391
45	85.43	0.0798	0.3831	2.36299	85.45	0.0792	0.3829	2.36038	85.48	0.0787	0.3827	2.35777	85.48	0.0787
50	94.63	-0.0807	0.4204	2.01307	94.66	-0.0813	0.4202	2.01048	94.70	-0.0819	0.4200	2.00791	94.70	-0.0819
55	103.70	-0.2368	0.4692	1.67271	103.73	-0.2374	0.4690	1.67017	103.77	-0.2381	0.4688	1.66764	103.77	-0.2381
60	112.58	-0.3840	0.5346	1.35168	112.62	-0.3847	0.5344	1.34920	112.67	-0.3854	0.5342	1.34672	112.67	-0.3854
65	121.22	-0.5183	0.6245	1.05079	121.27	-0.5190	0.6243	1.05639	121.32	-0.5198	0.6242	1.05399	121.32	-0.5198
70	129.51	-0.6363	0.7527	0.80143	129.57	-0.6370	0.7527	0.79914	129.63	-0.6378	0.7526	0.79666	129.63	-0.6378
75	137.35	-0.7355	0.9433	0.58496	137.42	-0.7363	0.9435	0.58283	137.48	-0.7371	0.9438	0.58070	137.48	-0.7371
80	144.57	-0.8148	1.2393	0.41197	144.64	-0.8156	1.2404	0.41004	144.72	-0.8163	1.2415	0.40810	144.72	-0.8163
85	151.00	-0.8746	1.7175	0.28155	151.08	-0.8753	1.7206	0.27985	151.16	-0.8759	1.7238	0.27817	151.16	-0.8759
90	156.50	-0.9171	2.5078	0.18906	156.58	-0.9176	2.5158	0.18765	156.66	-0.9182	2.5238	0.18624	156.66	-0.9182
95	161.00	-0.9455	3.8090	0.12695	161.08	-0.9460	3.8273	0.12582	161.16	-0.9464	3.8457	0.12469	161.16	-0.9464
100	164.57	-0.9640	5.8844	0.08576	164.64	-0.9643	5.9225	0.08587	164.72	-0.9646	5.9612	0.08499	164.72	-0.9646
105	167.35	-0.9757	9.0301	0.06110	167.42	-0.9760	9.1024	0.06002	167.48	-0.9762	9.1759	0.05973	167.48	-0.9762
110	169.51	-0.9833	13.5255	0.04460	169.57	-0.9835	13.6510	0.04406	169.63	-0.9837	13.7785	0.04353	169.63	-0.9837
115	171.22	-0.9883	19.5855	0.03376	171.27	-0.9884	19.7865	0.03333	171.32	-0.9885	19.9910	0.03291	171.32	-0.9885
120	172.58	-0.9916	27.3234	0.02644	172.62	-0.9917	27.6244	0.02610	172.67	-0.9918	27.9308	0.02576	172.67	-0.9918
125	173.70	-0.9940	36.7288	0.02137	173.73	-0.9940	37.1543	0.02108	173.77	-0.9941	37.5876	0.02080	173.77	-0.9941
130	174.63	-0.9956	47.6587	0.01776	174.66	-0.9957	48.2313	0.01751	174.70	-0.9957	48.8146	0.01727	174.70	-0.9957
135	175.43	-0.9968	59.8399	0.01513	175.45	-0.9969	60.5785	0.01492	175.48	-0.9969	61.3311	0.01471	175.48	-0.9969
140	176.12	-0.9977	72.8830	0.01318	176.14	-0.9977	73.8009	0.01300	176.17	-0.9978	74.7363	0.01281	176.17	-0.9978
145	176.74	-0.9984	86.3038	0.01172	176.76	-0.9984	87.4074	0.01155	176.78	-0.9984	88.5322	0.01139	176.78	-0.9984
150	177.29	-0.9989	99.5531	0.01061	177.31	-0.9989	100.8410	0.01046	177.33	-0.9989	102.1537	0.01032	177.33	-0.9989
155	177.80	-0.9993	112.0512	0.00978	177.82	-0.9993	113.5135	0.00964	177.83	-0.9993	115.0041	0.00951	177.83	-0.9993
160	178.28	-0.9995	123.2239	0.00916	178.29	-0.9996	124.8427	0.00903	178.30	-0.9996	126.4927	0.00890	178.30	-0.9996
165	178.73	-0.9998	132.5405	0.00871	178.74	-0.9998	134.2898	0.00859	178.75	-0.9998	136.0732	0.00847	178.75	-0.9998
170	179.16	-0.9999	139.5469	0.00841	179.17	-0.9999	141.3947	0.00829	179.17	-0.9999	143.2784	0.00817	179.17	-0.9999
175	179.58	-1.0000	143.8963	0.00824	179.59	-1.0000	145.8053	0.00812	179.59	-1.0000	147.7513	0.00800	179.59	-1.0000
180	180.00	-1.0000	145.3709	0.00818	180.00	-1.0000	147.3005	0.00806	180.00	-1.0000	149.2677	0.00795	180.00	-1.0000

$x = 0.844$					$x = 0.845$					$x = 0.846$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.2716	4.35184	0.00	1.0000	0.2715	4.35915	0.00	1.0000	0.2713	4.35646	0.00	1.0000
5	9.59	0.9860	0.2727	4.33140	9.60	0.9860	0.2725	4.32871	9.60	0.9860	0.2724	4.32602	9.60	0.9860
10	19.18	0.9445	0.2758	4.24100	19.19	0.9445	0.2756	4.23831	19.19	0.9444	0.2755	4.23563	19.19	0.9444
15	28.76	0.8767	0.2810	4.09337	28.76	0.8766	0.2810	4.09069	28.77	0.8765	0.2808	4.08801	28.77	0.8765
20	38.31	0.7846	0.2889	3.89298	38.32	0.7845	0.2888	3.89030	38.34	0.7844	0.2886	3.88763	38.34	0.7844
25	47.85	0.6711	0.2995	3.64587	47.86	0.6709	0.2993	3.64320	47.87	0.6708	0.2992	3.64054	47.87	0.6708
30	57.34	0.5396	0.3133	3.35950	57.36	0.5393	0.3131	3.35684	57.38	0.5391	0.3129	3.35419	57.38	0.5391
35	66.80	0.3940	0.3310	3.04249	66.82	0.3936	0.3308	3.03983	66.84	0.3933	0.3306	3.03720	66.84	0.3933
40	76.19	0.2386	0.3536	2.70433	76.22	0.2382	0.3534	2.70170	76.24	0.2378	0.3532	2.69908	76.24	0.2378
45	85.51	0.0782	0.3825	2.35516	85.54	0.0777	0.3823	2.35256	85.57	0.0772	0.3821	2.34996	85.57	0.0772
50	94.73	-0.0825	0.4198	2.00533	94.76	-0.0830	0.4196	2.00277	94.80	-0.0836	0.4193	2.00020	94.80	-0.0836
55	103.81	-0.2387	0.4686	1.66511	103.85	-0.2394	0.4684	1.66258	103.89	-0.2400	0.4682	1.66006	103.89	-0.2400
60	112.71	-0.3861	0.5340	1.34425	112.76	-0.3868	0.5338	1.34179	112.80	-0.3876	0.5336	1.33932	112.80	-0.3876
65	121.37	-0.5205	0.6240	1.05160	121.42	-0.5213	0.6239	1.04922	121.47	-0.5221	0.6237	1.04674	121.47	-0.5221
70	129.69	-0.6386	0.7526	0.79458	129.75	-0.6394	0.7525	0.79231	129.80	-0.6402	0.7525	0.79003	129.80	-0.6402
75	137.55	-0.7378	0.9441	0.57857	137.61	-0.7386	0.9444	0.57644	137.68	-0.7394	0.9447	0.57432	137.68	-0.7394
80	144.79	-0.8170	1.2426	0.40617	144.86	-0.8177	1.2437	0.40424	144.93	-0.8185	1.2448	0.40232	144.93	-0.8185
85	151.23	-0.8766	1.7270	0.27649	151.31	-0.8772	1.7302	0.27481	151.39	-0.8779	1.7334	0.27313	151.39	-0.8779
90	156.74	-0.9187	2.5318	0.19483	156.82	-0.9192	2.5400	0.19343	156.89	-0.9198	2.5482	0.19203	156.89	-0.9198
95	161.23	-0.9468	3.8444	0.12356	161.31	-0.9473	3.8833	0.12244	161.39	-0.9477	3.9025	0.12132	161.39	-0.9477
100	164.79	-0.9650	6.0004	0.08411	164.86	-0.9653	6.0402	0.08323	164.93	-0.9656	6.0805	0.08236	164.93	-0.9656
105	167.55	-0.9765	9.2505	0.05905	167.61	-0.9767	9.3263	0.05837	167.68	-0.9770	9.4034	0.05770	167.68	-0.9770
110	169.69	-0.9838	13.9082	0.04300	169.75	-0.9840	14.0402	0.04247	169.80	-0.9842	14.1744	0.04194	169.80	-0.9842
115	171.37	-0.9887	20.1992	0.03249	171.42	-0.9888	20.4110	0.03207	171.47	-0.9889	20.6267	0.03165	171.47	-0.9889
120	172.71	-0.9919	28.2428	0.02541	172.76	-0.9920	28.5605	0.02508	172.80	-0.9921	28.8841	0.02474	172.80	-0.9921
125	173.81	-0.9942	38.0290	0.02052	173.85	-0.9942	38.4786	0.02024	173.89	-0.9943	38.9367	0.01996	173.89	-0.9943
130	174.73	-0.9958	49.4089	0.01704	174.76	-0.9958	50.0146	0.01680	174.80	-0.9959	50.6317	0.01657	174.80	-0.9959
135	175.51	-0.9969	62.0980	0.01451	175.54	-0.9970	62.8797	0.01430	175.57	-0.9970	63.6764	0.01410	175.57	-0.9970
140	176.19	-0.9978	75.6897	0.01253	176.22	-0.9978	76.6615	0.01245	176.24	-0.9979	77.6522	0.01228	176.24	-0.9979
145	176.80	-0.9984	89.6787	0.01123	176.82	-0.9985	90.8475	0.01107	176.84	-0.9985	92.0391	0.01091	176.84	-0.9985
150	177.34	-0.9989	103.4919	0.01017	177.36	-0.9989	104.8561	0.01002	177.38	-0.9990	106.2471	0.00988	177.38	-0.9990
155	177.85	-0.9993	116.5237	0.00937	177.87	-0.9993	118.0729	0.00924	177.87	-0.9993	119.6527	0.00910	177.87	-0.9993

$$x = 0.847$$

$$x = 0.848$$

$$x = 0.849$$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2712	4.35378	0.00	1.0000	0.2710	4.35111	0.00	1.0000	0.2709	4.34844
5	9.60	0.9860	0.2722	4.32334	9.60	0.9860	0.2721	4.32067	9.61	0.9860	0.2719	4.31800
10	19.20	0.9444	0.2753	4.23295	19.20	0.9444	0.2752	4.23028	19.21	0.9443	0.2750	4.22752
15	28.78	0.8765	0.2807	4.09534	28.79	0.8764	0.2805	4.09267	28.80	0.8763	0.2804	4.08001
20	38.35	0.7843	0.2865	3.89496	38.36	0.7841	0.2863	3.89230	38.37	0.7840	0.2861	3.87965
25	47.89	0.6706	0.2990	3.63789	47.90	0.6704	0.2988	3.63523	47.92	0.6702	0.2987	3.63258
30	57.40	0.5388	0.3128	3.38154	57.42	0.5385	0.3126	3.34890	57.43	0.5383	0.3124	3.34626
35	66.86	0.3929	0.3304	3.03453	66.88	0.3926	0.3303	3.03193	66.90	0.3923	0.3301	3.02931
40	76.27	0.2374	0.3530	2.69647	76.29	0.2369	0.3528	2.69386	76.32	0.2365	0.3526	2.69125
45	85.60	0.0767	0.3819	2.34737	85.63	0.0762	0.3817	2.34479	85.66	0.0757	0.3815	2.34221
50	94.83	-0.0842	0.4191	1.99724	94.86	-0.0848	0.4189	1.99509	94.90	-0.0854	0.4187	1.99254
55	103.93	-0.2407	0.4680	1.65755	103.97	-0.2414	0.4678	1.65504	104.01	-0.2420	0.4676	1.65253
60	112.85	-0.3883	0.5334	1.35037	112.89	-0.3890	0.5332	1.33441	112.94	-0.3897	0.5330	1.33196
65	121.52	-0.5228	0.6235	1.04446	121.57	-0.5236	0.6234	1.04208	121.62	-0.5243	0.6232	1.03971
70	129.86	-0.6409	0.7525	0.78776	129.92	-0.6417	0.7524	0.78550	129.98	-0.6425	0.7524	0.78323
75	137.74	-0.7401	0.9449	0.57220	137.81	-0.7409	0.9452	0.57008	137.88	-0.7417	0.9455	0.56797
80	145.00	-0.8192	1.2459	0.40039	145.08	-0.8199	1.2471	0.39847	145.15	-0.8207	1.2482	0.39656
85	151.47	-0.8785	1.7366	0.27145	151.54	-0.8792	1.7399	0.26978	151.62	-0.8798	1.7432	0.26811
90	156.97	-0.9203	2.5565	0.13054	157.05	-0.9209	2.5649	0.11924	157.13	-0.9214	2.5734	0.11786
95	161.47	-0.9481	3.9218	0.12020	161.54	-0.9486	3.9415	0.11909	161.62	-0.9490	3.9614	0.11798
100	165.00	-0.9659	6.1215	0.08149	165.08	-0.9663	6.1631	0.08023	165.15	-0.9666	6.2052	0.07977
105	167.74	-0.9772	9.4817	0.05703	167.81	-0.9775	9.5613	0.05336	167.88	-0.9777	9.6422	0.05559
110	169.86	-0.9844	14.3109	0.04142	169.92	-0.9846	14.4498	0.04090	169.98	-0.9847	14.5911	0.04039
115	171.52	-0.9891	20.8463	0.03124	171.57	-0.9892	21.0698	0.03023	171.62	-0.9899	21.2975	0.03042
120	172.85	-0.9922	29.2137	0.02441	172.89	-0.9923	29.5495	0.02408	172.94	-0.9924	29.8916	0.02375
125	173.93	-0.9944	39.4035	0.01959	173.97	-0.9945	39.8792	0.01941	174.01	-0.9945	40.3641	0.01914
130	174.83	-0.9959	51.2608	0.01633	174.86	-0.9960	51.9020	0.01610	174.90	-0.9960	52.5558	0.01583
135	175.60	-0.9971	64.4885	0.01390	175.63	-0.9971	65.3166	0.01370	175.66	-0.9971	66.1609	0.01351
140	176.27	-0.9979	78.6622	0.01210	176.29	-0.9979	79.6922	0.01193	176.32	-0.9979	80.7425	0.01175
145	176.86	-0.9985	93.2542	0.01075	176.88	-0.9985	94.4933	0.01050	176.90	-0.9985	95.7571	0.01044
150	177.40	-0.9990	107.6655	0.00974	177.42	-0.9990	109.1122	0.00959	177.43	-0.9990	110.5879	0.00945
155	177.89	-0.9993	121.2638	0.00937	177.90	-0.9993	122.9071	0.00924	177.92	-0.9993	124.5833	0.00911
160	178.35	-0.9996	133.4230	0.00904	178.36	-0.9996	135.2424	0.00882	178.37	-0.9996	137.0985	0.00885
165	178.78	-0.9998	143.5637	0.00799	178.79	-0.9998	145.5304	0.00787	178.80	-0.9998	147.5368	0.00775
170	179.20	-0.9999	151.1909	0.00771	179.20	-0.9999	153.2685	0.00759	179.21	-0.9999	155.3881	0.00748
175	179.60	-1.0000	155.9260	0.00755	179.60	-1.0000	158.0725	0.00744	179.61	-1.0000	160.2624	0.00733
180	180.00	-1.0000	157.5314	0.00749	180.00	-1.0000	159.7013	0.00738	180.00	-1.0000	161.9150	0.00727

$$x = 0.850$$

$$x = 0.851$$

$$x = 0.852$$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2707	4.34573	0.00	1.0000	0.2706	4.34312	0.00	1.0000	0.2704	4.34047
5	9.61	0.9860	0.2717	4.31534	9.61	0.9860	0.2716	4.31268	9.61	0.9860	0.2714	4.31003
10	19.21	0.9443	0.2749	4.22495	19.22	0.9443	0.2747	4.22230	19.22	0.9442	0.2746	4.21965
15	28.81	0.8763	0.2802	4.07735	28.81	0.8762	0.2800	4.07470	28.82	0.8761	0.2799	4.07206
20	38.38	0.7839	0.2880	3.87700	38.39	0.7838	0.2878	3.87435	38.40	0.7837	0.2876	3.87171
25	47.93	0.6700	0.2985	3.62994	47.95	0.6698	0.2983	3.62730	47.96	0.6696	0.2982	3.62467
30	57.45	0.5380	0.3122	3.34303	57.47	0.5378	0.3121	3.34100	57.49	0.5375	0.3119	3.33838
35	66.93	0.3919	0.3299	3.02609	66.95	0.3916	0.3297	3.02408	66.97	0.3913	0.3295	3.02147
40	76.34	0.2361	0.3525	2.68855	76.37	0.2357	0.3523	2.68606	76.39	0.2353	0.3521	2.68347
45	85.69	0.0752	0.3813	2.33963	85.72	0.0747	0.3811	2.33706	85.74	0.0742	0.3809	2.33449
50	94.93	-0.0860	0.4185	1.98999	94.96	-0.0865	0.4183	1.98745	95.00	-0.0871	0.4181	1.98492
55	104.04	-0.2427	0.4674	1.65003	104.08	-0.2433	0.4671	1.64753	104.12	-0.2440	0.4669	1.64503
60	112.98	-0.3894	0.5328	1.32952	113.03	-0.3911	0.5326	1.32707	113.07	-0.3919	0.5324	1.32464
65	121.68	-0.5251	0.6231	1.03734	121.73	-0.5259	0.6229	1.03498	121.78	-0.5266	0.6227	1.03262
70	130.04	-0.6433	0.7523	0.78098	130.10	-0.6441	0.7523	0.77872	130.15	-0.6449	0.7523	0.77647
75	137.94	-0.7425	0.9458	0.56595	138.01	-0.7432	0.9461	0.56375	138.07	-0.7440	0.9464	0.56164
80	145.22	-0.8214	1.2493	0.39404	145.30	-0.8221	1.2505	0.39273	145.37	-0.8228	1.2516	0.39082
85	151.70	-0.8805	1.7465	0.26645	151.78	-0.8811	1.7498	0.26478	151.86	-0.8818	1.7532	0.26312
90	157.21	-0.9220	2.5820	0.12647	157.29	-0.9225	2.5906	0.11759	157.37	-0.9230	2.5994	0.11731
95	161.70	-0.9494	3.9815	0.11638	161.78	-0.9499	4.0019	0.11578	161.86	-0.9503	4.0225	0.11468
100	165.22	-0.9669	6.2480	0.07391	165.30	-0.9673	6.2915	0.07006	165.37	-0.9676	6.3356	0.07721
105	167.94	-0.9779	9.7244	0.05503	168.01	-0.9782	9.8080	0.05438	168.07	-0.9784	9.8930	0.05373
110	170.04	-0.9849	14.7350	0.03988	170.10	-0.9851	14.8814	0.03937	170.15	-0.9853	15.0304	0.03886
115	171.68	-0.9895	21.5293	0.03002	171.73	-0.9896	21.7655	0.02952	171.78	-0.9897	22.0061	0.02922
120	172.98	-0.9925	30.2402	0.02342	173.03	-0.9926	30.5955	0.02310	173.07	-0.9927	30.9576	0.02278
125	174.04	-0.9946	40.8583	0.01887	174.08	-0.9947	41.3622	0.01861	174.12	-0.9947	41.8760	0.01834
130	174.93	-0.9961	53.2223	0.01575	174.96	-0.9961	53.9020	0.01542	175.00	-0.9962	54.5953	0.01520
135	175.69	-0.9972	67.0220	0.01331	175.72	-0.9972	67.9003	0.01312	175.74	-0.9972	68.7962	0.01293
140	176.34	-0.9980	81.8139	0.01158	176.37	-0.9980	82.9067	0.01141	176.39	-0.9980	84.0217	0.01124
145	176.93	-0.9986	97.0463	0.01029	176.95	-0.9986	98.3615	0.01014	176.97	-0.9986	99.7035	0.00999
150	177.45	-0.9990	112.0932	0.00931	177.47	-0.9990	113.6292	0.00918	177.49	-0.9990	115.1964	0.00904
155	177.93	-0.9993	126.2934	0.00858	177.95	-0.9994	128.0383	0.00845	177.96	-0.9994	129.8189	0.00832
160	178.38	-0.9996	138.9822	0.00803	178.39	-0.9996	140.9244	0.00791	178.40	-0.9996	142.8964	0.00779
165	178.81	-0.9998	149.5838	0.00754	178.81	-0.9998	151.6727	0.00742	178.82	-0.9998	153.6045	0.00741
170	179.21	-0.9999	157.5507	0.00737	179.22	-0.9999	159.7575	0.00726	179.22	-0.9999	162.0097	0.00715
175	179.61	-1.0000	162.4968	0.00722	179.61	-1.0000	164.7769	0.00711	179.61	-1.0000	167.1039	0.00700
180	180.00	-1.0000	164.1737	0.00717	180.00	-1.0000	166.4787	0.00706	180.00	-1.0000	168.8311	0.00695

x = 0.853					x = 0.854					x = 0.855				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2703	4.33782	0.00	1.0000	0.2701	4.33518	0.00	1.0000	0.2700	4.33254		
5	9.62	0.9859	0.2713	4.30739	9.62	0.9859	0.2711	4.30475	9.62	0.9859	0.2710	4.30211		
10	19.23	0.9442	0.2744	4.21701	19.23	0.9442	0.2742	4.21437	19.24	0.9441	0.2741	4.21174		
15	28.83	0.8761	0.2797	4.06342	28.84	0.8760	0.2796	4.06078	28.85	0.8759	0.2794	4.06415		
20	38.41	0.7835	0.2875	3.86908	38.43	0.7834	0.2873	3.86645	38.44	0.7833	0.2872	3.86383		
25	47.97	0.6695	0.2980	3.62204	47.99	0.6693	0.2978	3.61942	48.00	0.6691	0.2977	3.61680		
30	57.50	0.5373	0.3117	3.33576	57.52	0.5370	0.3116	3.33315	57.54	0.5367	0.3114	3.33054		
35	66.99	0.3909	0.3294	3.01887	67.01	0.3906	0.3292	3.01627	67.03	0.3902	0.3290	3.01368		
40	76.42	0.2348	0.3519	2.58088	76.44	0.2344	0.3517	2.67830	76.47	0.2340	0.3515	2.67573		
45	85.77	0.0737	0.3807	2.33193	85.80	0.0732	0.3805	2.32937	85.83	0.0727	0.3803	2.32682		
50	95.03	-0.0877	0.4179	1.92239	95.07	-0.0883	0.4177	1.97986	95.10	-0.0889	0.4175	1.97734		
55	104.16	-0.2447	0.4667	1.35254	104.20	-0.2453	0.4665	1.64006	104.24	-0.2460	0.4663	1.63758		
60	113.12	-0.3926	0.5322	1.32220	113.16	-0.3933	0.5320	1.31977	113.20	-0.3940	0.5318	1.31735		
65	121.83	-0.5274	0.6226	1.03025	121.88	-0.5282	0.6224	1.02791	121.93	-0.5289	0.6223	1.02556		
70	130.21	-0.6456	0.7522	0.77422	130.27	-0.6464	0.7522	0.77197	130.33	-0.6472	0.7521	0.76973		
75	138.14	-0.7448	0.9466	0.55954	138.21	-0.7455	0.9469	0.55744	138.27	-0.7463	0.9472	0.55534		
80	145.44	-0.8236	1.2528	0.38892	145.52	-0.8243	1.2539	0.38701	145.59	-0.8250	1.2551	0.38511		
85	151.94	-0.8824	1.7566	0.25146	152.01	-0.8831	1.7600	0.25981	152.09	-0.8837	1.7634	0.25816		
90	157.46	-0.9236	2.6082	0.17233	157.54	-0.9241	2.6171	0.17096	157.62	-0.9247	2.6261	0.16959		
95	161.94	-0.9507	4.0435	0.11359	162.01	-0.9511	4.0647	0.11250	162.09	-0.9516	4.0861	0.11141		
100	165.44	-0.9679	6.3804	0.07636	165.52	-0.9682	6.4258	0.07552	165.59	-0.9685	6.4720	0.07468		
105	168.14	-0.9787	9.9795	0.05303	168.21	-0.9789	10.0674	0.05243	168.27	-0.9791	10.1569	0.05179		
110	170.21	-0.9854	15.1822	0.03363	170.27	-0.9856	15.3367	0.03785	170.33	-0.9858	15.4940	0.03737		
115	171.83	-0.9898	22.2512	0.02803	171.88	-0.9900	22.5010	0.02943	171.93	-0.9901	22.7555	0.02804		
120	173.12	-0.9928	31.3267	0.02246	173.16	-0.9929	31.7031	0.02215	173.20	-0.9930	32.0868	0.02183		
125	174.16	-0.9948	42.3999	0.01808	174.20	-0.9949	42.9342	0.01782	174.24	-0.9949	43.4793	0.01756		
130	175.03	-0.9962	55.3024	0.01498	175.07	-0.9963	56.0238	0.01476	175.10	-0.9963	56.7599	0.01455		
135	175.77	-0.9973	69.7102	0.01274	175.80	-0.9973	70.6429	0.01255	175.83	-0.9974	71.5947	0.01236		
140	176.42	-0.9980	85.1594	0.01108	176.44	-0.9981	86.3204	0.01091	176.47	-0.9981	87.5055	0.01075		
145	176.99	-0.9986	101.0730	0.00964	177.01	-0.9986	102.4707	0.00969	177.03	-0.9987	103.8974	0.00954		
150	177.50	-0.9991	116.7959	0.00820	177.52	-0.9991	118.4286	0.00877	177.54	-0.9991	120.0952	0.00864		
155	177.97	-0.9994	131.6363	0.00682	177.99	-0.9994	133.4914	0.00808	178.00	-0.9994	135.3853	0.00795		
160	178.41	-0.9996	144.9091	0.00758	178.43	-0.9996	146.9637	0.00756	178.44	-0.9996	149.0613	0.00744		
165	178.83	-0.9998	155.9805	0.00730	178.84	-0.9998	158.2018	0.00719	178.85	-0.9998	160.4697	0.00708		
170	179.23	-0.9999	164.3086	0.00704	179.23	-0.9999	166.6555	0.00694	179.24	-0.9999	169.0517	0.00683		
175	179.62	-1.0000	169.4793	0.00639	179.62	-1.0000	171.9042	0.00679	179.62	-1.0000	174.3800	0.00669		
180	180.00	-1.0000	171.2323	0.00635	180.00	-1.0000	173.6837	0.00674	180.00	-1.0000	176.1866	0.00664		

x = 0.856					x = 0.857					x = 0.858				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2698	4.32991	0.00	1.0000	0.2697	4.32729	0.00	1.0000	0.2695	4.32467		
5	9.63	0.9859	0.2708	4.29948	9.63	0.9859	0.2707	4.29686	9.63	0.9859	0.2705	4.29424		
10	19.25	0.9441	0.2739	4.20911	19.25	0.9441	0.2738	4.20649	19.26	0.9441	0.2736	4.20387		
15	28.85	0.8758	0.2793	4.06153	28.86	0.8758	0.2791	4.05891	28.87	0.8757	0.2790	4.05630		
20	38.45	0.7832	0.2870	3.86121	38.46	0.7831	0.2868	3.85859	38.47	0.7829	0.2867	3.85599		
25	48.02	0.6689	0.2975	3.61419	48.03	0.6687	0.2973	3.61159	48.05	0.6685	0.2972	3.60899		
30	57.56	0.5365	0.3112	3.32794	57.57	0.5362	0.3110	3.32535	57.59	0.5360	0.3109	3.32276		
35	67.05	0.3899	0.3288	3.01109	67.07	0.3896	0.3287	3.00851	67.09	0.3892	0.3285	3.00593		
40	76.49	0.2336	0.3513	2.67316	76.52	0.2332	0.3512	2.67059	76.54	0.2327	0.3510	2.66803		
45	85.86	0.0722	0.3801	2.32427	85.89	0.0717	0.3799	2.32173	85.92	0.0712	0.3797	2.31919		
50	95.13	-0.0895	0.4173	1.97482	95.17	-0.0901	0.4171	1.97231	95.20	-0.0906	0.4169	1.96980		
55	104.28	-0.2466	0.4661	1.63510	104.32	-0.2473	0.4659	1.63263	104.36	-0.2479	0.4657	1.63016		
60	113.25	-0.3947	0.5316	1.31493	113.29	-0.3955	0.5314	1.31251	113.34	-0.3962	0.5312	1.31009		
65	121.98	-0.5297	0.6221	1.02321	122.04	-0.5304	0.6219	1.02087	122.09	-0.5312	0.6218	1.01853		
70	130.39	-0.6480	0.7521	0.76749	130.45	-0.6488	0.7520	0.76525	130.51	-0.6495	0.7520	0.76301		
75	138.34	-0.7471	0.9475	0.55324	138.41	-0.7479	0.9478	0.55115	138.47	-0.7486	0.9481	0.54906		
80	145.66	-0.8257	1.2562	0.38322	145.74	-0.8265	1.2574	0.38132	145.81	-0.8272	1.2586	0.37943		
85	152.17	-0.8844	1.7668	0.25651	152.25	-0.8850	1.7703	0.25486	152.33	-0.8857	1.7738	0.25321		
90	157.70	-0.9252	2.6352	0.16822	157.78	-0.9257	2.6444	0.16686	157.86	-0.9263	2.6537	0.16550		
95	162.17	-0.9520	4.1079	0.11033	162.25	-0.9524	4.1300	0.10925	162.33	-0.9528	4.1523	0.10817		
100	165.66	-0.9689	6.5189	0.07385	165.74	-0.9692	6.5666	0.07302	165.81	-0.9695	6.6150	0.07219		
105	168.34	-0.9794	10.2479	0.05115	168.41	-0.9796	10.3405	0.05052	168.47	-0.9798	10.4347	0.04989		
110	170.39	-0.9860	15.6543	0.03687	170.45	-0.9861	15.8175	0.03638	170.51	-0.9863	15.9838	0.03590		
115	171.98	-0.9902	23.0150	0.02766	172.04	-0.9904	23.2795	0.02727	172.09	-0.9905	23.5492	0.02689		
120	173.25	-0.9931	32.4782	0.02152	173.29	-0.9932	32.8774	0.02121	173.34	-0.9933	33.2846	0.02091		
125	174.28	-0.9950	44.0354	0.01731	174.32	-0.9951	44.6028	0.01705	174.36	-0.9952	45.1818	0.01680		
130	175.13	-0.9964	57.5110	0.01433	175.17	-0.9964	58.2776	0.01412	175.20	-0.9965	59.0601	0.01391		
135	175.86	-0.9974	72.5661	0.01218	175.89	-0.9974	73.5578	0.01199	175.92	-0.9975	74.5702	0.01181		
140	176.49	-0.9981	88.7151	0.01059	176.52	-0.9982	89.9501	0.01043	176.54	-0.9982	91.2112	0.01027		
145	177.05	-0.9987	105.3540	0.00940	177.07	-0.9987	106.8412	0.00925	177.09	-0.9987	108.3600	0.00911		
150	177.56	-0.9991	121.7969	0.00850	177.57	-0.9991	123.5345	0.00837	177.59	-0.9991	125.3090	0.00824		
155	178.02	-0.9994	137.3191	0.00783	178.03	-0.9994	139.2938	0.00771	178.05	-0.999				

2 x = 0.859					2 x = 0.860					2 x = 0.861				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2693	4.32205	0.00	1.0000	0.2692	4.31945	0.00	1.0000	0.2690	4.31684		
5	9.63	0.9859	0.2704	4.29163	9.64	0.9859	0.2702	4.28902	9.64	0.9859	0.2701	4.28642		
10	19.26	0.9440	0.2735	4.20126	19.27	0.9440	0.2733	4.19865	19.27	0.9440	0.2732	4.19605		
15	28.88	0.8756	0.2788	4.05369	28.89	0.8756	0.2786	4.05109	28.90	0.8755	0.2785	4.04849		
20	38.48	0.7828	0.2865	3.85338	38.49	0.7827	0.2864	3.85079	38.50	0.7826	0.2862	3.84820		
25	48.06	0.6684	0.2970	3.60639	48.07	0.6682	0.2968	3.60380	48.09	0.6680	0.2967	3.60122		
30	57.61	0.5357	0.3107	3.32017	57.62	0.5355	0.3105	3.31759	57.64	0.5352	0.3104	3.31502		
35	67.11	0.3989	0.3283	3.00336	67.13	0.3986	0.3281	3.00079	67.16	0.3982	0.3280	2.99823		
40	76.57	0.2323	0.3508	2.65548	76.59	0.2319	0.3506	2.65292	76.62	0.2315	0.3504	2.65038		
45	85.95	0.0707	0.3796	2.31666	85.98	0.0702	0.3794	2.31413	86.01	0.0697	0.3792	2.31160		
50	95.23	-0.0912	0.4167	1.96730	95.27	-0.0918	0.4165	1.96480	95.30	-0.0924	0.4163	1.96230		
55	104.39	-0.2486	0.4655	1.62769	104.43	-0.2493	0.4653	1.62523	104.47	-0.2499	0.4651	1.62278		
60	113.38	-0.3969	0.5310	1.30768	113.43	-0.3976	0.5308	1.30528	113.47	-0.3983	0.5306	1.30287		
65	122.14	-0.5320	0.6216	1.01620	122.19	-0.5327	0.6214	1.01387	122.24	-0.5335	0.6213	1.01154		
70	130.57	-0.6503	0.7520	0.76078	130.63	-0.6511	0.7519	0.75856	130.69	-0.6519	0.7519	0.75633		
75	138.54	-0.7494	0.9483	0.54698	138.61	-0.7502	0.9486	0.54489	138.67	-0.7510	0.9489	0.54281		
80	145.89	-0.8279	1.2597	0.37754	145.96	-0.8287	1.2609	0.37565	146.04	-0.8294	1.2621	0.37376		
85	152.41	-0.8863	1.7774	0.25157	152.49	-0.8870	1.7809	0.24993	152.57	-0.8876	1.7845	0.24830		
90	157.94	-0.9268	2.6631	0.16414	158.03	-0.9274	2.6726	0.16279	158.11	-0.9279	2.6822	0.16144		
95	162.41	-0.9533	4.1750	0.10710	162.49	-0.9537	4.1979	0.10603	162.57	-0.9541	4.2212	0.10497		
100	165.89	-0.9698	6.6642	0.07137	165.96	-0.9701	6.7141	0.07055	166.04	-0.9704	6.7649	0.06973		
105	168.54	-0.9801	10.5306	0.04926	168.61	-0.9803	10.6282	0.04863	168.67	-0.9805	10.7276	0.04801		
110	170.57	-0.9865	16.1533	0.03542	170.63	-0.9866	16.3260	0.03494	170.69	-0.9868	16.5020	0.03446		
115	172.14	-0.9906	23.8243	0.02651	172.19	-0.9907	24.1047	0.02614	172.24	-0.9908	24.3908	0.02577		
120	173.38	-0.9933	33.7000	0.02060	173.43	-0.9934	34.1240	0.02030	173.47	-0.9935	34.5566	0.02000		
125	174.39	-0.9952	45.7728	0.01655	174.43	-0.9953	46.3760	0.01631	174.47	-0.9953	46.9919	0.01606		
130	175.23	-0.9965	59.8590	0.01370	175.27	-0.9966	60.6747	0.01349	175.30	-0.9966	61.5077	0.01328		
135	175.95	-0.9975	75.6040	0.01163	175.98	-0.9975	76.6597	0.01145	176.01	-0.9976	77.7381	0.01127		
140	176.57	-0.9982	92.4990	0.01011	176.59	-0.9982	93.8144	0.00995	176.62	-0.9983	95.1582	0.00980		
145	177.11	-0.9987	109.9112	0.00897	177.13	-0.9987	111.4957	0.00883	177.16	-0.9988	113.1146	0.00869		
150	177.61	-0.9991	127.1217	0.00812	177.62	-0.9991	128.9734	0.00799	177.64	-0.9992	130.8655	0.00786		
155	178.06	-0.9994	143.3710	0.00747	178.07	-0.9994	145.4758	0.00735	178.09	-0.9994	147.6266	0.00724		
160	178.48	-0.9996	157.9071	0.00699	178.49	-0.9997	160.2390	0.00688	178.50	-0.9997	162.6218	0.00677		
165	178.88	-0.9998	170.0343	0.00665	178.89	-0.9998	172.5559	0.00654	178.90	-0.9998	175.1326	0.00644		
170	179.26	-0.9999	179.1578	0.00641	179.27	-0.9999	181.8223	0.00631	179.27	-0.9999	184.5451	0.00621		
175	179.63	-1.0000	184.8226	0.00628	179.64	-1.0000	187.5759	0.00618	179.64	-1.0000	190.3894	0.00608		
180	180.00	-1.0000	186.7434	0.00623	180.00	-1.0000	189.5267	0.00614	180.00	-1.0000	192.3711	0.00604		

2 x = 0.862					2 x = 0.863					2 x = 0.864				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2689	4.31424	0.00	1.0000	0.2687	4.31165	0.00	1.0000	0.2686	4.30906		
5	9.64	0.9859	0.2699	4.28382	9.64	0.9859	0.2698	4.28123	9.65	0.9859	0.2696	4.27864		
10	19.28	0.9439	0.2730	4.19346	19.28	0.9439	0.2729	4.19087	19.29	0.9439	0.2727	4.18828		
15	28.90	0.8754	0.2783	4.04590	28.91	0.8754	0.2782	4.04331	28.92	0.8753	0.2780	4.04073		
20	38.51	0.7825	0.2861	3.84561	38.53	0.7823	0.2859	3.84303	38.54	0.7822	0.2857	3.84045		
25	48.10	0.6678	0.2965	3.59864	48.12	0.6676	0.2964	3.59606	48.13	0.6674	0.2962	3.59349		
30	57.66	0.5349	0.3102	3.31245	57.68	0.5347	0.3100	3.30988	57.69	0.5344	0.3099	3.30732		
35	67.18	0.3979	0.3278	2.99567	67.20	0.3976	0.3276	2.99312	67.22	0.3972	0.3274	2.99057		
40	76.64	0.2311	0.3502	2.65784	76.67	0.2306	0.3500	2.65530	76.69	0.2302	0.3499	2.65277		
45	86.03	0.0692	0.3790	2.30908	86.06	0.0687	0.3788	2.30657	86.09	0.0682	0.3786	2.30406		
50	95.33	-0.0930	0.4161	1.95981	95.37	-0.0936	0.4159	1.95732	95.40	-0.0941	0.4157	1.95484		
55	104.51	-0.2506	0.4649	1.62033	104.55	-0.2512	0.4647	1.61788	104.59	-0.2519	0.4645	1.61544		
60	113.52	-0.3991	0.5304	1.30048	113.56	-0.3998	0.5302	1.29808	113.61	-0.4005	0.5300	1.29569		
65	122.29	-0.5343	0.6211	1.00921	122.35	-0.5350	0.6209	1.00689	122.40	-0.5358	0.6208	1.00457		
70	130.74	-0.6527	0.7518	0.75411	130.80	-0.6535	0.7518	0.75189	130.86	-0.6543	0.7517	0.74967		
75	138.74	-0.7517	0.9492	0.54074	138.81	-0.7525	0.9495	0.53866	138.88	-0.7533	0.9497	0.53659		
80	146.11	-0.8301	1.2633	0.37188	146.19	-0.8309	1.2645	0.37000	146.26	-0.8316	1.2657	0.36812		
85	152.65	-0.8883	1.7881	0.24666	152.74	-0.8889	1.7917	0.24503	152.82	-0.8895	1.7954	0.24341		
90	158.19	-0.9284	2.6919	0.16009	158.28	-0.9290	2.7017	0.15875	158.36	-0.9295	2.7116	0.15741		
95	162.65	-0.9545	4.2449	0.10390	162.74	-0.9549	4.2688	0.10285	162.82	-0.9554	4.2931	0.10179		
100	166.11	-0.9708	6.8166	0.06892	166.19	-0.9711	6.8690	0.06811	166.26	-0.9714	6.9224	0.06731		
105	168.74	-0.9808	10.8287	0.04740	168.81	-0.9810	10.9318	0.04678	168.88	-0.9812	11.0367	0.04618		
110	170.74	-0.9870	16.6814	0.03399	170.80	-0.9871	16.8643	0.03352	170.86	-0.9873	17.0509	0.03305		
115	172.29	-0.9910	24.6827	0.02540	172.35	-0.9911	24.9805	0.02503	172.40	-0.9912	25.2845	0.02466		
120	173.52	-0.9936	34.9983	0.01971	173.56	-0.9937	35.4491	0.01941	173.61	-0.9938	35.9095	0.01912		
125	174.51	-0.9954	47.6208	0.01582	174.55	-0.9955	48.2631	0.01558	174.59	-0.9955	48.9191	0.01534		
130	175.33	-0.9967	62.3586	0.01308	175.37	-0.9967	63.2277	0.01288	175.40	-0.9968	64.1157	0.01267		
135	176.03	-0.9976	78.8397	0.01110	176.06	-0.9976	79.9653	0.01093	176.09	-0.9977	81.1155	0.01075		
140	176.64	-0.9983	96.5311	0.00964	176.67	-0.9983	97.9341	0.00949	176.69	-0.9983	99.3680	0.00934		
145	177.18	-0.9988	114.7688	0.00856	177.20	-0.9988	116.4594	0.00842	177.22	-0.9988	118.1874	0.00829		
150	177.66	-0.9992	132.7989	0.00774	177.68	-0.9992	134.7750	0.00761	177.69	-0.9992	136.7951	0.00749		
155	178.10	-0.9995	149.8246	0.00712	178.12	-0.9995	152.0712	0.00701	178.13	-0.9995	154.3679	0.00689		
160	178.51	-0.9997	165.0570	0.00666	178.53	-0.9997	167.5462	0.00656	178.54	-0.9997	170.0910	0.00645		
165	178.90	-0.9998	177.7661	0.00633	178.91	-0.9998	180.4581	0.00623	178.92	-0.9998	183.2103	0.00613		
170	179.28	-0.9999	187.3279	0										

$x = 0.865$					$x = 0.866$					$x = 0.867$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2684	4.30648	0.00	1.0000	0.2683	4.30391	0.00	1.0000	0.2681	4.30133	0.00	1.0000
5	9.65	0.9859	0.2695	4.27606	9.65	0.9858	0.2693	4.27348	9.65	0.9858	0.2692	4.27091	9.65	0.9858
10	19.29	0.9438	0.2726	4.18570	19.30	0.9438	0.2724	4.18313	19.30	0.9438	0.2723	4.18056	19.30	0.9438
15	28.93	0.8752	0.2779	4.03816	28.94	0.8752	0.2777	4.03559	28.95	0.8751	0.2776	4.03302	28.95	0.8751
20	38.55	0.7821	0.2856	3.83788	38.56	0.7820	0.2854	3.83531	38.57	0.7818	0.2853	3.83275	38.57	0.7818
25	48.14	0.6672	0.2960	3.59093	48.16	0.6671	0.2959	3.58837	48.17	0.6669	0.2957	3.58582	48.17	0.6669
30	57.71	0.5342	0.3097	3.30477	57.73	0.5339	0.3095	3.30222	57.75	0.5337	0.3094	3.29967	57.75	0.5337
35	67.24	0.3869	0.3273	2.98803	67.26	0.3865	0.3271	2.98549	67.28	0.3862	0.3269	2.98296	67.28	0.3862
40	76.71	0.2298	0.3497	2.65024	76.74	0.2294	0.3495	2.64772	76.76	0.2290	0.3493	2.64520	76.76	0.2290
45	86.12	0.0677	0.3784	2.30155	86.15	0.0672	0.3782	2.29905	86.18	0.0666	0.3780	2.29656	86.18	0.0666
50	95.44	-0.0947	0.4155	1.95236	95.47	-0.0953	0.4153	1.94989	95.50	-0.0959	0.4151	1.94742	95.50	-0.0959
55	104.63	-0.2525	0.4643	1.61300	104.67	-0.2532	0.4640	1.61056	104.71	-0.2539	0.4638	1.60813	104.71	-0.2539
60	113.65	-0.4012	0.5298	1.29330	113.70	-0.4019	0.5296	1.29092	113.74	-0.4026	0.5294	1.28854	113.74	-0.4026
65	122.45	-0.5366	0.6206	1.00226	122.50	-0.5373	0.6205	0.99995	122.55	-0.5381	0.6203	0.99764	122.55	-0.5381
70	130.92	-0.6550	0.7517	0.74746	130.98	-0.6558	0.7516	0.74525	131.04	-0.6566	0.7516	0.74304	131.04	-0.6566
75	138.94	-0.7541	0.9500	0.53452	139.01	-0.7548	0.9503	0.53245	139.08	-0.7556	0.9506	0.53038	139.08	-0.7556
80	146.34	-0.8323	1.2669	0.36625	146.41	-0.8330	1.2681	0.36437	146.49	-0.8338	1.2693	0.36250	146.49	-0.8338
85	152.90	-0.8902	1.7991	0.24178	152.98	-0.8908	1.8028	0.24016	153.06	-0.8915	1.8065	0.23854	153.06	-0.8915
90	158.44	-0.9301	2.7217	0.15607	158.53	-0.9306	2.7318	0.15473	158.61	-0.9311	2.7420	0.15340	158.61	-0.9311
95	162.90	-0.9558	4.3177	0.10074	162.98	-0.9562	4.3427	0.09970	163.06	-0.9566	4.3681	0.09865	163.06	-0.9566
100	166.34	-0.9717	6.9767	0.06651	166.41	-0.9720	7.0318	0.06571	166.49	-0.9723	7.0880	0.06492	166.49	-0.9723
105	168.94	-0.9814	11.1436	0.04557	169.01	-0.9817	11.2525	0.04497	169.08	-0.9819	11.3635	0.04437	169.08	-0.9819
110	170.92	-0.9875	17.2411	0.03259	170.98	-0.9876	17.4351	0.03213	171.04	-0.9878	17.6331	0.03167	171.04	-0.9878
115	172.45	-0.9913	25.5947	0.02430	172.50	-0.9914	25.9113	0.02394	172.55	-0.9916	26.2346	0.02359	172.55	-0.9916
120	173.65	-0.9939	36.3796	0.01883	173.70	-0.9940	36.8597	0.01855	173.74	-0.9940	37.3502	0.01826	173.74	-0.9940
125	174.63	-0.9956	49.5893	0.01510	174.67	-0.9957	50.2740	0.01487	174.71	-0.9957	50.9738	0.01463	174.71	-0.9957
130	175.44	-0.9968	65.0231	0.01248	175.47	-0.9969	65.9505	0.01228	175.50	-0.9969	66.8984	0.01208	175.50	-0.9969
135	176.12	-0.9977	82.2911	0.01058	176.15	-0.9977	83.4928	0.01041	176.18	-0.9978	84.7214	0.01025	176.18	-0.9978
140	176.71	-0.9984	100.8337	0.00919	176.74	-0.9984	102.3322	0.00904	176.76	-0.9984	103.6645	0.00889	176.76	-0.9984
145	177.24	-0.9988	119.9540	0.00815	177.26	-0.9989	121.7602	0.00802	177.28	-0.9989	123.6074	0.00789	177.28	-0.9989
150	177.71	-0.9992	138.8603	0.00737	177.73	-0.9992	140.9722	0.00725	177.75	-0.9992	143.1320	0.00713	177.75	-0.9992
155	178.14	-0.9995	156.7161	0.00678	178.16	-0.9995	159.1175	0.00667	178.17	-0.9995	161.5736	0.00656	178.17	-0.9995
160	178.55	-0.9997	172.6931	0.00635	178.56	-0.9997	175.3541	0.00624	178.57	-0.9997	178.0759	0.00614	178.57	-0.9997
165	178.93	-0.9998	186.0245	0.00603	178.94	-0.9998	188.9025	0.00593	178.95	-0.9998	191.8464	0.00583	178.95	-0.9998
170	179.29	-0.9999	196.0551	0.00582	179.30	-0.9999	199.0966	0.00572	179.30	-0.9999	202.2078	0.00563	179.30	-0.9999
175	179.65	-1.0000	202.2835	0.00570	179.65	-1.0000	205.4267	0.00560	179.65	-1.0000	208.6418	0.00551	179.65	-1.0000
180	180.00	-1.0000	204.3954	0.00566	180.00	-1.0000	207.5731	0.00556	180.00	-1.0000	210.8235	0.00547	180.00	-1.0000

2 x = 0.868					2 x = 0.869					2 x = 0.870				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2680	4.29877	0.00	1.0000	0.2679	4.29621	0.00	1.0000	0.2677	4.29365		
5	9.66	0.9858	0.2690	4.26834	9.66	0.9858	0.2689	4.26578	9.66	0.9858	0.2687	4.26323		
10	19.31	0.9437	0.2721	4.17800	19.32	0.9437	0.2720	4.17544	19.32	0.9437	0.2718	4.17288		
15	28.95	0.8750	0.2774	4.03046	28.96	0.8749	0.2773	4.02790	28.97	0.8749	0.2771	4.02535		
20	38.58	0.7817	0.2851	3.83020	38.59	0.7816	0.2850	3.82765	38.60	0.7815	0.2848	3.82510		
25	48.19	0.6667	0.2955	3.58327	48.20	0.6665	0.2954	3.58072	48.22	0.6663	0.2952	3.57819		
30	57.76	0.5334	0.3092	3.29713	57.78	0.5331	0.3090	3.29460	57.80	0.5329	0.3089	3.29207		
35	67.30	0.3859	0.3267	2.98043	67.32	0.3855	0.3266	2.97790	67.34	0.3852	0.3264	2.97539		
40	76.79	0.2285	0.3491	2.64269	76.81	0.2281	0.3489	2.64018	76.84	0.2277	0.3488	2.63768		
45	86.21	0.0661	0.3778	2.29407	86.24	0.0656	0.3776	2.29158	86.27	0.0651	0.3774	2.28910		
50	95.54	-0.0965	0.4149	1.94496	95.57	-0.0971	0.4147	1.94250	95.60	-0.0976	0.4145	1.94004		
55	104.74	-0.2545	0.4636	1.60570	104.78	-0.2552	0.4634	1.60328	104.82	-0.2558	0.4632	1.60086		
60	113.79	-0.4034	0.5292	1.28616	113.83	-0.4041	0.5290	1.28379	113.88	-0.4048	0.5288	1.28142		
65	122.61	-0.5388	0.6201	0.99534	122.66	-0.5396	0.6199	0.99303	122.71	-0.5404	0.6198	0.99074		
70	131.10	-0.6574	0.7515	0.74084	131.16	-0.6582	0.7515	0.73864	131.22	-0.6590	0.7514	0.73644		
75	139.15	-0.7564	0.9509	0.52832	139.22	-0.7572	0.9512	0.52626	139.28	-0.7580	0.9514	0.52420		
80	146.56	-0.8345	1.2705	0.36063	146.64	-0.8352	1.2717	0.35877	146.72	-0.8360	1.2730	0.35690		
85	153.14	-0.8921	1.8103	0.23692	153.23	-0.8928	1.8141	0.23530	153.31	-0.8934	1.8179	0.23369		
90	158.70	-0.9317	2.7524	0.15207	158.78	-0.9322	2.7629	0.15075	158.87	-0.9327	2.7735	0.14942		
95	163.14	-0.9570	4.3938	0.09761	163.23	-0.9575	4.4199	0.09658	163.31	-0.9579	4.4464	0.09554		
100	166.56	-0.9726	7.1451	0.06413	166.64	-0.9729	7.2032	0.06334	166.72	-0.9732	7.2623	0.06256		
105	169.15	-0.9821	11.4766	0.04377	169.22	-0.9823	11.5919	0.04318	169.28	-0.9826	11.7094	0.04259		
110	171.10	-0.9880	17.8351	0.03122	171.16	-0.9881	18.0412	0.03077	171.22	-0.9883	18.2516	0.03032		
115	172.61	-0.9917	26.5848	0.02323	172.66	-0.9918	26.9019	0.02288	172.71	-0.9919	27.2464	0.02254		
120	173.79	-0.9941	37.8514	0.01798	173.83	-0.9942	38.3635	0.01770	173.88	-0.9943	38.8869	0.01742		
125	174.74	-0.9958	51.6890	0.01440	174.78	-0.9959	52.4202	0.01417	174.82	-0.9959	53.1678	0.01395		
130	175.54	-0.9970	67.8676	0.01189	175.57	-0.9970	68.8586	0.01170	175.60	-0.9971	69.8722	0.01151		
135	176.21	-0.9978	85.9777	0.01008	176.24	-0.9978	87.2626	0.00992	176.27	-0.9979	88.5770	0.00975		
140	176.79	-0.9984	105.4315	0.00875	176.81	-0.9985	107.0344	0.00861	176.84	-0.9985	108.6743	0.00846		
145	177.30	-0.9989	125.4967	0.00776	177.32	-0.9989	127.4294	0.00763	177.34	-0.9989	129.4070	0.00750		
150	177.76	-0.9992	145.3413	0.00701	177.78	-0.9993	147.6016	0.00690	177.80	-0.9993	149.9144	0.00678		
155	178.19	-0.9995	164.0861	0.00645	178.20	-0.9995	166.6567	0.00635	178.22	-0.9995	169.2872	0.00624		
160	178.58	-0.9997	180.8603	0.00604	178.59	-0.9997	183.7092	0.00594	178.60	-0.9997	186.6247	0.00584		
165	178.95	-0.9998	194.8581	0.00574	178.96	-0.9998	197.9397	0.00564	178.97	-0.9998	201.0934	0.00555		
170	179.31	-0.9999	205.3907	0.00554	179.32	-0.9999	208.6475	0.00544	179.32	-0.9999	211.9807	0.00535		
175	179.66	-1.0000	211.9312	0.00542	179.66	-1.0000	215.2969	0.00533	179.66	-1.0000	218.7416	0.00524		
180	180.00	-1.0000	214.1489	0.00538	180.00	-1.0000	217.5516	0.00529	180.00	-1.0000	221.0340	0.00520		

z x = 0.871					z x = 0.872					z x = 0.873				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2676	4.29110	0.00	1.0000	0.2674	4.28855	0.00	1.0000	0.2673	4.28601		
5	9.67	0.9858	0.2686	4.26068	9.67	0.9858	0.2684	4.25813	9.67	0.9858	0.2683	4.25559		
10	19.33	0.9436	0.2717	4.17034	19.33	0.9436	0.2715	4.16779	19.34	0.9436	0.2714	4.16525		
15	28.98	0.8748	0.2769	4.02281	28.99	0.8747	0.2768	4.02027	28.99	0.8747	0.2766	4.01773		
20	38.61	0.7814	0.2846	3.82256	38.63	0.7812	0.2845	3.82003	38.64	0.7811	0.2843	3.81750		
25	48.23	0.6661	0.2951	3.57565	48.24	0.6660	0.2949	3.57312	48.26	0.6658	0.2947	3.57060		
30	57.82	0.5326	0.3087	3.28954	57.83	0.5324	0.3085	3.28702	57.85	0.5321	0.3084	3.28451		
35	67.36	0.3949	0.3262	2.97287	67.39	0.3945	0.3260	2.97036	67.41	0.3942	0.3259	2.96786		
40	76.86	0.2723	0.3486	2.63518	76.89	0.2720	0.3484	2.63269	76.91	0.2715	0.3482	2.63020		
45	86.29	0.0646	0.3772	2.28662	86.32	0.0641	0.3771	2.28414	86.35	0.0636	0.3769	2.28167		
50	95.64	-0.0982	0.4143	1.93759	95.67	-0.0988	0.4141	1.93515	95.70	-0.0994	0.4139	1.93270		
55	104.86	-0.2565	0.4630	1.59845	104.90	-0.2571	0.4628	1.59604	104.94	-0.2578	0.4626	1.59363		
60	113.92	-0.4055	0.5286	1.27906	113.97	-0.4062	0.5284	1.27670	114.01	-0.4070	0.5282	1.27434		
65	122.76	-0.5411	0.6196	0.98844	122.81	-0.5419	0.6194	0.98615	122.87	-0.5427	0.6193	0.98386		
70	131.28	-0.6598	0.7513	0.73425	131.34	-0.6605	0.7513	0.73205	131.40	-0.6613	0.7512	0.72986		
75	139.35	-0.7587	0.9517	0.52215	139.42	-0.7595	0.9520	0.52010	139.49	-0.7603	0.9523	0.51805		
80	146.79	-0.8367	1.2742	0.35504	146.87	-0.8374	1.2754	0.35318	146.95	-0.8382	1.2767	0.35133		
85	153.39	-0.8941	1.8218	0.23208	153.47	-0.8947	1.8257	0.23047	153.56	-0.8954	1.8296	0.22887		
90	158.95	-0.9333	2.7842	0.14811	159.04	-0.9338	2.7951	0.14679	159.12	-0.9343	2.8061	0.14547		
95	163.39	-0.9563	4.4733	0.09452	163.47	-0.9567	4.5006	0.09349	163.56	-0.9591	4.5284	0.09247		
100	166.79	-0.9736	7.3224	0.06178	166.87	-0.9739	7.3837	0.06101	166.95	-0.9742	7.4460	0.06024		
105	169.35	-0.9828	11.8292	0.04201	169.42	-0.9830	11.9514	0.04143	169.49	-0.9832	12.0761	0.04085		
110	171.28	-0.9884	18.4664	0.02987	171.34	-0.9886	18.6857	0.02943	171.40	-0.9888	18.9096	0.02900		
115	172.76	-0.9920	27.5983	0.02219	172.81	-0.9921	27.9579	0.02185	172.87	-0.9923	28.2354	0.02151		
120	173.92	-0.9944	39.4220	0.01715	173.97	-0.9945	39.9690	0.01688	174.01	-0.9945	40.5285	0.01661		
125	174.86	-0.9960	53.9323	0.01372	174.90	-0.9960	54.7142	0.01350	174.94	-0.9961	55.5141	0.01328		
130	175.64	-0.9971	70.9089	0.01113	175.67	-0.9971	71.9696	0.01113	175.70	-0.9972	73.0549	0.01095		
135	176.29	-0.9979	89.9216	0.00959	176.32	-0.9979	91.2976	0.00943	176.35	-0.9980	92.7059	0.00928		
140	176.86	-0.9985	110.3523	0.00832	176.89	-0.9985	112.0696	0.00818	176.91	-0.9985	113.8275	0.00805		
145	177.36	-0.9989	131.4307	0.00738	177.39	-0.9990	133.5020	0.00725	177.41	-0.9990	135.6224	0.00713		
150	177.82	-0.9993	152.2814	0.00667	177.83	-0.9993	154.7043	0.00656	177.85	-0.9993	157.1849	0.00644		
155	178.23	-0.9995	171.9795	0.00613	178.24	-0.9995	174.7356	0.00603	178.26	-0.9995	177.5574	0.00593		
160	178.61	-0.9997	189.6086	0.00574	178.63	-0.9997	192.6637	0.00564	178.64	-0.9997	195.7916	0.00554		
165	178.98	-0.9998	204.3214	0.00545	178.99	-0.9998	207.6260	0.00536	178.99	-0.9998	211.0098	0.00527		
170	179.33	-0.9999	215.3924	0.00526	179.33	-0.9999	218.8853	0.00517	179.34	-0.9999	222.4618	0.00508		
175	179.67	-1.0000	222.2675	0.00515	179.67	-1.0000	225.8773	0.00506	179.67	-1.0000	229.5736	0.00497		
180	180.00	-1.0000	224.5967	0.00511	180.00	-1.0000	228.2482	0.00502	180.00	-1.0000	231.9852	0.00494		

z x = 0.874					z x = 0.875					z x = 0.876				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2671	4.28348	0.00	1.0000	0.2670	4.28095	0.00	1.0000	0.2668	4.27842		
5	9.67	0.9858	0.2681	4.25306	9.68	0.9858	0.2680	4.25053	9.68	0.9858	0.2678	4.24800		
10	19.34	0.9436	0.2712	4.16272	19.35	0.9435	0.2711	4.16019	19.35	0.9435	0.2709	4.15767		
15	29.00	0.8746	0.2765	4.01520	29.01	0.8745	0.2763	4.01268	29.02	0.8745	0.2762	4.01016		
20	38.65	0.7810	0.2842	3.81497	38.66	0.7809	0.2840	3.81245	38.67	0.7808	0.2839	3.80993		
25	48.27	0.6656	0.2946	3.56808	48.29	0.6654	0.2944	3.56557	48.30	0.6652	0.2943	3.56306		
30	57.87	0.5319	0.3082	3.28200	57.89	0.5316	0.3080	3.27949	57.90	0.5314	0.3079	3.27698		
35	67.43	0.3939	0.3257	2.96536	67.45	0.3935	0.3255	2.96287	67.47	0.3932	0.3253	2.96038		
40	76.94	0.2760	0.3480	2.62772	76.96	0.2756	0.3479	2.62524	76.99	0.2752	0.3477	2.62276		
45	86.38	0.0631	0.3767	2.27921	86.41	0.0626	0.3765	2.27675	86.44	0.0621	0.3763	2.27429		
50	95.74	-0.1000	0.4137	1.93026	95.77	-0.1006	0.4135	1.92783	95.81	-0.1012	0.4133	1.92540		
55	104.98	-0.2585	0.4624	1.59123	105.02	-0.2591	0.4622	1.58883	105.06	-0.2598	0.4620	1.58643		
60	114.06	-0.4077	0.5280	1.27199	114.10	-0.4084	0.5278	1.26964	114.15	-0.4091	0.5276	1.26729		
65	122.92	-0.5434	0.6191	0.98158	122.97	-0.5442	0.6189	0.97930	123.02	-0.5450	0.6188	0.97702		
70	131.46	-0.6621	0.7512	0.72768	131.52	-0.6629	0.7511	0.72549	131.58	-0.6637	0.7511	0.72331		
75	139.56	-0.7611	0.9526	0.51600	139.63	-0.7618	0.9528	0.51395	139.70	-0.7626	0.9531	0.51191		
80	147.03	-0.8389	1.2779	0.34947	147.10	-0.8396	1.2792	0.34762	147.18	-0.8404	1.2804	0.34577		
85	153.64	-0.8960	1.8336	0.22726	153.73	-0.8967	1.8375	0.22566	153.81	-0.8973	1.8416	0.22406		
90	159.21	-0.9349	2.8172	0.14416	159.30	-0.9354	2.8284	0.14286	159.38	-0.9359	2.8398	0.14155		
95	163.64	-0.9595	4.5565	0.09145	163.73	-0.9599	4.5851	0.09044	163.81	-0.9603	4.6142	0.08943		
100	167.03	-0.9745	7.5095	0.05947	167.10	-0.9748	7.5742	0.05871	167.18	-0.9751	7.6400	0.05795		
105	169.56	-0.9834	12.2032	0.04028	169.63	-0.9837	12.3329	0.03971	169.70	-0.9839	12.4653	0.03914		
110	171.46	-0.9889	19.1384	0.02856	171.52	-0.9891	19.3720	0.02813	171.58	-0.9892	19.6108	0.02770		
115	172.92	-0.9924	28.7011	0.02117	172.97	-0.9925	29.0853	0.02084	173.02	-0.9926	29.4781	0.02051		
120	174.06	-0.9946	41.1006	0.01634	174.10	-0.9947	41.6860	0.01607	174.15	-0.9948	42.2849	0.01581		
125	174.96	-0.9962	56.3326	0.01306	175.02	-0.9962	57.1702	0.01284	175.06	-0.9963	58.0275	0.01263		
130	175.74	-0.9972	74.4658	0.01077	175.77	-0.9973	75.3026	0.01059	175.81	-0.9973	76.4670	0.01041		
135	176.38	-0.9980	94.1475	0.00912	176.41	-0.9980	95.6235	0.00896	176.44	-0.9981	97.1349	0.00881		
140	176.94	-0.9986	115.6271	0.00791	176.96	-0.9986	117.4700	0.00777	176.99	-0.9986	119.3574	0.00764		
145	177.43	-0.9990	137.7935	0.00701	177.45	-0.9990	140.0170	0.00689	177.47	-0.9990	142.2945	0.00677		
150	177.87	-0.9993	159.7250	0.00633	177.89	-0.9993	162.3265	0.00622	177.90	-0.9993	164.9914	0.00611		
155	178.27	-0.9995	180.4471	0.00582	178.29	-0.9995	183.4068	0.00572	178.30	-0.9996	186.4389			

2 x = 0.877					2 x = 0.878					2 x = 0.879				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2667	4.27590	0.00	1.0000	0.2665	4.27339	0.00	1.0000	0.2664	4.27088		
5	9.68	0.9858	0.2677	4.24548	9.68	0.9857	0.2675	4.24297	9.69	0.9857	0.2674	4.24046		
10	19.36	0.9435	0.2708	4.15515	19.36	0.9434	0.2706	4.15264	19.37	0.9434	0.2705	4.15013		
15	29.03	0.8744	0.2760	4.00764	29.04	0.8743	0.2759	4.00513	29.04	0.8743	0.2757	4.00263		
20	38.68	0.7806	0.2837	3.80742	38.69	0.7805	0.2835	3.80492	38.70	0.7804	0.2834	3.80242		
25	48.31	0.6650	0.2941	3.56055	48.33	0.6649	0.2939	3.55805	48.34	0.6647	0.2938	3.55556		
30	57.92	0.5311	0.3077	3.27449	57.94	0.5308	0.3075	3.27200	57.95	0.5306	0.3074	3.26952		
35	67.49	0.3829	0.3252	2.95789	67.51	0.3825	0.3250	2.95541	67.53	0.3822	0.3248	2.95293		
40	77.01	0.2246	0.3475	2.62029	77.03	0.2244	0.3473	2.61782	77.06	0.2239	0.3471	2.61536		
45	86.47	0.0616	0.3761	2.27184	86.50	0.0611	0.3759	2.26940	86.53	0.0606	0.3757	2.26695		
50	95.84	-0.1017	0.4131	1.92297	95.87	-0.1023	0.4129	1.92055	95.91	-0.1029	0.4127	1.91814		
55	105.10	-0.2604	0.4618	1.58404	105.14	-0.2611	0.4616	1.58166	105.17	-0.2618	0.4614	1.57927		
60	114.20	-0.4099	0.5273	1.26495	114.24	-0.4106	0.5271	1.26261	114.29	-0.4113	0.5269	1.26028		
65	123.08	-0.5457	0.6186	0.97474	123.13	-0.5465	0.6184	0.97247	123.18	-0.5473	0.6183	0.97020		
70	131.64	-0.6645	0.7510	0.72113	131.70	-0.6653	0.7509	0.71896	131.76	-0.6661	0.7509	0.71679		
75	139.77	-0.7634	0.9534	0.50987	139.84	-0.7642	0.9537	0.50783	139.90	-0.7650	0.9540	0.50580		
80	147.26	-0.8411	1.2817	0.34392	147.34	-0.8419	1.2829	0.34208	147.41	-0.8426	1.2842	0.34023		
85	153.89	-0.8980	1.8456	0.22247	153.98	-0.8986	1.8497	0.22087	154.06	-0.8993	1.8538	0.21928		
90	159.47	-0.9365	2.8513	0.14025	159.56	-0.9370	2.8630	0.13895	159.64	-0.9375	2.8748	0.13766		
95	163.89	-0.9608	4.6437	0.08842	163.98	-0.9612	4.6737	0.08741	164.06	-0.9616	4.7041	0.08641		
100	167.26	-0.9754	7.7071	0.05719	167.34	-0.9757	7.7754	0.05644	167.41	-0.9760	7.8451	0.05569		
105	169.77	-0.9841	12.6004	0.03858	169.84	-0.9843	12.7384	0.03802	169.90	-0.9845	12.8792	0.03746		
110	171.64	-0.9894	19.8548	0.02728	171.70	-0.9895	20.1042	0.02685	171.76	-0.9897	20.3592	0.02644		
115	173.08	-0.9927	29.8799	0.02018	173.13	-0.9928	30.2909	0.01985	173.18	-0.9929	30.7115	0.01953		
120	174.20	-0.9949	42.8978	0.01555	174.24	-0.9950	43.5251	0.01529	174.29	-0.9950	44.1674	0.01504		
125	175.10	-0.9963	58.9053	0.01242	175.14	-0.9964	59.8040	0.01221	175.17	-0.9965	60.7245	0.01200		
130	175.84	-0.9974	77.6592	0.01023	175.87	-0.9974	78.6803	0.01005	175.91	-0.9974	80.1312	0.00988		
135	176.47	-0.9981	98.6830	0.00866	176.50	-0.9981	100.2690	0.00851	176.53	-0.9982	101.8940	0.00836		
140	177.01	-0.9986	121.2909	0.00751	177.03	-0.9987	123.2719	0.00738	177.06	-0.9987	125.3020	0.00725		
145	177.49	-0.9990	144.6277	0.00665	177.51	-0.9991	147.0186	0.00653	177.53	-0.9991	149.4690	0.00642		
150	177.92	-0.9993	167.7218	0.00601	177.94	-0.9994	170.5198	0.00590	177.95	-0.9994	173.3878	0.00580		
155	178.31	-0.9996	189.5456	0.00552	178.33	-0.9996	192.7295	0.00543	178.34	-0.9996	195.9932	0.00533		
160	178.68	-0.9997	209.0817	0.00517	178.69	-0.9997	212.6118	0.00507	178.70	-0.9997	216.2305	0.00498		
165	179.03	-0.9999	225.3883	0.00491	179.04	-0.9999	229.2078	0.00482	179.04	-0.9999	233.1232	0.00473		
170	179.36	-0.9999	237.6603	0.00473	179.36	-0.9999	241.6977	0.00465	179.37	-0.9999	245.8367	0.00457		
175	179.68	-1.0000	245.2816	0.00463	179.68	-1.0000	249.4546	0.00455	179.69	-1.0000	253.7326	0.00447		
180	180.00	-1.0000	247.8660	0.00460	180.00	-1.0000	252.0850	0.00452	180.00	-1.0000	256.4100	0.00444		

2 x = 0.880					2 x = 0.881					2 x = 0.882				
PSI	θ	cos θ	G	S	θ	cos θ	G	S	θ	cos θ	G	S		
0	0.00	1.0000	0.2662	4.26837	0.00	1.0000	0.2661	4.26587	0.00	1.0000	0.2659	4.26338		
5	9.69	0.9857	0.2672	4.23795	9.69	0.9857	0.2671	4.23546	9.70	0.9857	0.2669	4.23296		
10	19.38	0.9434	0.2703	4.14763	19.38	0.9433	0.2702	4.14513	19.39	0.9433	0.2700	4.14264		
15	29.05	0.8742	0.2756	4.00013	29.06	0.8741	0.2754	3.99763	29.07	0.8740	0.2753	3.99514		
20	38.71	0.7803	0.2832	3.79992	38.72	0.7802	0.2831	3.79743	38.74	0.7800	0.2829	3.79495		
25	48.36	0.6645	0.2936	3.55307	48.37	0.6643	0.2935	3.55058	48.38	0.6641	0.2933	3.54810		
30	57.97	0.5303	0.3072	3.26703	57.99	0.5301	0.3070	3.26456	58.01	0.5298	0.3069	3.26209		
35	67.55	0.3818	0.3246	2.95046	67.57	0.3815	0.3245	2.94800	67.59	0.3812	0.3243	2.94554		
40	77.08	0.2235	0.3469	2.61291	77.11	0.2231	0.3468	2.61045	77.13	0.2227	0.3466	2.60801		
45	86.55	0.0601	0.3755	2.26451	86.58	0.0596	0.3753	2.26208	86.61	0.0591	0.3751	2.25965		
50	95.94	-0.1035	0.4125	1.91572	95.97	-0.1041	0.4123	1.91331	96.01	-0.1047	0.4121	1.91091		
55	105.21	-0.2624	0.4612	1.57689	105.25	-0.2631	0.4609	1.57452	105.29	-0.2637	0.4607	1.57215		
60	114.33	-0.4120	0.5267	1.25794	114.38	-0.4127	0.5265	1.25562	114.42	-0.4135	0.5263	1.25329		
65	123.23	-0.5480	0.6181	0.96794	123.29	-0.5488	0.6179	0.96568	123.34	-0.5496	0.6177	0.96342		
70	131.83	-0.6669	0.7508	0.71462	131.89	-0.6676	0.7508	0.71245	131.95	-0.6684	0.7507	0.71028		
75	139.97	-0.7658	0.9542	0.50376	140.04	-0.7665	0.9545	0.50173	140.11	-0.7673	0.9548	0.49970		
80	147.49	-0.8433	1.2855	0.33839	147.57	-0.8441	1.2868	0.33655	147.65	-0.8448	1.2881	0.33471		
85	154.15	-0.8999	1.8580	0.21769	154.24	-0.9006	1.8621	0.21611	154.32	-0.9012	1.8663	0.21452		
90	159.73	-0.9381	2.8868	0.13636	159.82	-0.9388	2.8909	0.13507	159.91	-0.9391	2.9111	0.13379		
95	164.15	-0.9620	4.7351	0.08542	164.24	-0.9624	4.7665	0.08443	164.32	-0.9628	4.7985	0.08344		
100	167.49	-0.9763	7.9161	0.05495	167.57	-0.9766	7.9884	0.05421	167.65	-0.9769	8.0622	0.05348		
105	169.97	-0.9847	13.0230	0.03691	170.04	-0.9849	13.1699	0.03636	170.11	-0.9852	13.3200	0.03582		
110	171.83	-0.9898	20.6200	0.02602	171.89	-0.9900	20.8867	0.02561	171.95	-0.9901	21.1595	0.02520		
115	173.23	-0.9930	31.1419	0.01921	173.29	-0.9931	31.5825	0.01889	173.34	-0.9932	32.0335	0.01858		
120	174.33	-0.9951	44.8251	0.01478	174.38	-0.9952	45.4987	0.01453	174.42	-0.9953	46.1887	0.01428		
125	175.21	-0.9965	61.6674	0.01179	175.25	-0.9966	62.6335	0.01159	175.29	-0.9966	63.6236	0.01138		
130	175.94	-0.9975	81.4130	0.00971	175.97	-0.9975	82.7267	0.00954	176.01	-0.9976	84.3733	0.00937		
135	176.55	-0.9982	103.5594	0.00821	176.58	-0.9982	105.2665	0.00807	176.61	-0.9983	107.0168	0.00792		
140	177.08	-0.9987	127.3828	0.00712	177.11	-0.9987	129.5161	0.00699	177.13	-0.9987	131.7037	0.00686		
145	177.55	-0.9991	151.9810	0.00630	177.57	-0.9991	154.5565	0.00619	177.59	-0.9991	157.1978	0.00608		
150	177.97	-0.9994	176.3280	0.00569	177.99	-0.9994	179.3428	0.00559	178.01	-0.9994	182.4349	0.00549		
155	178.36	-0.9996	199.3382	0.00523	178.37	-0.9996	202.7705	0.00514	178.38	-0.9996	206.2			

2 x = 0.683					2 x = 0.684					2 x = 0.885				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2658	4.26089	0.00	1.0000	0.2656	4.25840	0.00	1.0000	0.2655	4.25592		
5	9.70	0.9857	0.2668	4.23047	9.70	0.9857	0.2667	4.22799	9.70	0.9857	0.2665	4.22551		
10	19.39	0.9433	0.2699	4.14015	19.40	0.9432	0.2697	4.13767	19.40	0.9432	0.2696	4.13519		
15	29.08	0.8740	0.2751	3.99266	29.08	0.8739	0.2750	3.99018	29.09	0.8738	0.2748	3.98770		
20	38.75	0.7793	0.2828	3.79246	38.76	0.7792	0.2826	3.78999	38.77	0.7791	0.2825	3.78752		
25	48.40	0.6630	0.2931	3.54563	48.41	0.6638	0.2930	3.54316	48.43	0.6636	0.2928	3.54069		
30	58.02	0.5296	0.3067	3.25962	58.04	0.5293	0.3065	3.25716	58.06	0.5291	0.3064	3.25470		
35	67.61	0.3808	0.3241	2.94308	67.63	0.3805	0.3240	2.94063	67.66	0.3802	0.3238	2.93818		
40	77.16	0.2223	0.3464	2.60556	77.18	0.2218	0.3462	2.60312	77.21	0.2214	0.3460	2.60069		
45	86.64	0.0586	0.3750	2.25723	86.67	0.0581	0.3748	2.25481	86.70	0.0576	0.3746	2.25239		
50	96.04	-0.1052	0.4119	1.90851	96.07	-0.1058	0.4117	1.90611	96.11	-0.1064	0.4115	1.90372		
55	105.33	-0.2644	0.4605	1.56978	105.37	-0.2650	0.4603	1.56742	105.41	-0.2657	0.4601	1.56506		
60	114.47	-0.4142	0.5261	1.25097	114.51	-0.4149	0.5259	1.24865	114.56	-0.4156	0.5257	1.24634		
65	123.39	-0.5503	0.6176	0.96116	123.44	-0.5511	0.6174	0.95891	123.50	-0.5519	0.6172	0.95668		
70	132.01	-0.6692	0.7506	0.70812	132.07	-0.6700	0.7506	0.70596	132.13	-0.6708	0.7505	0.70381		
75	140.18	-0.7681	0.9551	0.49768	140.25	-0.7689	0.9553	0.49565	140.32	-0.7697	0.9556	0.49363		
80	147.73	-0.8455	1.2894	0.33288	147.81	-0.8463	1.2906	0.33104	147.89	-0.8470	1.2919	0.32921		
85	154.41	-0.9019	1.8706	0.21294	154.49	-0.9025	1.8749	0.21136	154.58	-0.9032	1.8792	0.20978		
90	160.00	-0.9397	2.9235	0.13250	160.09	-0.9402	2.9361	0.13122	160.18	-0.9407	2.9488	0.12994		
95	164.41	-0.9652	4.8311	0.08245	164.49	-0.9658	4.8641	0.08147	164.58	-0.9660	4.8978	0.08049		
100	167.73	-0.9772	8.1375	0.05274	167.81	-0.9774	8.2142	0.05201	167.89	-0.9777	8.2925	0.05129		
105	170.18	-0.9854	13.4734	0.03528	170.25	-0.9856	13.6302	0.03474	170.32	-0.9858	13.7904	0.03421		
110	172.01	-0.9903	21.4386	0.02479	172.07	-0.9904	21.7243	0.02439	172.13	-0.9906	22.0167	0.02399		
115	173.39	-0.9934	32.4955	0.01827	173.44	-0.9935	32.9686	0.01796	173.50	-0.9936	33.4534	0.01765		
120	174.47	-0.9953	46.8958	0.01403	174.51	-0.9954	47.6204	0.01379	174.56	-0.9955	48.3632	0.01355		
125	175.33	-0.9967	64.6384	0.01118	175.37	-0.9967	65.6789	0.01099	175.41	-0.9968	66.7459	0.01079		
130	176.04	-0.9976	85.4539	0.00920	176.07	-0.9977	86.8699	0.00903	176.11	-0.9977	88.3222	0.00887		
135	176.64	-0.9983	108.8117	0.00778	176.67	-0.9983	110.6528	0.00764	176.70	-0.9983	112.5417	0.00750		
140	177.16	-0.9988	133.9473	0.00674	177.18	-0.9988	136.2490	0.00661	177.21	-0.9988	138.6108	0.00649		
145	177.61	-0.9991	159.9071	0.00597	177.63	-0.9991	162.6868	0.00586	177.66	-0.9992	165.5393	0.00575		
150	178.02	-0.9994	185.6069	0.00539	178.04	-0.9994	188.8616	0.00529	178.06	-0.9994	192.2017	0.00519		
155	178.40	-0.9996	209.9044	0.00495	178.41	-0.9996	213.6052	0.00486	178.43	-0.9996	217.4076	0.00477		
160	178.75	-0.9998	231.6520	0.00463	178.76	-0.9998	235.7607	0.00454	178.77	-0.9998	239.9779	0.00446		
165	179.08	-0.9999	249.8109	0.00440	179.08	-0.9999	254.2572	0.00432	179.09	-0.9999	258.8211	0.00423		
170	179.39	-0.9999	263.4783	0.00424	179.40	-0.9999	268.1791	0.00416	179.40	-0.9999	273.0042	0.00408		
175	179.70	-1.0000	271.9670	0.00415	179.70	-1.0000	276.8259	0.00407	179.70	-1.0000	281.8134	0.00400		
180	180.00	-1.0000	274.8456	0.00412	180.00	-1.0000	279.7581	0.00404	180.00	-1.0000	284.8006	0.00397		

2 x = 0.886					2 x = 0.887					2 x = 0.888				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2654	4.25344	0.00	1.0000	0.2652	4.25097	0.00	1.0000	0.2651	4.24851		
5	9.71	0.9857	0.2664	4.22303	9.71	0.9857	0.2662	4.22056	9.71	0.9857	0.2661	4.21810		
10	19.41	0.9432	0.2694	4.13272	19.41	0.9431	0.2693	4.13025	19.42	0.9431	0.2691	4.12778		
15	29.10	0.8738	0.2747	3.98523	29.11	0.8737	0.2745	3.98277	29.12	0.8736	0.2744	3.98031		
20	38.78	0.7796	0.2823	3.78505	38.79	0.7794	0.2822	3.78259	38.80	0.7793	0.2820	3.78013		
25	48.44	0.6634	0.2927	3.53823	48.45	0.6632	0.2925	3.53578	48.47	0.6630	0.2924	3.53332		
30	58.06	0.5288	0.3062	3.25224	58.09	0.5285	0.3060	3.24980	58.11	0.5283	0.3059	3.24735		
35	67.68	0.3798	0.3236	2.93574	67.70	0.3795	0.3234	2.93330	67.72	0.3792	0.3233	2.93086		
40	77.23	0.2210	0.3459	2.59826	77.26	0.2206	0.3457	2.59583	77.28	0.2202	0.3455	2.59341		
45	86.73	0.0571	0.3744	2.24998	86.76	0.0566	0.3742	2.24757	86.78	0.0561	0.3740	2.24517		
50	96.14	-0.1070	0.4113	1.90133	96.18	-0.1076	0.4111	1.89895	96.21	-0.1082	0.4109	1.89657		
55	105.45	-0.2664	0.4599	1.56270	105.49	-0.2670	0.4597	1.56035	105.53	-0.2677	0.4595	1.55800		
60	114.60	-0.4163	0.5255	1.24403	114.65	-0.4171	0.5253	1.24172	114.70	-0.4178	0.5251	1.23942		
65	123.55	-0.5526	0.6170	0.95441	123.60	-0.5534	0.6169	0.95217	123.65	-0.5542	0.6167	0.94993		
70	132.19	-0.6716	0.7504	0.70165	132.25	-0.6724	0.7504	0.69950	132.31	-0.6732	0.7503	0.69735		
75	140.40	-0.7705	0.9559	0.49161	140.47	-0.7712	0.9562	0.48959	140.54	-0.7720	0.9564	0.48757		
80	147.97	-0.8478	1.2933	0.32738	148.05	-0.8485	1.2946	0.32555	148.13	-0.8492	1.2959	0.32373		
85	154.67	-0.9038	1.8836	0.20820	154.76	-0.9045	1.8880	0.20663	154.84	-0.9051	1.8924	0.20506		
90	160.27	-0.9413	2.9617	0.12867	160.36	-0.9418	2.9748	0.12740	160.45	-0.9423	2.9881	0.12613		
95	164.67	-0.9644	4.9320	0.07951	164.76	-0.9648	4.9668	0.07854	164.84	-0.9652	5.0023	0.07758		
100	167.97	-0.9780	8.3724	0.05057	168.05	-0.9783	8.4539	0.04985	168.13	-0.9786	8.5372	0.04914		
105	170.40	-0.9860	13.9543	0.03368	170.47	-0.9862	14.1218	0.03315	170.54	-0.9864	14.2932	0.03263		
110	172.19	-0.9907	22.3161	0.02359	172.25	-0.9909	22.6227	0.02320	172.31	-0.9910	22.9367	0.02281		
115	173.55	-0.9937	33.9501	0.01735	173.60	-0.9938	34.4592	0.01704	173.65	-0.9939	34.9812	0.01675		
120	174.60	-0.9956	49.1248	0.01331	174.65	-0.9956	49.9058	0.01307	174.70	-0.9957	50.7070	0.01283		
125	175.45	-0.9968	67.8402	0.01059	175.49	-0.9969	68.9630	0.01040	175.53	-0.9970	70.1152	0.01021		
130	176.14	-0.9977	89.8123	0.00871	176.18	-0.9978	91.3415	0.00855	176.21	-0.9978	92.9111	0.00839		
135	176.73	-0.9984	114.4800	0.00736	176.76	-0.9984	116.4696	0.00722	176.78	-0.9984	118.5121	0.00709		
140	177.23	-0.9988	141.0347	0.00637	177.26	-0.9989	143.5230	0.00625	177.28	-0.9989	146.0780	0.00613		
145	177.68	-0.9992	168.4673	0.00564	177.70	-0.9992	171.4733	0.00553	177.72	-0.9992	174.5602	0.00543		
150	178.08	-0.9994	195.6305	0.00509	178.09	-0.9994	199.1510	0.00499	178.11	-0.9995	202.7665	0.00490		
155	178.44	-0.9996	221.3111	0.00468	178.45	-0.9996								

x = 0.889					x = 0.890					x = 0.891				
PSI	θ	cos θ	g	S	θ	cos θ	g	S	θ	cos θ	g	S		
0	0.00	1.0000	0.2649	4.24605	0.00	1.0000	0.2648	4.24359	0.00	1.0000	0.2646	4.24114		
5	9.71	0.9857	0.2659	4.21564	9.72	0.9857	0.2658	4.21318	9.72	0.9856	0.2656	4.21073		
10	19.42	0.9431	0.2690	4.12532	19.43	0.9431	0.2688	4.12287	19.43	0.9430	0.2687	4.12042		
15	29.12	0.8736	0.2742	3.97785	29.13	0.8735	0.2741	3.97540	29.14	0.8734	0.2739	3.97295		
20	38.81	0.7792	0.2819	3.77768	38.82	0.7791	0.2817	3.77523	38.83	0.7790	0.2816	3.77279		
25	48.48	0.6628	0.2922	3.53088	48.50	0.6627	0.2920	3.52844	48.51	0.6625	0.2919	3.52600		
30	58.13	0.5280	0.3057	3.24491	58.14	0.5278	0.3056	3.24248	58.16	0.5275	0.3054	3.24005		
35	67.74	0.3788	0.3231	2.92843	67.76	0.3785	0.3229	2.92601	67.78	0.3782	0.3228	2.92359		
40	77.31	0.2199	0.3453	2.59100	77.33	0.2193	0.3451	2.58858	77.35	0.2189	0.3450	2.58618		
45	86.81	0.0556	0.3738	2.24277	86.84	0.0551	0.3736	2.24037	86.87	0.0546	0.3734	2.23798		
50	96.24	-0.1087	0.4107	1.89419	96.28	-0.1093	0.4105	1.89182	96.31	-0.1099	0.4103	1.88945		
55	105.57	-0.2683	0.4593	1.55566	105.60	-0.2690	0.4591	1.55331	105.64	-0.2697	0.4589	1.55098		
60	114.74	-0.4185	0.5249	1.23712	114.79	-0.4192	0.5247	1.23482	114.83	-0.4200	0.5245	1.23252		
65	123.71	-0.5550	0.6165	0.94769	123.76	-0.5557	0.6163	0.94546	123.81	-0.5565	0.6161	0.94323		
70	132.38	-0.6740	0.7502	0.69520	132.44	-0.6748	0.7502	0.69306	132.50	-0.6756	0.7501	0.69092		
75	140.61	-0.7728	0.9567	0.48556	140.68	-0.7736	0.9570	0.48355	140.75	-0.7744	0.9573	0.48154		
80	148.21	-0.8500	1.2972	0.32190	148.29	-0.8507	1.2985	0.32008	148.37	-0.8515	1.2999	0.31826		
85	154.93	-0.9058	1.8969	0.20349	155.02	-0.9065	1.9014	0.20192	155.11	-0.9071	1.9059	0.20036		
90	160.54	-0.9429	3.0015	0.12486	160.63	-0.9434	3.0151	0.12359	160.72	-0.9439	3.0289	0.12233		
95	164.93	-0.9656	5.0383	0.07661	165.02	-0.9660	5.0751	0.07565	165.11	-0.9664	5.1124	0.07469		
100	168.21	-0.9789	8.6222	0.04843	168.29	-0.9792	8.7089	0.04772	168.37	-0.9795	8.7976	0.04702		
105	170.61	-0.9866	14.4686	0.03211	170.68	-0.9868	14.6481	0.03159	170.75	-0.9870	14.8318	0.03108		
110	172.38	-0.9912	23.2585	0.02242	172.44	-0.9913	23.5882	0.02204	172.50	-0.9914	23.9262	0.02166		
115	173.71	-0.9940	35.5164	0.01645	173.76	-0.9941	36.0654	0.01616	173.81	-0.9942	36.6286	0.01587		
120	174.74	-0.9958	51.5290	0.01260	174.79	-0.9959	52.3726	0.01237	174.83	-0.9959	53.2386	0.01214		
125	175.57	-0.9970	71.2978	0.01002	175.60	-0.9971	72.5120	0.00983	175.64	-0.9971	73.7588	0.00965		
130	176.24	-0.9979	94.5277	0.00823	176.28	-0.9979	96.1776	0.00807	176.31	-0.9979	97.8776	0.00792		
135	176.81	-0.9985	120.6096	0.00695	176.84	-0.9985	122.7641	0.00682	176.87	-0.9985	124.9775	0.00669		
140	177.31	-0.9989	148.7021	0.00602	177.33	-0.9989	151.3978	0.00590	177.35	-0.9989	154.1678	0.00579		
145	177.74	-0.9992	177.7310	0.00532	177.76	-0.9992	180.9886	0.00522	177.78	-0.9992	184.3363	0.00512		
150	178.13	-0.9995	206.4804	0.00480	178.14	-0.9995	210.2965	0.00471	178.16	-0.9995	214.2183	0.00462		
155	178.48	-0.9996	233.6647	0.00442	178.50	-0.9997	238.0101	0.00433	178.51	-0.9997	242.4762	0.00424		
160	178.81	-0.9998	258.0100	0.00413	178.82	-0.9998	262.8304	0.00405	178.83	-0.9998	267.7850	0.00397		
165	179.12	-0.9999	278.3374	0.00392	179.13	-0.9999	283.5550	0.00384	179.14	-0.9999	288.9179	0.00377		
170	179.42	-0.9999	293.6388	0.00378	179.43	-1.0000	299.1556	0.00371	179.43	-1.0000	304.8263	0.00363		
175	179.71	-1.0000	303.1430	0.00370	179.72	-1.0000	308.8458	0.00363	179.72	-1.0000	314.7076	0.00355		
180	180.00	-1.0000	306.3660	0.00367	180.00	-1.0000	312.1319	0.00360	180.00	-1.0000	318.0587	0.00353		

x = 0.892					x = 0.893					x = 0.894				
PSI	θ	cos θ	g	S	θ	cos θ	g	S	θ	cos θ	g	S		
0	0.00	1.0000	0.2645	4.23869	0.00	1.0000	0.2643	4.23625	0.00	1.0000	0.2642	4.23382		
5	9.72	0.9856	0.2655	4.20828	9.72	0.9856	0.2653	4.20584	9.73	0.9856	0.2652	4.20341		
10	19.44	0.9430	0.2686	4.11798	19.44	0.9430	0.2684	4.11554	19.45	0.9429	0.2683	4.11310		
15	29.15	0.8734	0.2738	3.97051	29.16	0.8733	0.2736	3.96807	29.17	0.8732	0.2735	3.96564		
20	38.85	0.7788	0.2814	3.77035	38.86	0.7787	0.2812	3.76792	38.87	0.7786	0.2811	3.76549		
25	48.52	0.6623	0.2917	3.52357	48.54	0.6621	0.2916	3.52114	48.55	0.6619	0.2914	3.51872		
30	58.18	0.5273	0.3052	3.23762	58.20	0.5270	0.3051	3.23520	58.21	0.5268	0.3049	3.23279		
35	67.80	0.3778	0.3226	2.92117	67.82	0.3775	0.3224	2.91876	67.84	0.3772	0.3222	2.91636		
40	77.38	0.2185	0.3448	2.58377	77.40	0.2181	0.3446	2.58137	77.43	0.2177	0.3444	2.57898		
45	86.90	0.0541	0.3732	2.23559	86.93	0.0536	0.3731	2.23321	86.96	0.0531	0.3729	2.23083		
50	96.34	-0.1105	0.4101	1.88709	96.38	-0.1111	0.4099	1.88473	96.41	-0.1117	0.4097	1.88237		
55	105.68	-0.2703	0.4587	1.54864	105.72	-0.2710	0.4585	1.54632	105.76	-0.2716	0.4583	1.54399		
60	114.88	-0.4207	0.5243	1.23023	114.92	-0.4214	0.5241	1.22795	114.97	-0.4221	0.5239	1.22566		
65	123.87	-0.5573	0.6160	0.94100	123.92	-0.5580	0.6158	0.93877	123.97	-0.5588	0.6156	0.93655		
70	132.56	-0.6764	0.7500	0.68878	132.62	-0.6772	0.7500	0.68664	132.68	-0.6780	0.7499	0.68451		
75	140.82	-0.7752	0.9575	0.47953	140.89	-0.7760	0.9578	0.47752	140.97	-0.7768	0.9581	0.47552		
80	148.45	-0.8522	1.3012	0.31644	148.53	-0.8529	1.3025	0.31462	148.61	-0.8537	1.3039	0.31281		
85	155.20	-0.9078	1.9105	0.19879	155.29	-0.9084	1.9152	0.19723	155.38	-0.9091	1.9198	0.19567		
90	160.81	-0.9445	3.0429	0.12108	160.91	-0.9450	3.0571	0.11982	161.00	-0.9455	3.0715	0.11857		
95	165.20	-0.9668	5.1505	0.07374	165.29	-0.9672	5.1893	0.07279	165.38	-0.9676	5.2288	0.07185		
100	168.45	-0.9799	8.8882	0.04633	168.53	-0.9800	8.9807	0.04563	168.61	-0.9803	9.0753	0.04494		
105	170.82	-0.9872	15.0200	0.03057	170.89	-0.9874	15.2126	0.03007	170.97	-0.9876	15.4100	0.02956		
110	172.56	-0.9916	24.2727	0.02128	172.62	-0.9917	24.6281	0.02091	172.68	-0.9919	24.9926	0.02054		
115	173.87	-0.9943	37.2065	0.01558	173.92	-0.9944	37.7998	0.01529	173.97	-0.9945	38.4088	0.01501		
120	174.88	-0.9960	54.1277	0.01192	174.92	-0.9961	55.0409	0.01169	174.97	-0.9961	55.9791	0.01147		
125	175.68	-0.9972	75.0395	0.00947	175.72	-0.9972	76.3554	0.00928	175.76	-0.9973	77.7077	0.00911		
130	176.34	-0.9980	99.6242	0.00777	176.38	-0.9980	101.4192	0.00762	176.41	-0.9980	103.2645	0.00747		
135	176.90	-0.9985	127.2522	0.00656	176.93	-0.9986	129.5903	0.00643	176.96	-0.9986	131.9944	0.00630		
140	177.38	-0.9990	157.0147	0.00567	177.40	-0.9990	159.9416	0.00556	177.43	-0.9990	162.9314	0.00545		
145	177.80	-0.9993	187.7774	0.00502	177.82	-0.9993	191.3155	0.00492	177.84	-0.9993	194.9542	0.00482		
150	178.18	-0.9995	218.2500	0.00453	178.20	-0.9995	222.3955	0.00444	178.21	-0.9995	226.6593	0.00435		
155	178.52	-0.9997	247.0677	0.00416	178.54	-0.9997	251.7892	0.00408	178.55	-0.9997	256.6456			

$\frac{2}{x} = 0.895$
 $\frac{2}{x} = 0.896$
 $\frac{2}{x} = 0.897$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2641	4.23138	0.00	1.0000	0.2639	4.22896	0.00	1.0000	0.2638	4.22653
5	9.73	0.9856	0.2651	4.20098	9.73	0.9856	0.2649	4.19855	9.73	0.9856	0.2648	4.19613
10	19.46	0.9429	0.2681	4.11067	19.46	0.9429	0.2660	4.10825	19.47	0.9428	0.2678	4.10583
15	29.17	0.8731	0.2733	3.96321	29.18	0.8731	0.2732	3.96079	29.19	0.8730	0.2730	3.95837
20	38.88	0.7785	0.2809	3.76307	38.89	0.7784	0.2808	3.76065	38.90	0.7782	0.2806	3.75823
25	48.57	0.6617	0.2913	3.51630	48.58	0.6616	0.2911	3.51388	48.59	0.6614	0.2909	3.51147
30	58.23	0.5265	0.3047	3.23038	58.25	0.5262	0.3046	3.22797	58.27	0.5260	0.3044	3.22557
35	67.86	0.3768	0.3221	2.91395	67.88	0.3765	0.3219	2.91155	67.90	0.3762	0.3217	2.90916
40	77.45	0.2172	0.3442	2.57659	77.48	0.2168	0.3441	2.57420	77.50	0.2164	0.3439	2.57182
45	86.99	0.0526	0.3727	2.22846	87.02	0.0521	0.3725	2.22609	87.04	0.0516	0.3723	2.22372
50	96.44	-0.1122	0.4095	1.88002	96.48	-0.1128	0.4093	1.87767	96.51	-0.1134	0.4091	1.87533
55	105.80	-0.2723	0.4581	1.54167	105.84	-0.2730	0.4578	1.53935	105.88	-0.2736	0.4576	1.53703
60	115.01	-0.4228	0.5237	1.22338	115.06	-0.4236	0.5234	1.22111	115.11	-0.4243	0.5232	1.21883
65	124.03	-0.5596	0.6154	0.93433	124.08	-0.5604	0.6152	0.93211	124.13	-0.5611	0.6151	0.92990
70	132.75	-0.6788	0.7498	0.58238	132.81	-0.6796	0.7497	0.58025	132.87	-0.6804	0.7496	0.57812
75	141.04	-0.7776	0.9583	0.47352	141.11	-0.7783	0.9586	0.47152	141.18	-0.7791	0.9589	0.46952
80	148.70	-0.8544	1.3052	0.31099	148.78	-0.8552	1.3066	0.30918	148.86	-0.8559	1.3080	0.30737
85	155.47	-0.9097	1.9245	0.19412	155.56	-0.9104	1.9293	0.19256	155.65	-0.9110	1.9341	0.19101
90	161.09	-0.9460	3.0861	0.11732	161.19	-0.9466	3.1009	0.11607	161.28	-0.9471	3.1159	0.11483
95	165.47	-0.9680	5.2690	0.07090	165.56	-0.9684	5.3100	0.06996	165.65	-0.9688	5.3158	0.06903
100	168.70	-0.9806	9.1720	0.04426	168.78	-0.9809	9.2709	0.04357	168.86	-0.9812	9.3720	0.04290
105	171.04	-0.9878	15.6122	0.02907	171.11	-0.9880	15.8194	0.02857	171.18	-0.9882	16.0318	0.02808
110	172.75	-0.9920	25.3667	0.02017	172.81	-0.9921	25.7506	0.01981	172.87	-0.9923	26.1447	0.01944
115	174.03	-0.9946	39.0343	0.01473	174.08	-0.9947	39.6769	0.01445	174.13	-0.9948	40.3371	0.01418
120	175.01	-0.9962	56.9431	0.01125	175.06	-0.9963	57.9339	0.01103	175.11	-0.9964	58.9526	0.01082
125	175.80	-0.9973	79.0978	0.00893	175.84	-0.9974	80.5272	0.00875	175.88	-0.9974	81.9974	0.00858
130	176.44	-0.9981	105.1619	0.00732	176.48	-0.9981	107.1135	0.00718	176.51	-0.9981	109.1212	0.00703
135	176.99	-0.9986	134.4669	0.00618	177.02	-0.9986	137.0104	0.00605	177.04	-0.9987	139.6277	0.00593
140	177.45	-0.9990	166.0472	0.00534	177.48	-0.9990	169.7325	0.00523	177.50	-0.9990	172.5107	0.00513
145	177.86	-0.9993	198.6974	0.00472	177.88	-0.9993	202.5490	0.00463	177.90	-0.9993	206.5134	0.00453
150	178.23	-0.9995	231.0459	0.00426	178.25	-0.9995	235.5599	0.00417	178.27	-0.9995	240.2065	0.00409
155	178.57	-0.9997	261.6422	0.00391	178.58	-0.9997	266.7843	0.00383	178.59	-0.9997	272.0776	0.00375
160	178.88	-0.9998	289.0493	0.00366	178.89	-0.9998	294.7550	0.00358	178.90	-0.9998	300.6287	0.00351
165	179.17	-0.9999	311.9368	0.00347	179.18	-0.9999	318.1137	0.00340	179.19	-0.9999	324.4729	0.00333
170	179.46	-1.0000	329.1672	0.00335	179.46	-1.0000	335.6993	0.00328	179.47	-1.0000	342.4294	0.00321
175	179.73	-1.0000	339.8703	0.00328	179.73	-1.0000	346.6231	0.00321	179.73	-1.0000	353.5753	0.00314
180	180.00	-1.0000	343.5001	0.00325	180.00	-1.0000	350.3277	0.00319	180.00	-1.0000	357.3571	0.00312

 $\frac{2}{x} = 0.898$
 $\frac{2}{x} = 0.899$
 $\frac{2}{x} = 0.900$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2636	4.22412	0.00	1.0000	0.2635	4.22170	0.00	1.0000	0.2633	4.21930
5	9.74	0.9856	0.2646	4.19371	9.74	0.9856	0.2645	4.19130	9.74	0.9856	0.2643	4.18889
10	19.47	0.9428	0.2677	4.10341	19.48	0.9428	0.2675	4.10100	19.48	0.9427	0.2674	4.09860
15	29.20	0.8729	0.2729	3.95596	29.21	0.8728	0.2728	3.95355	29.21	0.8728	0.2726	3.95115
20	38.91	0.7781	0.2805	3.75582	38.92	0.7780	0.2803	3.75342	38.93	0.7779	0.2802	3.75102
25	48.61	0.6612	0.2908	3.50907	48.62	0.6610	0.2906	3.50667	48.64	0.6608	0.2905	3.50427
30	58.28	0.5257	0.3043	3.22317	58.30	0.5255	0.3041	3.22077	58.32	0.5252	0.3039	3.21839
35	67.92	0.3758	0.3216	2.90677	67.95	0.3755	0.3214	2.90439	67.97	0.3752	0.3212	2.90201
40	77.53	0.2160	0.3437	2.56945	77.55	0.2156	0.3435	2.56707	77.58	0.2152	0.3434	2.56470
45	87.07	0.0511	0.3721	2.22136	87.10	0.0506	0.3719	2.21900	87.13	0.0501	0.3717	2.21665
50	96.55	-0.1140	0.4089	1.87299	96.58	-0.1146	0.4087	1.87065	96.61	-0.1152	0.4085	1.86832
55	105.92	-0.2743	0.4574	1.53472	105.96	-0.2749	0.4572	1.53242	106.00	-0.2756	0.4570	1.53011
60	115.15	-0.4250	0.5230	1.21656	115.20	-0.4257	0.5228	1.21430	115.24	-0.4265	0.5226	1.21203
65	124.19	-0.5619	0.6149	0.92769	124.24	-0.5627	0.6147	0.92548	124.29	-0.5634	0.6145	0.92327
70	132.93	-0.6811	0.7496	0.67600	133.00	-0.6819	0.7495	0.67387	133.06	-0.6827	0.7494	0.67175
75	141.25	-0.7799	0.9591	0.46752	141.33	-0.7807	0.9594	0.46553	141.40	-0.7815	0.9597	0.46354
80	148.94	-0.8567	1.3093	0.30556	149.03	-0.8574	1.3107	0.30376	149.11	-0.8582	1.3121	0.30195
85	155.74	-0.9117	1.9390	0.18946	155.83	-0.9123	1.9438	0.18791	155.92	-0.9130	1.9488	0.18636
90	161.37	-0.9476	3.1311	0.11359	161.47	-0.9482	3.1466	0.11235	161.57	-0.9487	3.1623	0.11111
95	165.74	-0.9692	5.3944	0.06810	165.83	-0.9696	5.4379	0.06717	165.92	-0.9700	5.4822	0.06625
100	168.94	-0.9814	9.4755	0.04222	169.03	-0.9817	9.5814	0.04155	169.11	-0.9820	9.6898	0.04089
105	171.25	-0.9884	16.2497	0.02760	171.33	-0.9886	16.4731	0.02711	171.40	-0.9888	16.7024	0.02663
110	172.93	-0.9924	26.5494	0.01909	173.00	-0.9925	26.9651	0.01873	173.06	-0.9927	27.3922	0.01838
115	174.19	-0.9949	41.0157	0.01391	174.24	-0.9950	41.7134	0.01364	174.29	-0.9950	42.4309	0.01337
120	175.15	-0.9964	60.0003	0.01060	175.20	-0.9965	61.0780	0.01039	175.24	-0.9966	62.1870	0.01019
125	175.92	-0.9975	83.5099	0.00841	175.96	-0.9975	85.0665	0.00824	176.00	-0.9976	86.6689	0.00807
130	176.55	-0.9982	111.1875	0.00689	176.58	-0.9982	113.3144	0.00675	176.61	-0.9983	115.5045	0.00661
135	177.07	-0.9987	142.3217	0.00581	177.10	-0.9987	145.0955	0.00569	177.13	-0.9987	147.9522	0.00557
140	177.53	-0.9991	175.8854	0.00502	177.55	-0.9991	179.3605	0.00492	177.58	-0.9991	182.9399	0.00481
145	177.92	-0.9993	210.5951	0.00444	177.95	-0.9994	214.7985	0.00435	177.97	-0.9994	219.1287	0.00425
150	178.28	-0.9996	244.9908	0.00400	178.30	-0.9996	249.9183	0.00392	178.32	-0.9996	254.9948	0.00384
155	178.61	-0.9997	277.5282	0.00368	178.62	-0.9997	283.1423	0.00360	178.64	-0.9997	288.9264	0.00352
160	178.91	-0.9998	306.6773	0.00344	178.92	-0.9998	312.9075	0.00336	178.93	-0.9998	319.3268	0.00339
165	179.20	-0.9999	331.0214	0.00326	179.21	-0.9999	337.7669	0.00319	179.21	-0.9999	344.7172	0.00312
170	179.47	-1.0000	349.3494	0.00314	179.48	-1.0000	356.4832	0.00308	179.48	-1.0000	363.8337	0.00301
175	179.74	-1.0000	360.7348	0.00308	179.74	-1.0000	368.1099	0.00301	179.74	-1.0000	375.7091	0.00295
180	180.00	-1.0000	364.5960	0.00305	180.00	-1.0000	372.0529	0.00299	180.00	-1.0000	379.7366	0.00293

$\frac{2}{x} = 0.901$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2632	4.21689
5	9.75	0.9856	0.2642	4.18649
10	19.49	0.9427	0.2672	4.09619
15	29.22	0.8727	0.2725	3.94875
20	38.94	0.7778	0.2800	3.74862
25	48.65	0.6607	0.2903	3.50188
30	58.33	0.5250	0.3038	3.21600
35	67.99	0.3748	0.3211	2.89963
40	77.60	0.2147	0.3432	2.56234
45	87.16	0.0496	0.3716	2.21430
50	96.65	-0.1158	0.4083	1.86599
55	106.04	-0.2763	0.4568	1.52781
60	115.29	-0.4272	0.5224	1.20977
65	124.35	-0.5642	0.6143	0.92107
70	133.12	-0.6835	0.7493	0.66964
75	141.47	-0.7823	0.9599	0.46155
80	149.19	-0.8589	1.3135	0.30015
85	156.01	-0.9136	1.9538	0.18481
90	161.66	-0.9492	3.1782	0.10988
95	166.01	-0.9704	5.5274	0.06533
100	169.19	-0.9823	9.8008	0.04022
105	171.47	-0.9889	16.9377	0.02616
110	173.12	-0.9928	27.8312	0.01803
115	174.35	-0.9951	43.1690	0.01311
120	175.29	-0.9966	63.3285	0.00998
125	176.04	-0.9976	88.3189	0.00790
130	176.65	-0.9983	117.7603	0.00647
135	177.16	-0.9988	150.8951	0.00545
140	177.60	-0.9991	186.6281	0.00471
145	177.99	-0.9994	223.5908	0.00416
150	178.33	-0.9996	260.2264	0.00375
155	178.65	-0.9997	294.8876	0.00345
160	178.94	-0.9998	325.9427	0.00322
165	179.22	-0.9999	351.8808	0.00306
170	179.49	-1.0000	371.4100	0.00295
175	179.75	-1.0000	383.5419	0.00286
180	180.00	-1.0000	387.6563	0.00286

 $\frac{2}{x} = 0.902$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.2631	4.21449
9.75	0.9856	0.2641	4.18409
19.49	0.9427	0.2671	4.09380
29.23	0.8727	0.2723	3.94635
38.96	0.7776	0.2799	3.74623
48.66	0.6605	0.2902	3.49950
58.35	0.5247	0.3036	3.21362
68.01	0.3745	0.3209	2.89726
77.62	0.2143	0.3430	2.55998
87.19	0.0491	0.3714	2.21196
96.68	-0.1163	0.4081	1.86366
106.08	-0.2769	0.4566	1.52552
115.34	-0.4279	0.5222	1.20752
124.46	-0.5650	0.6141	0.91887
133.18	-0.6843	0.7492	0.66752
141.55	-0.7831	0.9602	0.45956
149.28	-0.8597	1.3149	0.29834
156.11	-0.9143	1.9588	0.18327
161.76	-0.9497	3.1944	0.10865
166.11	-0.9707	5.5736	0.06441
169.28	-0.9825	9.9145	0.03957
171.55	-0.9881	17.1792	0.02569
173.18	-0.9929	28.2825	0.01768
174.40	-0.9952	43.9284	0.01285
175.34	-0.9967	64.5038	0.00978
176.08	-0.9977	90.0185	0.00774
176.68	-0.9983	120.0845	0.00633
177.19	-0.9988	153.9279	0.00534
177.62	-0.9991	190.4293	0.00461
178.01	-0.9994	228.1902	0.00407
178.35	-0.9996	265.6193	0.00367
178.66	-0.9997	301.0331	0.00337
178.96	-0.9998	332.7636	0.00315
179.23	-0.9999	359.2664	0.00299
179.49	-1.0000	379.2212	0.00288
179.75	-1.0000	391.6176	0.00282
180.00	-1.0000	395.8218	0.00280

 $\frac{2}{x} = 0.903$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.2629	4.21210
9.75	0.9856	0.2639	4.18170
19.50	0.9427	0.2670	4.09140
29.24	0.8726	0.2722	3.94396
38.97	0.7775	0.2797	3.74385
48.68	0.6603	0.2900	3.49711
58.37	0.5245	0.3034	3.21125
68.03	0.3742	0.3207	2.89489
77.65	0.2139	0.3428	2.55762
87.22	0.0486	0.3712	2.20962
96.71	-0.1169	0.4079	1.86134
106.12	-0.2776	0.4564	1.52322
115.38	-0.4286	0.5220	1.20526
124.46	-0.5658	0.6140	0.91667
133.25	-0.6851	0.7492	0.66541
141.62	-0.7839	0.9605	0.45757
149.36	-0.8604	1.3162	0.29654
156.20	-0.9150	1.9639	0.18173
161.85	-0.9503	3.2108	0.10742
166.20	-0.9711	5.6207	0.06350
169.36	-0.9828	10.0309	0.03891
171.62	-0.9893	17.4272	0.02522
173.25	-0.9931	28.7466	0.01734
174.46	-0.9953	44.7102	0.01259
175.38	-0.9968	65.7143	0.00957
176.12	-0.9977	91.7696	0.00758
176.71	-0.9984	122.4799	0.00620
177.22	-0.9988	157.0542	0.00522
177.65	-0.9992	194.3483	0.00451
178.03	-0.9994	232.9326	0.00399
178.37	-0.9996	271.1804	0.00359
178.68	-0.9997	307.3705	0.00330
178.97	-0.9998	339.7978	0.00308
179.24	-0.9999	366.8833	0.00293
179.50	-1.0000	387.2772	0.00282
179.75	-1.0000	399.9466	0.00276
180.00	-1.0000	404.2433	0.00274

 $\frac{2}{x} = 0.904$

PSI	θ	$\cos \theta$	G	$\frac{2}{S}$
0	0.00	1.0000	0.2628	4.20971
5	9.75	0.9855	0.2638	4.17931
10	19.50	0.9426	0.2668	4.08902
15	29.25	0.8725	0.2720	3.94158
20	38.98	0.7774	0.2796	3.74146
25	48.69	0.6601	0.2899	3.49474
30	58.39	0.5242	0.3033	3.20887
35	68.05	0.3738	0.3206	2.89253
40	77.67	0.2135	0.3427	2.55527
45	87.25	0.0481	0.3710	2.20728
50	96.75	-0.1175	0.4077	1.85903
55	106.15	-0.2782	0.4562	1.52093
60	115.43	-0.4294	0.5218	1.20301
65	124.51	-0.5665	0.6138	0.91448
70	133.31	-0.6859	0.7491	0.66330
75	141.69	-0.7847	0.9607	0.45558
80	149.45	-0.8612	1.3176	0.29474
85	156.29	-0.9156	1.9690	0.18019
90	161.95	-0.9508	3.2275	0.10619
95	166.29	-0.9715	5.6688	0.06259
100	169.45	-0.9831	10.1503	0.03826
105	171.69	-0.9885	17.6820	0.02475
110	173.31	-0.9932	29.2240	0.01700
115	174.51	-0.9954	45.5151	0.01233
120	175.43	-0.9968	66.9614	0.00937
125	176.15	-0.9977	93.5744	0.00741
130	176.75	-0.9984	124.9494	0.00607
135	177.25	-0.9988	160.2779	0.00511
140	177.67	-0.9992	198.3900	0.00441
145	178.05	-0.9994	237.8240	0.00390
150	178.39	-0.9996	276.9167	0.00351
155	178.69	-0.9997	313.9079	0.00323
160	178.98	-0.9998	347.0543	0.00300
165	179.25	-0.9999	374.7412	0.00286
170	179.50	-1.0000	395.5882	0.00276
175	179.75	-1.0000	408.5393	0.00270
180	180.00	-1.0000	412.9316	0.00268

 $\frac{2}{x} = 0.905$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.2626	4.20733
9.76	0.9855	0.2636	4.17692
19.51	0.9426	0.2667	4.08663
29.25	0.8725	0.2719	3.93920
38.99	0.7773	0.2794	3.73909
48.71	0.6599	0.2897	3.49236
58.40	0.5240	0.3031	3.20651
68.07	0.3735	0.3204	2.89017
77.70	0.2131	0.3425	2.55292
87.27	0.0476	0.3708	2.20495
96.78	-0.1181	0.4075	1.85671
106.19	-0.2789	0.4560	1.51865
115.47	-0.4301	0.5216	1.20077
124.56	-0.5673	0.6136	0.91229
133.37	-0.6867	0.7490	0.66119
141.77	-0.7855	0.9610	0.45360
149.53	-0.8619	1.3190	0.29294
156.39	-0.9163	1.9742	0.17865
162.05	-0.9513	3.2444	0.10497
166.39	-0.9719	5.7178	0.06168
169.53	-0.9834	10.2726	0.03762
171.77	-0.9897	17.9437	0.02429
173.37	-0.9933	29.7153	0.01667
174.56	-0.9955	46.3442	0.01208
175.47	-0.9969	68.2467	0.00918
176.19	-0.9978	95.4352	0.00726
176.78	-0.9984	127.4963	0.00593
177.27	-0.9989	163.6031	0.00500
177.70	-0.9992	202.5595	0.00432
178.07	-0.9994	242.8707	0.00381
178.40	-0.9996	282.8355	0.00344
178.71	-0.9997	320.6538	0.00316
178.99	-0.9998	354.5425	0.00295
179.25	-0.9999	382.8502	0.00280
179.51	-1.0000	404.1651	0.00270
179.76	-1.0000	417.4070	0.00264
180.00	-1.0000	421.8979	0.00262

 $\frac{2}{x} = 0.906$

θ	$\cos \theta$	G	$\frac{2}{S}$
0.00	1.0000	0.2625	4.20495
9.76	0.9855	0.2635	4.17454
19.51	0.9426	0.2665	4.08425
29.26	0.8724	0.2717	3.93682
39.00	0.7772	0.2793	3.73671
48.72	0.6597	0.2895	3.49000
58.42	0.5237	0.3030	3.20415
68.09	0.3732	0.3202	2.88782
77.72	0.2127	0.3423	2.55058
87.30	0.0471	0.3706	2.20262
96.82	-0.1187	0.4073	1.85440
106.23	-0.2795	0.4558	1.51636
115.52	-0.4308	0.5214	1.19852
124.62	-0.5681	0.6134	0.91010
133.44	-0.6875	0.7489	0.65908
141.84	-0.7863	0.9612	0.45162
149.62	-0.8627	1.3205	0.29115
156.48	-0.9169	1.9794	0.17711
162.15	-0.9518	3.2616	0.10375
166.48	-0.9723	5.7680	0.06078
169.62	-0.9836	10.3980	0.03697
171.84	-0.9899	18.2128	0.02384
173.44	-0.9934	30.2210	0.01633
174.62	-0.9956	47.1984	0.01183
175.52	-0.9969	69.5718	0.00898
176.23	-0.9978	97.3544	0.00710
176.82	-0.9985	130.1236	0.00580
177.30	-0.9989	167.0341	0.00489
177.72	-0.9992	206.8624	0.00422
178.09	-0.9994	248.0794	0.00373
178.42	-0.9996	288.9447	0.00336
178.72	-0.9998	327.6172	0.00308
179.00	-0.9999	362.2725	0.00288

$$x = 0.907$$

$$x = 0.908$$

$$x = 0.909$$

PSI	ϕ	$\cos \phi$	g	S^2	ϕ	$\cos \phi$	g	S^2	ϕ	$\cos \phi$	g	S^2
0	0.00	1.0000	0.2623	4.20257	0.00	1.0000	0.2622	4.20020	0.00	1.0000	0.2621	4.19783
5	9.76	0.9855	0.2633	4.17217	9.76	0.9855	0.2632	4.16980	9.77	0.9855	0.2631	4.16743
10	19.52	0.9425	0.2664	4.08188	19.52	0.9425	0.2662	4.07951	19.53	0.9425	0.2661	4.07715
15	29.27	0.8773	0.2716	3.93445	29.28	0.8773	0.2714	3.93208	29.29	0.8772	0.2713	3.92972
20	39.01	0.7770	0.2791	3.73434	39.02	0.7769	0.2790	3.73198	39.03	0.7768	0.2788	3.72936
25	48.73	0.6596	0.2894	3.48763	48.75	0.6594	0.2892	3.48527	48.76	0.6592	0.2891	3.48292
30	58.44	0.5234	0.3028	3.20179	58.45	0.5232	0.3026	3.19943	58.47	0.5229	0.3025	3.19708
35	68.11	0.3728	0.3201	2.88547	68.13	0.3725	0.3199	2.88312	68.15	0.3722	0.3197	2.88078
40	77.75	0.2122	0.3421	2.54824	77.77	0.2118	0.3419	2.54591	77.80	0.2114	0.3418	2.54357
45	87.33	0.0466	0.3704	2.20029	87.36	0.0460	0.3702	2.19797	87.39	0.0455	0.3701	2.19565
50	96.85	-0.1193	0.4071	1.85210	96.88	-0.1198	0.4069	1.84980	96.92	-0.1204	0.4067	1.84750
55	106.37	-0.2330	0.4556	1.51409	106.41	-0.2330	0.4554	1.51181	106.45	-0.2335	0.4551	1.50954
60	115.57	-0.4315	0.5212	1.19628	115.61	-0.4323	0.5209	1.19404	115.66	-0.4330	0.5207	1.19181
65	124.67	-0.5689	0.6132	0.90791	124.72	-0.5696	0.6130	0.90573	124.78	-0.5704	0.6128	0.90355
70	133.50	-0.6883	0.7488	0.65698	133.56	-0.6892	0.7487	0.65488	133.63	-0.6900	0.7486	0.65278
75	141.91	-0.7871	0.9615	0.44964	141.99	-0.7879	0.9618	0.44766	142.06	-0.7887	0.9620	0.44568
80	149.70	-0.8634	1.3219	0.28935	149.79	-0.8642	1.3233	0.28756	149.87	-0.8649	1.3247	0.28576
85	156.58	-0.9176	1.9847	0.17557	156.67	-0.9182	1.9900	0.17404	156.77	-0.9189	1.9954	0.17251
90	162.24	-0.9524	3.2791	0.10254	162.34	-0.9529	3.2869	0.10132	162.44	-0.9534	3.3150	0.10011
95	166.58	-0.9727	5.8192	0.05988	166.67	-0.9731	5.8716	0.05899	166.77	-0.9734	5.9251	0.05810
100	169.70	-0.9839	10.5266	0.03633	169.79	-0.9842	10.6586	0.03570	169.87	-0.9844	10.7940	0.03507
105	171.91	-0.9901	18.4894	0.02338	171.99	-0.9902	18.7739	0.02293	172.06	-0.9904	19.0666	0.02249
110	173.50	-0.9936	30.7417	0.01600	173.56	-0.9937	31.2780	0.01568	173.63	-0.9938	31.8307	0.01535
115	174.67	-0.9957	48.0768	0.01158	174.72	-0.9958	48.9865	0.01133	174.78	-0.9959	49.9276	0.01109
120	175.57	-0.9970	70.9382	0.00879	175.61	-0.9971	72.3479	0.00860	175.66	-0.9971	73.8027	0.00841
125	176.27	-0.9979	99.3343	0.00694	176.31	-0.9979	101.3777	0.00679	176.35	-0.9980	103.4873	0.00664
130	176.85	-0.9985	132.8350	0.00568	176.88	-0.9985	135.6340	0.00555	176.92	-0.9986	138.5246	0.00542
135	177.33	-0.9989	170.5756	0.00478	177.36	-0.9989	174.2323	0.00467	177.39	-0.9990	178.0092	0.00456
140	177.75	-0.9992	211.3044	0.00413	177.77	-0.9992	215.8916	0.00403	177.80	-0.9993	220.6303	0.00394
145	178.11	-0.9995	253.4570	0.00364	178.13	-0.9995	259.0109	0.00356	178.15	-0.9995	264.7489	0.00348
150	178.44	-0.9996	295.2526	0.00328	178.45	-0.9996	301.7679	0.00321	178.47	-0.9996	308.4996	0.00313
155	178.73	-0.9998	334.8074	0.00301	178.75	-0.9998	342.2344	0.00295	178.76	-0.9998	349.9087	0.00288
160	179.01	-0.9999	370.2546	0.00282	179.02	-0.9999	378.4999	0.00275	179.03	-0.9999	387.0202	0.00269
165	179.27	-0.9999	399.8657	0.00267	179.28	-0.9999	408.7955	0.00261	179.29	-0.9999	418.0233	0.00255
170	179.52	-1.0000	422.1629	0.00258	179.52	-1.0000	431.6065	0.00252	179.53	-1.0000	441.3695	0.00246
175	179.76	-1.0000	436.0152	0.00252	179.76	-1.0000	445.7815	0.00246	179.77	-1.0000	455.8739	0.00240
180	180.00	-1.0000	440.7134	0.00250	180.00	-1.0000	450.5884	0.00244	180.00	-1.0000	460.7933	0.00239

$$x = 0.910$$

$$x = 0.911$$

$$x = 0.912$$

PSI	ϕ	$\cos \phi$	g	S^2	ϕ	$\cos \phi$	g	S^2	ϕ	$\cos \phi$	g	S^2
0	0.00	1.0000	0.2619	4.19347	0.00	1.0000	0.2618	4.19311	0.00	1.0000	0.2616	4.19076
5	9.77	0.9855	0.2629	4.16507	9.77	0.9855	0.2628	4.16271	9.77	0.9855	0.2626	4.16036
10	19.54	0.9424	0.2660	4.07479	19.54	0.9424	0.2658	4.07243	19.55	0.9424	0.2657	4.07008
15	29.29	0.8721	0.2711	3.92736	29.30	0.8721	0.2710	3.92501	29.31	0.8720	0.2709	3.92266
20	39.04	0.7767	0.2787	3.72727	39.05	0.7766	0.2785	3.72492	39.06	0.7764	0.2784	3.72257
25	48.78	0.6590	0.2889	3.48057	48.79	0.6588	0.2888	3.47822	48.80	0.6586	0.2886	3.47588
30	58.49	0.5227	0.3023	3.19474	58.50	0.5224	0.3022	3.19240	58.52	0.5222	0.3020	3.19006
35	68.17	0.3718	0.3196	2.87844	68.19	0.3715	0.3194	2.87611	68.21	0.3712	0.3192	2.87378
40	77.82	0.2110	0.3416	2.54125	77.84	0.2106	0.3414	2.53893	77.87	0.2102	0.3412	2.53661
45	87.42	0.0450	0.3699	2.19334	87.45	0.0445	0.3697	2.19103	87.48	0.0440	0.3695	2.18873
50	96.95	-0.1210	0.4065	1.84520	96.98	-0.1216	0.4063	1.84291	97.02	-0.1222	0.4061	1.84063
55	106.39	-0.2822	0.4549	1.50727	106.43	-0.2828	0.4547	1.50501	106.47	-0.2835	0.4545	1.50274
60	115.70	-0.4337	0.5205	1.18958	115.75	-0.4344	0.5203	1.18735	115.80	-0.4352	0.5201	1.18512
65	124.63	-0.5712	0.6126	0.90137	124.69	-0.5720	0.6125	0.89920	124.74	-0.5727	0.6123	0.89703
70	133.69	-0.6908	0.7485	0.65068	133.75	-0.6916	0.7484	0.64858	133.82	-0.6924	0.7484	0.64649
75	142.14	-0.7895	0.9623	0.44371	142.21	-0.7903	0.9625	0.44173	142.29	-0.7911	0.9628	0.43976
80	149.96	-0.8657	1.3261	0.28397	150.05	-0.8664	1.3276	0.28218	150.13	-0.8672	1.3290	0.28039
85	156.86	-0.9196	2.0108	0.17098	156.96	-0.9202	2.0063	0.16945	157.06	-0.9209	2.0119	0.16792
90	162.54	-0.9539	3.3333	0.09890	162.64	-0.9545	3.3520	0.09769	162.74	-0.9550	3.3710	0.09649
95	166.66	-0.9738	5.9798	0.05721	166.96	-0.9742	6.0357	0.05633	167.06	-0.9746	6.0930	0.05545
100	169.96	-0.9847	10.9330	0.03444	170.05	-0.9849	11.0758	0.03382	170.13	-0.9852	11.2224	0.03321
105	172.14	-0.9906	19.3678	0.02204	172.21	-0.9908	19.6779	0.02161	172.29	-0.9910	19.9974	0.02117
110	173.69	-0.9939	32.4004	0.01503	173.75	-0.9941	32.9878	0.01472	173.82	-0.9942	33.5937	0.01440
115	174.43	-0.9959	50.8885	0.01085	174.49	-0.9960	51.8854	0.01061	174.54	-0.9961	52.9146	0.01038
120	175.70	-0.9972	75.3046	0.00822	175.75	-0.9973	76.8556	0.00804	175.80	-0.9973	78.4580	0.00786
125	176.39	-0.9980	105.6660	0.00649	176.43	-0.9981	107.9169	0.00634	176.47	-0.9981	110.2434	0.00620
130	176.95	-0.9986	141.5106	0.00530	176.98	-0.9986	144.5966	0.00518	177.02	-0.9986	147.7869	0.00506
135	177.42	-0.9990	181.9118	0.00446	177.45	-0.9990	185.9457	0.00436	177.48	-0.9990	190.1169	0.00425
140	177.82	-0.9993	225.5274	0.00385	177.84	-0.9993	230.5899	0.00376	177.87	-0.9993	235.8255	0.00367
145	178.17	-0.9995	270.6793	0.00340	178.19	-0.9995	276.8107	0.00332	178.21	-0.9995	283.1524	0.00324
150	178.49	-0.9997	315.4576	0.00306	178.50	-0.9997	322.6521	0.00299	178.52	-0.9997	330.0938	0.00292
155	178.78	-0.9998	357.8413	0.00281	178.79	-0.9998	366.0440	0.00274	178.80	-0.9998	374.5291	0.00268
160	179.04	-0.9999	395.8277	0.00262	179.05	-0.9999	404.9354	0.00256	179.06	-0.9999	414.3572	0.00250
165	179.29	-0.9999	427.5625	0.00249	179.30	-0.9999	437.4272	0.00243	179.31	-0.9999	447.6323	0.00237
170	179.53	-1.0000	451.4601	0.00240	179.54	-1.0000	461.8952	0.00234	179.55	-1.0000	472.6907	0.00229
175	179.77	-1.0000	466.3073	0.00235	179.77	-1.0000	477.0970	0.00229	179.77	-1.0000	488.2595	0.00224
180	180.00	-1.0000	471.3429	0.00233	180.00	-1.0000	482.2530	0.00228	180.00	-1.0000	493.5399	0.00222

x = 0.913					x = 0.914					x = 0.915				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2615	4.18841	0.00	1.0000	0.2614	4.18607	0.00	1.0000	0.2612	4.18373		
5	9.78	0.9855	0.2625	4.15801	9.78	0.9855	0.2624	4.15567	9.78	0.9855	0.2622	4.15333		
10	19.55	0.9423	0.2655	4.06773	19.56	0.9423	0.2654	4.06539	19.56	0.9423	0.2652	4.06305		
15	29.32	0.8719	0.2707	3.92031	29.33	0.8718	0.2706	3.91797	29.33	0.8718	0.2704	3.91564		
20	39.07	0.7763	0.2782	3.72023	39.09	0.7762	0.2781	3.71789	39.10	0.7761	0.2780	3.71556		
25	48.82	0.6585	0.2865	3.47354	48.83	0.6583	0.2883	3.47121	48.84	0.6581	0.2882	3.46888		
30	58.54	0.5219	0.3018	3.18773	58.56	0.5217	0.3017	3.18540	58.57	0.5214	0.3015	3.18308		
35	68.23	0.3708	0.3191	2.87146	68.25	0.3705	0.3189	2.86914	68.28	0.3702	0.3187	2.86682		
40	77.89	0.2097	0.3411	2.53429	77.92	0.2093	0.3409	2.53198	77.94	0.2089	0.3407	2.52968		
45	87.50	0.0435	0.3693	2.18643	87.53	0.0430	0.3691	2.18413	87.56	0.0425	0.3689	2.18184		
50	97.05	-0.1228	0.4059	1.83834	97.08	-0.1233	0.4057	1.83606	97.12	-0.1239	0.4056	1.83379		
55	106.51	-0.2842	0.4543	1.50049	106.55	-0.2848	0.4541	1.49823	106.59	-0.2855	0.4539	1.49598		
60	115.84	-0.4359	0.5199	1.18290	115.89	-0.4366	0.5197	1.18068	115.93	-0.4374	0.5195	1.17847		
65	125.06	-0.5735	0.6121	0.89486	125.05	-0.5743	0.6119	0.89269	125.10	-0.5751	0.6117	0.89052		
70	133.88	-0.6932	0.7483	0.64440	133.95	-0.6940	0.7482	0.64231	134.01	-0.6948	0.7481	0.64022		
75	142.36	-0.7919	0.9630	0.43779	142.44	-0.7927	0.9633	0.43582	142.51	-0.7935	0.9635	0.43385		
80	150.22	-0.8679	1.3305	0.27860	150.31	-0.8687	1.3319	0.27681	150.39	-0.8694	1.3334	0.27503		
85	157.15	-0.9215	2.0175	0.16639	157.25	-0.9222	2.0231	0.16487	157.35	-0.9229	2.0288	0.16335		
90	162.84	-0.9555	3.3903	0.09529	162.95	-0.9560	3.4100	0.09409	163.05	-0.9566	3.4300	0.09290		
95	167.15	-0.9750	6.1516	0.05457	167.25	-0.9753	6.2115	0.05370	167.35	-0.9757	6.2729	0.05283		
100	170.22	-0.9855	11.3731	0.03259	170.31	-0.9857	11.5280	0.03198	170.39	-0.9860	11.6873	0.03138		
105	172.36	-0.9911	20.3264	0.02074	172.44	-0.9913	20.6656	0.02031	172.51	-0.9915	21.0153	0.01989		
110	173.88	-0.9943	34.2189	0.01409	173.95	-0.9944	34.8643	0.01378	174.01	-0.9945	35.5308	0.01348		
115	175.00	-0.9962	53.9778	0.01015	175.05	-0.9963	55.0763	0.00992	175.10	-0.9964	56.2118	0.00969		
120	175.84	-0.9974	80.1141	0.00768	175.89	-0.9974	81.8264	0.00750	175.93	-0.9975	83.5975	0.00732		
125	176.51	-0.9981	112.6488	0.00605	176.55	-0.9982	115.1368	0.00591	176.59	-0.9982	117.7113	0.00577		
130	177.05	-0.9987	151.0864	0.00494	177.08	-0.9987	154.5002	0.00482	177.12	-0.9987	158.0336	0.00471		
135	177.50	-0.9991	194.4316	0.00415	177.53	-0.9991	198.8967	0.00405	177.56	-0.9991	203.5191	0.00396		
140	177.89	-0.9993	241.2421	0.00358	177.92	-0.9993	246.8481	0.00350	177.94	-0.9994	252.6526	0.00341		
145	178.23	-0.9995	289.7140	0.00316	178.25	-0.9995	296.5059	0.00309	178.28	-0.9995	303.5390	0.00301		
150	178.54	-0.9997	337.7942	0.00285	178.56	-0.9997	345.7655	0.00278	178.57	-0.9997	354.0205	0.00271		
155	178.82	-0.9998	383.3097	0.00261	178.83	-0.9998	392.3998	0.00255	178.84	-0.9998	401.8138	0.00249		
160	179.07	-0.9999	424.1075	0.00244	179.09	-0.9999	434.2018	0.00238	179.10	-0.9999	444.6564	0.00232		
165	179.32	-0.9999	458.1936	0.00232	179.33	-0.9999	469.1279	0.00226	179.33	-0.9999	480.4528	0.00220		
170	179.55	-1.0000	483.8633	0.00223	179.56	-1.0000	495.4306	0.00218	179.56	-1.0000	507.4114	0.00212		
175	179.78	-1.0000	499.8120	0.00218	179.78	-1.0000	511.7729	0.00213	179.78	-1.0000	524.1614	0.00208		
180	180.00	-1.0000	505.2213	0.00217	180.00	-1.0000	517.3156	0.00211	180.00	-1.0000	529.8425	0.00206		

x = 0.916					x = 0.917					x = 0.918				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2611	4.18139	0.00	1.0000	0.2609	4.17906	0.00	1.0000	0.2608	4.17674		
5	9.78	0.9855	0.2621	4.15100	9.79	0.9854	0.2619	4.14867	9.79	0.9854	0.2618	4.14634		
10	19.57	0.9423	0.2651	4.06072	19.57	0.9422	0.2650	4.05839	19.58	0.9422	0.2648	4.05607		
15	29.34	0.8717	0.2703	3.91331	29.35	0.8716	0.2701	3.91098	29.36	0.8716	0.2700	3.90866		
20	39.11	0.7760	0.2778	3.71323	39.12	0.7758	0.2777	3.71091	39.13	0.7757	0.2775	3.70859		
25	48.86	0.6579	0.2880	3.46655	48.87	0.6577	0.2879	3.46423	48.89	0.6576	0.2877	3.46192		
30	58.59	0.5212	0.3014	3.18076	58.61	0.5209	0.3012	3.17845	58.62	0.5207	0.3011	3.17614		
35	68.30	0.3708	0.3186	2.88451	68.32	0.3695	0.3184	2.88220	68.34	0.3692	0.3182	2.87990		
40	77.97	0.2085	0.3405	2.52737	77.99	0.2081	0.3404	2.52508	78.02	0.2077	0.3402	2.52278		
45	87.59	0.0420	0.3688	2.17955	87.62	0.0415	0.3686	2.17726	87.65	0.0410	0.3684	2.17498		
50	97.15	-0.1245	0.4054	1.83152	97.19	-0.1251	0.4052	1.82925	97.22	-0.1257	0.4050	1.82698		
55	106.63	-0.2862	0.4537	1.49373	106.67	-0.2868	0.4535	1.49149	106.71	-0.2875	0.4533	1.48925		
60	115.98	-0.4381	0.5192	1.17626	116.03	-0.4388	0.5190	1.17405	116.07	-0.4395	0.5188	1.17184		
65	125.16	-0.5758	0.6115	0.88836	125.21	-0.5766	0.6113	0.88620	125.27	-0.5774	0.6111	0.88405		
70	134.07	-0.6956	0.7480	0.63914	134.14	-0.6964	0.7479	0.63695	134.20	-0.6972	0.7478	0.63479		
75	142.59	-0.7943	0.9637	0.43188	142.66	-0.7951	0.9640	0.42992	142.74	-0.7959	0.9642	0.42795		
80	150.48	-0.8702	1.3348	0.27324	150.57	-0.8710	1.3363	0.27146	150.66	-0.8717	1.3378	0.26998		
85	157.45	-0.9235	2.0346	0.16182	157.55	-0.9242	2.0405	0.16030	157.65	-0.9248	2.0464	0.15878		
90	163.15	-0.9571	3.4503	0.09170	163.26	-0.9576	3.4710	0.09051	163.36	-0.9581	3.4922	0.08932		
95	167.45	-0.9761	6.3358	0.05197	167.55	-0.9765	6.4002	0.05111	167.65	-0.9768	6.4662	0.05025		
100	170.48	-0.9862	11.8512	0.03078	170.57	-0.9865	12.0198	0.03018	170.66	-0.9867	12.1934	0.02959		
105	172.59	-0.9916	21.3760	0.01947	172.66	-0.9918	21.7482	0.01906	172.74	-0.9920	22.1324	0.01864		
110	174.07	-0.9947	36.2194	0.01318	174.14	-0.9948	36.9311	0.01288	174.20	-0.9949	37.6669	0.01259		
115	175.16	-0.9964	57.3860	0.00947	175.21	-0.9965	58.6009	0.00924	175.27	-0.9966	59.8582	0.00903		
120	175.98	-0.9975	85.4301	0.00715	176.03	-0.9976	87.3272	0.00698	176.07	-0.9977	89.2919	0.00681		
125	176.63	-0.9983	120.3763	0.00563	176.67	-0.9983	123.1362	0.00549	176.71	-0.9983	125.9957	0.00536		
130	177.15	-0.9989	161.6523	0.00459	177.19	-0.9988	165.4824	0.00448	177.22	-0.9988	169.4102	0.00437		
135	177.59	-0.9991	203.3065	0.00386	177.62	-0.9991	213.2666	0.00376	177.65	-0.9992	218.4081	0.00367		
140	177.97	-0.9994	258.6651	0.00333	177.99	-0.9994	264.8955	0.00324	178.02	-0.9994	271.3546	0.00316		
145	178.30	-0.9996	310.8247	0.00294	178.32	-0.9996	318.3754	0.00286	178.34	-0.9996	326.2040	0.00279		
150	178.59	-0.9997	362.5727	0.00264	178.61	-0.9997	371.4367	0.00258	178.62	-0.9997	380.6277	0.00251		
155	178.86	-0.9998	411.5675	0.00243	178.87	-0.9998	421.6773	0.00236	178.89	-0.9998	43			

$x = 0.919$
 $x = 0.920$
 $x = 0.921$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.2607	4.17442	0.00	1.0000	0.2605	4.17210	0.00	1.0000	0.2604	4.16979
5	9.79	0.9854	0.2617	4.14402	9.80	0.9854	0.2615	4.14170	9.80	0.9854	0.2614	4.13939
10	19.58	0.9422	0.2647	4.05375	19.59	0.9421	0.2645	4.05143	19.59	0.9421	0.2644	4.04912
15	29.37	0.8715	0.2698	3.90634	29.37	0.8714	0.2697	3.90403	29.38	0.8714	0.2696	3.90172
20	39.14	0.7756	0.2774	3.70627	39.15	0.7755	0.2772	3.70396	39.16	0.7754	0.2771	3.70165
25	48.90	0.6574	0.2876	3.45961	48.91	0.6572	0.2874	3.45730	48.93	0.6570	0.2873	3.45500
30	58.64	0.5204	0.3009	3.17383	58.66	0.5201	0.3007	3.17153	58.68	0.5199	0.3006	3.16923
35	68.36	0.3688	0.3181	2.85760	68.38	0.3685	0.3179	2.85530	68.40	0.3682	0.3177	2.85301
40	78.04	0.2072	0.3400	2.52049	78.06	0.2068	0.3398	2.51821	78.09	0.2064	0.3397	2.51592
45	87.68	0.0405	0.3682	2.17270	87.71	0.0400	0.3680	2.17043	87.73	0.0395	0.3678	2.16816
50	97.25	-0.1263	0.4048	1.82472	97.29	-0.1268	0.4046	1.82247	97.32	-0.1274	0.4044	1.82021
55	106.75	-0.2981	0.4531	1.48701	106.79	-0.2988	0.4529	1.48478	106.83	-0.2995	0.4527	1.48255
60	116.12	-0.4403	0.5186	1.16964	116.17	-0.4410	0.5184	1.16743	116.21	-0.4417	0.5182	1.16524
65	125.32	-0.5782	0.6109	0.88189	125.38	-0.5790	0.6107	0.87974	125.43	-0.5797	0.6105	0.87759
70	134.27	-0.6980	0.7476	0.63189	134.33	-0.6988	0.7475	0.62982	134.40	-0.6996	0.7474	0.62774
75	142.82	-0.7967	0.9645	0.42599	142.89	-0.7975	0.9647	0.42403	142.97	-0.7983	0.9649	0.42207
80	150.75	-0.8725	1.3392	0.23789	150.84	-0.8732	1.3407	0.23611	150.93	-0.8740	1.3422	0.23433
85	157.75	-0.9255	2.0523	0.15726	157.85	-0.9262	2.0583	0.15575	157.95	-0.9268	2.0644	0.15423
90	163.46	-0.9586	3.5135	0.08814	163.57	-0.9592	3.5355	0.08696	163.68	-0.9597	3.5578	0.08578
95	167.75	-0.9772	6.5339	0.04940	167.85	-0.9776	6.6033	0.04855	167.95	-0.9780	6.6745	0.04770
100	170.75	-0.9870	12.3722	0.02900	170.84	-0.9872	12.5564	0.02841	170.93	-0.9875	12.7463	0.02783
105	172.82	-0.9922	22.5293	0.01824	172.89	-0.9923	22.9392	0.01783	172.97	-0.9925	23.3630	0.01743
110	174.27	-0.9950	38.4281	0.01229	174.33	-0.9951	39.2159	0.01201	174.40	-0.9952	40.0315	0.01172
115	175.32	-0.9967	61.1601	0.00881	175.38	-0.9967	62.5087	0.00860	175.43	-0.9968	63.9065	0.00838
120	176.12	-0.9977	91.3276	0.00664	176.17	-0.9978	93.4376	0.00648	176.21	-0.9978	95.6258	0.00631
125	176.75	-0.9984	128.9595	0.00522	176.79	-0.9984	132.0330	0.00509	176.83	-0.9985	135.2216	0.00496
130	177.25	-0.9989	173.4826	0.00426	177.29	-0.9989	177.7067	0.00415	177.32	-0.9989	182.0904	0.00404
135	177.68	-0.9992	223.7399	0.00358	177.71	-0.9992	229.2715	0.00348	177.73	-0.9992	235.0131	0.00339
140	178.04	-0.9994	278.0537	0.00308	178.06	-0.9994	285.0048	0.00300	178.09	-0.9994	292.2209	0.00292
145	178.36	-0.9996	334.3245	0.00272	178.38	-0.9996	342.7513	0.00265	178.40	-0.9996	351.5003	0.00258
150	178.64	-0.9997	390.1620	0.00245	178.66	-0.9997	400.0569	0.00238	178.68	-0.9997	410.3307	0.00232
155	178.90	-0.9998	443.0362	0.00225	178.91	-0.9998	454.3338	0.00219	178.93	-0.9998	466.0444	0.00213
160	179.14	-0.9999	490.4402	0.00210	179.15	-0.9999	502.9781	0.00204	179.16	-0.9999	515.9975	0.00199
165	179.37	-0.9999	530.0519	0.00199	179.37	-0.9999	543.6357	0.00194	179.38	-0.9999	557.7416	0.00189
170	179.58	-1.0000	559.8861	0.00192	179.59	-1.0000	574.2581	0.00187	179.59	-1.0000	589.1830	0.00182
175	179.79	-1.0000	578.4235	0.00187	179.80	-1.0000	593.2857	0.00183	179.80	-1.0000	608.7196	0.00178
180	180.00	-1.0000	584.7110	0.00186	180.00	-1.0000	599.7393	0.00181	180.00	-1.0000	615.3459	0.00176

 $x = 0.922$
 $x = 0.923$
 $x = 0.924$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.2603	4.16748	0.00	1.0000	0.2601	4.16518	0.00	1.0000	0.2600	4.16288
5	9.80	0.9854	0.2612	4.13708	9.80	0.9854	0.2611	4.13478	9.81	0.9854	0.2610	4.13248
10	19.60	0.9421	0.2643	4.04681	19.60	0.9420	0.2641	4.04451	19.61	0.9420	0.2640	4.04221
15	29.39	0.8713	0.2694	3.89941	29.40	0.8712	0.2693	3.89711	29.41	0.8712	0.2691	3.89481
20	39.17	0.7752	0.2769	3.69935	39.18	0.7751	0.2768	3.69705	39.19	0.7750	0.2766	3.69476
25	48.94	0.6568	0.2871	3.45270	48.96	0.6566	0.2870	3.45040	48.97	0.6565	0.2868	3.44811
30	58.69	0.5196	0.3004	3.16694	58.71	0.5194	0.3003	3.16465	58.73	0.5191	0.3001	3.16236
35	68.42	0.3678	0.3176	2.85073	68.44	0.3675	0.3174	2.84844	68.46	0.3672	0.3172	2.84615
40	78.11	0.2060	0.3395	2.51365	78.14	0.2056	0.3393	2.51137	78.16	0.2052	0.3391	2.50910
45	87.76	0.0390	0.3676	2.16589	87.79	0.0385	0.3675	2.16363	87.82	0.0380	0.3673	2.16137
50	97.35	-0.1280	0.4042	1.81796	97.39	-0.1286	0.4040	1.81572	97.42	-0.1292	0.4038	1.81347
55	106.86	-0.2901	0.4524	1.48032	106.90	-0.2908	0.4522	1.47810	106.94	-0.2914	0.4520	1.47588
60	116.26	-0.4424	0.5180	1.16304	116.31	-0.4432	0.5178	1.16085	116.35	-0.4439	0.5175	1.15866
65	125.49	-0.5805	0.6103	0.87545	125.54	-0.5813	0.6101	0.87330	125.60	-0.5821	0.6099	0.87116
70	134.46	-0.7004	0.7473	0.62567	134.53	-0.7012	0.7472	0.62360	134.59	-0.7021	0.7471	0.62153
75	143.05	-0.7991	0.9652	0.42011	143.12	-0.7999	0.9654	0.41815	143.20	-0.8007	0.9656	0.41620
80	151.02	-0.8748	1.3437	0.26255	151.11	-0.8755	1.3452	0.26077	151.20	-0.8763	1.3467	0.25899
85	158.05	-0.9275	2.0706	0.15272	158.15	-0.9282	2.0768	0.15120	158.25	-0.9288	2.0831	0.14969
90	163.78	-0.9602	3.5806	0.08460	163.89	-0.9607	3.6037	0.08342	164.00	-0.9612	3.6274	0.08225
95	168.05	-0.9783	6.7476	0.04686	168.15	-0.9787	6.8227	0.04603	168.25	-0.9791	6.8997	0.04519
100	171.02	-0.9877	12.9421	0.02726	171.11	-0.9880	13.1441	0.02669	171.20	-0.9882	13.3526	0.02612
105	173.05	-0.9926	23.8013	0.01704	173.12	-0.9928	24.2547	0.01664	173.20	-0.9930	24.7240	0.01625
110	174.46	-0.9953	40.8763	0.01144	174.53	-0.9954	41.7519	0.01116	174.59	-0.9955	42.6597	0.01088
115	175.49	-0.9969	65.3557	0.00818	175.54	-0.9970	66.8592	0.00797	175.60	-0.9970	68.4196	0.00777
120	176.26	-0.9979	97.8960	0.00615	176.31	-0.9979	100.2527	0.00600	176.35	-0.9980	102.7001	0.00584
125	176.86	-0.9985	138.5312	0.00483	176.90	-0.9985	141.9681	0.00471	176.94	-0.9986	145.5389	0.00458
130	177.35	-0.9989	186.6417	0.00394	177.39	-0.9990	191.3694	0.00383	177.42	-0.9990	196.2827	0.00373
135	177.76	-0.9992	240.9755	0.00330	177.79	-0.9993	247.1702	0.00322	177.82	-0.9993	253.6094	0.00313
140	178.11	-0.9995	299.7155	0.00285	178.14	-0.9995	307.5032	0.00277	178.16	-0.9995	315.5996	0.00270
145	178.42	-0.9996	360.5879	0.00251	178.44	-0.9996	370.0319	0.00244	178.46	-0.9996	379.8512	0.00238
150	178.69	-0.9997	421.0031	0.00226	178.71	-0.9997	432.0950	0.00220	178.73	-0.9998	443.6285	0.00214
155	178.94	-0.9998	478.2204	0.00207	178.96	-0.9998	490.8757	0.00202	178.97	-0.9998	504.0357	0.00196
160	179.17	-0.9999	529.5235	0.00193	179.18	-0.9999	543.5825	0.00188	179.19	-0.9999	558.2028	0.00183
165	179.39	-0.9999	572.3963	0.00184	179.40	-0.9999	587.6299	0.00179	179.41	-0.9999	603.4719	0.00174
170	179.60	-1.0000	604.6893	0.00177	179.60	-1.0000	620.8074	0.00172	179.61	-1.0000	637.5700	0.00167
175	179.80	-1.0000	624.7549	0.00173	179.80	-1.0000	641.4232	0.00168	179.81	-1.0000	658.7583	0.00164
180	180.00	-1.0000	631.5608	0.00172	180.00	-1.0000	648.4157	0.00167	180.00	-1.0000	665.9448	0.00163

$x = 0.925$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2598	4.16058
5	9.81	0.9854	0.2608	4.13019
10	19.61	0.9420	0.2638	4.03992
15	29.41	0.8711	0.2690	3.89252
20	39.20	0.7749	0.2765	3.69247
25	48.98	0.6563	0.2867	3.44583
30	58.74	0.5189	0.3000	3.16008
35	68.48	0.3668	0.3171	2.84389
40	78.19	0.2047	0.3390	2.50683
45	87.85	0.0375	0.3671	2.15912
50	97.46	-0.1298	0.4036	1.81123
55	106.98	-0.2921	0.4518	1.47366
60	116.40	-0.4446	0.5173	1.15648
65	125.65	-0.5829	0.6097	0.86902
70	134.66	-0.7029	0.7470	0.61946
75	143.28	-0.8016	0.9658	0.41424
80	151.29	-0.8771	1.3482	0.25722
85	158.36	-0.9295	2.0895	0.14818
90	164.11	-0.9618	3.6515	0.08108
95	168.36	-0.9794	6.9789	0.04437
100	171.29	-0.9885	13.5679	0.02556
105	173.28	-0.9931	25.2101	0.01587
110	174.66	-0.9957	43.6014	0.01061
115	175.65	-0.9971	70.0400	0.00756
120	176.40	-0.9980	105.2432	0.00568
125	176.98	-0.9986	149.2509	0.00446
130	177.46	-0.9990	201.3916	0.00363
135	177.85	-0.9993	260.3062	0.00304
140	178.19	-0.9995	324.0210	0.00262
145	178.48	-0.9996	390.0659	0.00231
150	178.74	-0.9998	455.6275	0.00208
155	178.98	-0.9998	517.7275	0.00191
160	179.20	-0.9998	573.4146	0.00178
165	179.41	-0.9998	619.9552	0.00169
170	179.61	-1.0000	655.0117	0.00163
175	179.81	-1.0000	676.7957	0.00159
180	180.00	-1.0000	684.1845	0.00158

 $x = 0.926$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2597	4.15829
9.81	0.9854	0.2607	4.12750
19.62	0.9419	0.2637	4.03763
29.42	0.8710	0.2688	3.89024
39.22	0.7748	0.2763	3.69019
49.00	0.6561	0.2865	3.44355
58.76	0.5186	0.2998	3.15780
68.50	0.3665	0.3169	2.84162
78.21	0.2043	0.3388	2.50457
87.88	0.0370	0.3669	2.15686
97.49	-0.1303	0.4034	1.80900
107.02	-0.2928	0.4516	1.47145
116.45	-0.4454	0.5171	1.15429
125.71	-0.5836	0.6095	0.86688
134.72	-0.7037	0.7469	0.61739
143.36	-0.8024	0.9661	0.41229
151.38	-0.8778	1.3497	0.25544
158.46	-0.9302	2.0959	0.14667
164.21	-0.9623	3.6761	0.07991
168.46	-0.9798	7.0603	0.04354
171.38	-0.9887	13.7903	0.02500
173.36	-0.9933	25.7137	0.01549
174.72	-0.9958	44.5789	0.01034
175.71	-0.9972	71.7235	0.00737
176.45	-0.9981	107.8871	0.00553
177.02	-0.9987	153.1115	0.00434
177.49	-0.9990	206.7056	0.00353
177.88	-0.9993	267.2746	0.00296
178.21	-0.9995	332.7853	0.00255
178.50	-0.9997	400.6976	0.00225
178.76	-0.9998	468.1172	0.00202
179.00	-0.9998	531.9802	0.00185
179.22	-0.9999	589.2502	0.00173
179.42	-0.9999	637.1149	0.00164
179.62	-1.0000	673.1696	0.00158
179.81	-1.0000	695.5739	0.00155
180.00	-1.0000	703.1733	0.00154

 $x = 0.927$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2596	4.15601
9.81	0.9854	0.2606	4.12561
19.62	0.9419	0.2636	4.03535
29.43	0.8710	0.2687	3.88795
39.23	0.7747	0.2762	3.68790
49.01	0.6559	0.2863	3.44127
58.78	0.5184	0.2996	3.15553
68.52	0.3662	0.3167	2.83935
78.23	0.2039	0.3386	2.50231
87.91	0.0365	0.3667	2.15462
97.52	-0.1309	0.4032	1.80677
107.06	-0.2934	0.4514	1.46923
116.49	-0.4461	0.5169	1.15211
125.76	-0.5844	0.6093	0.86475
134.79	-0.7045	0.7423	0.61533
143.44	-0.8032	0.9663	0.41033
151.47	-0.8786	1.3512	0.25366
158.57	-0.9308	2.1025	0.14516
164.32	-0.9628	3.7012	0.07875
168.57	-0.9802	7.1440	0.04272
171.47	-0.9889	14.0202	0.02445
173.44	-0.9934	26.2358	0.01511
174.79	-0.9959	45.5939	0.01008
175.76	-0.9973	73.4735	0.00717
176.49	-0.9981	110.6372	0.00538
177.06	-0.9987	157.1289	0.00422
177.52	-0.9991	212.2381	0.00343
177.91	-0.9993	274.5296	0.00288
178.23	-0.9995	341.9113	0.00248
178.52	-0.9997	411.7693	0.00218
178.78	-0.9998	481.1248	0.00197
179.01	-0.9999	546.8247	0.00180
179.23	-0.9999	605.7441	0.00168
179.43	-1.0000	654.9887	0.00160
179.62	-1.0000	692.0833	0.00154
179.81	-1.0000	715.1342	0.00150
180.00	-1.0000	722.9529	0.00149

 $x = 0.928$

PSI	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2594	4.15372
5	9.82	0.9854	0.2604	4.12333
10	19.63	0.9419	0.2634	4.03306
15	29.44	0.8709	0.2686	3.88567
20	39.24	0.7745	0.2760	3.68563
25	49.02	0.6557	0.2862	3.43900
30	58.79	0.5181	0.2995	3.15326
35	68.54	0.3658	0.3166	2.83709
40	78.26	0.2035	0.3384	2.50006
45	87.94	0.0360	0.3665	2.15237
50	97.56	-0.1315	0.4030	1.80454
55	107.10	-0.2941	0.4512	1.46703
60	116.54	-0.4468	0.5167	1.14994
65	125.82	-0.5852	0.6091	0.86262
70	134.85	-0.7053	0.7466	0.61327
75	143.51	-0.8040	0.9665	0.40838
80	151.57	-0.8794	1.3527	0.25189
85	158.67	-0.9315	2.1090	0.14365
90	164.44	-0.9633	3.7268	0.07759
95	168.67	-0.9805	7.2301	0.04190
100	171.57	-0.9892	14.2579	0.02390
105	173.51	-0.9936	26.7773	0.01474
110	174.85	-0.9960	46.6466	0.00982
115	175.82	-0.9973	75.2937	0.00696
120	176.54	-0.9982	113.4995	0.00523
125	177.10	-0.9987	161.3119	0.00410
130	177.56	-0.9991	218.0012	0.00334
135	177.94	-0.9994	282.0871	0.00280
140	178.26	-0.9995	351.4193	0.00241
145	178.54	-0.9997	423.3055	0.00212
150	178.79	-0.9998	494.6792	0.00191
155	179.02	-0.9998	562.2942	0.00175
160	179.24	-0.9999	622.9333	0.00163
165	179.44	-1.0000	673.6163	0.00155
170	179.63	-1.0000	711.7953	0.00149
175	179.82	-1.0000	735.5203	0.00146
180	180.00	-1.0000	743.5675	0.00145

 $x = 0.929$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2593	4.15145
9.82	0.9854	0.2603	4.12105
19.63	0.9419	0.2633	4.03079
29.45	0.8708	0.2684	3.88340
39.25	0.7744	0.2759	3.68336
49.04	0.6556	0.2860	3.43673
58.81	0.5179	0.2993	3.15100
68.56	0.3655	0.3164	2.83483
78.28	0.2031	0.3383	2.49781
87.96	0.0355	0.3664	2.15013
97.59	-0.1321	0.4028	1.80231
107.14	-0.2947	0.4510	1.46482
116.59	-0.4475	0.5165	1.14776
125.87	-0.5860	0.6089	0.86049
134.92	-0.7061	0.7465	0.61121
143.59	-0.8048	0.9667	0.40643
151.66	-0.8801	1.3542	0.25011
158.78	-0.9322	2.1157	0.14214
164.55	-0.9638	3.7529	0.07643
168.78	-0.9809	7.3188	0.04109
171.66	-0.9894	14.5038	0.02335
173.59	-0.9938	27.3393	0.01437
174.92	-0.9961	47.7450	0.00956
175.87	-0.9974	77.1880	0.00679
176.59	-0.9982	116.4801	0.00509
177.14	-0.9988	165.6696	0.00399
177.59	-0.9991	224.0057	0.00324
177.96	-0.9994	289.9643	0.00272
178.28	-0.9996	361.3307	0.00234
178.56	-0.9997	435.3326	0.00206
178.81	-0.9998	508.8116	0.00185
179.04	-0.9999	578.4243	0.00170
179.25	-0.9999	640.8571	0.00159
179.45	-1.0000	693.0408	0.00150
179.63	-1.0000	732.3509	0.00145
179.82	-1.0000	756.7789	0.00142
180.00	-1.0000	765.0648	0.00141

 $x = 0.930$

θ	$\cos \theta$	G	S
0.00	1.0000	0.2592	4.14917
9.82	0.9853	0.2601	4.11878
19.64	0.9418	0.2631	4.02852
29.45	0.8708	0.2683	3.88113
39.26	0.7743	0.2758	3.68109
49.05	0.6554	0.2859	3.43446
58.83	0.5176	0.2992	3.14874
68.58	0.3652	0.3162	2.83258
78.31	0.2027	0.3381	2.49556
87.99	0.0350	0.3662	2.14790
97.62	-0.1327	0.4026	1.80009
107.18	-0.2954	0.4508	1.46262
116.63	-0.4483	0.5162	1.14559
125.93	-0.5868	0.6087	0.85836
134.99	-0.7069	0.7464	0.60915
143.67	-0.8056	0.9669	0.40448
151.75	-0.8809	1.3558	0.24834
158.88	-0.9328	2.1225	0.14064
164.66	-0.9644	3.7796	0.07527
168.88	-0.9812	7.4100	0.04028
171.75	-0.9897	14.7584	0.02281
173.67	-0.9939	27.9229	0.01401
174.99	-0.9962	48.8855	0.00930
175.93	-0.9975	79.1605	0.00660
176.63	-0.9983	119.5857	0.00495
177.18	-0.9988	170.2121	0.00387
177.62	-0.9991	230.2666	0.00315
177.99	-0.9994	298.1794	0.00264
178.31	-0.9996	371.6689	0.00227
178.58	-0.9997	447.8789	0.00200
178.83	-0.9998	523.5552	0.00180
179.05	-0.9999	595.2530	0.00165
179.26	-0.9999	659.5580	0.00154
179.45	-1.0000	713.3080	0.00146
179.64	-1.0000	753.7987	0.00141
179.82	-1.0000	778.9609	0.00138
180.00	-1.0000	787.4958	0.00137

$x = 0.931$
 $x = 0.932$
 $x = 0.933$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2590	4.14690	0.00	1.0000	0.2589	4.14464	0.00	1.0000	0.2587	4.14238
5	9.82	0.9853	0.2600	4.11651	9.83	0.9853	0.2599	4.11424	9.83	0.9853	0.2597	4.11198
10	19.65	0.9418	0.2630	4.02625	19.65	0.9418	0.2629	4.02398	19.66	0.9417	0.2627	4.02173
15	29.46	0.8707	0.2681	3.87886	29.47	0.8706	0.2680	3.87660	29.48	0.8705	0.2679	3.87434
20	39.27	0.7742	0.2756	3.67892	39.28	0.7741	0.2755	3.67656	39.29	0.7739	0.2753	3.67431
25	49.07	0.6552	0.2856	3.43220	49.08	0.6550	0.2856	3.42995	49.09	0.6548	0.2855	3.42769
30	58.84	0.5174	0.2990	3.14648	58.86	0.5171	0.2989	3.14423	58.88	0.5168	0.2987	3.14198
35	68.60	0.3649	0.3161	2.83033	68.62	0.3645	0.3159	2.82808	68.64	0.3642	0.3158	2.82584
40	78.33	0.2022	0.3379	2.49332	78.36	0.2018	0.3378	2.49108	78.38	0.2014	0.3376	2.48885
45	88.02	0.0345	0.3660	2.14537	88.05	0.0340	0.3658	2.14344	88.08	0.0335	0.3656	2.14121
50	97.66	-0.1333	0.4024	1.79787	97.69	-0.1339	0.4022	1.79566	97.73	-0.1344	0.4020	1.79345
55	107.22	-0.2911	0.4506	1.46042	107.26	-0.2967	0.4504	1.45823	107.30	-0.2974	0.4501	1.45604
60	116.68	-0.4490	0.5160	1.14342	116.73	-0.4497	0.5158	1.14126	116.77	-0.4505	0.5156	1.13909
65	125.98	-0.5876	0.6085	0.85624	126.04	-0.5883	0.6083	0.85411	126.09	-0.5891	0.6081	0.85199
70	135.05	-0.7078	0.7463	0.60709	135.12	-0.7066	0.7461	0.60503	135.18	-0.7094	0.7460	0.60298
75	143.75	-0.8064	0.9071	0.40253	143.83	-0.8073	0.9074	0.40058	143.81	-0.8081	0.9076	0.39963
80	151.85	-0.8817	1.13573	0.24556	151.94	-0.8825	1.13588	0.24479	151.93	-0.8832	1.13603	0.24302
85	158.99	-0.9335	2.1293	0.13913	159.10	-0.9342	2.1302	0.13763	159.21	-0.9349	2.1332	0.13612
90	164.77	-0.9649	3.8023	0.07411	164.68	-0.9654	3.8348	0.07296	165.00	-0.9659	3.8633	0.07181
95	168.99	-0.9816	7.5040	0.03948	169.10	-0.9819	7.6009	0.03868	169.21	-0.9823	7.7008	0.03788
100	171.85	-0.9899	15.0221	0.02228	171.94	-0.9901	15.2954	0.02175	172.03	-0.9904	15.5789	0.02122
105	173.75	-0.9941	28.5293	0.01365	173.83	-0.9942	29.1597	0.01329	173.91	-0.9944	29.8154	0.01294
110	175.05	-0.9963	50.0727	0.00905	175.12	-0.9964	51.3090	0.00890	175.18	-0.9965	52.5975	0.00855
115	175.98	-0.9975	81.2157	0.00542	176.04	-0.9976	83.3584	0.00523	176.09	-0.9977	85.5937	0.00505
120	176.68	-0.9983	122.6237	0.00480	176.73	-0.9984	126.2017	0.00466	176.77	-0.9984	129.7279	0.00453
125	177.22	-0.9988	174.5501	0.00376	177.26	-0.9989	179.8950	0.00365	177.30	-0.9989	185.0592	0.00354
130	177.66	-0.9992	236.7988	0.00306	177.69	-0.9992	243.6183	0.00296	177.73	-0.9992	250.7421	0.00288
135	178.02	-0.9994	306.7511	0.00256	178.05	-0.9994	315.7037	0.00248	178.08	-0.9994	325.0567	0.00241
140	178.33	-0.9996	382.4588	0.00220	178.36	-0.9996	393.7270	0.00214	178.38	-0.9996	405.5024	0.00207
145	178.60	-0.9997	460.9748	0.00194	178.62	-0.9997	474.6525	0.00188	178.64	-0.9997	488.9474	0.00182
150	178.84	-0.9998	536.9457	0.00175	178.86	-0.9998	555.0215	0.00169	178.88	-0.9998	571.8240	0.00164
155	179.07	-0.9999	612.5211	0.00150	179.08	-0.9999	631.1726	0.00155	179.09	-0.9999	650.3547	0.00150
160	179.27	-0.9999	690.0816	0.00149	179.28	-0.9999	699.4766	0.00145	179.29	-0.9999	720.7956	0.00140
165	179.46	-1.0000	734.4675	0.00142	179.47	-1.0000	756.5731	0.00137	179.48	-1.0000	779.6788	0.00133
170	179.65	-1.0000	776.1912	0.00136	179.65	-1.0000	799.5845	0.00132	179.66	-1.0000	824.0397	0.00128
175	179.82	-1.0000	802.1198	0.00133	179.83	-1.0000	826.3143	0.00129	179.83	-1.0000	851.6063	0.00125
180	180.00	-1.0000	810.9149	0.00132	180.00	-1.0000	835.3811	0.00128	180.00	-1.0000	860.9573	0.00124

 $x = 0.934$
 $x = 0.935$
 $x = 0.936$

PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S
0	0.00	1.0000	0.2586	4.14012	0.00	1.0000	0.2585	4.13787	0.00	1.0000	0.2583	4.13562
5	9.83	0.9853	0.2596	4.10973	9.83	0.9853	0.2595	4.10748	9.84	0.9853	0.2593	4.10523
10	19.66	0.9417	0.2626	4.01947	19.67	0.9417	0.2625	4.01722	19.67	0.9416	0.2623	4.01497
15	29.49	0.8705	0.2677	3.87209	29.49	0.8704	0.2676	3.86984	29.50	0.8703	0.2674	3.86759
20	39.30	0.7738	0.2752	3.67206	39.31	0.7737	0.2750	3.66981	39.32	0.7736	0.2749	3.66757
25	49.11	0.6547	0.2853	3.42544	49.12	0.6545	0.2852	3.42320	49.13	0.6543	0.2850	3.42096
30	58.90	0.5166	0.2985	3.13974	58.91	0.5163	0.2984	3.13750	58.93	0.5161	0.2982	3.13526
35	68.66	0.3658	0.3156	2.82360	68.68	0.3653	0.3154	2.82136	68.71	0.3632	0.3153	2.81913
40	78.40	0.2010	0.3374	2.48661	78.43	0.2006	0.3372	2.48439	78.45	0.2002	0.3371	2.48216
45	88.11	0.0330	0.3654	2.13899	88.14	0.0325	0.3652	2.13677	88.17	0.0320	0.3651	2.13455
50	97.76	-0.1350	0.4018	1.79124	97.79	-0.1356	0.4016	1.78904	97.83	-0.1362	0.4014	1.78684
55	107.34	-0.2981	0.4499	1.45385	107.38	-0.2987	0.4497	1.45167	107.42	-0.2994	0.4495	1.44948
60	116.82	-0.4512	0.5154	1.13693	116.87	-0.4519	0.5151	1.13478	116.91	-0.4527	0.5149	1.13262
65	125.15	-0.5899	0.6079	0.84988	125.21	-0.5907	0.6077	0.84776	125.26	-0.5915	0.6074	0.84565
70	135.25	-0.7102	0.7459	0.60093	135.32	-0.7110	0.7457	0.59888	135.38	-0.7118	0.7456	0.59683
75	143.99	-0.8089	0.9678	0.39669	144.07	-0.8097	0.9680	0.39474	144.15	-0.8105	0.9681	0.39280
80	152.13	-0.8840	1.3619	0.24124	152.23	-0.8848	1.3634	0.23947	152.32	-0.8856	1.3650	0.23770
85	159.31	-0.9355	2.1502	0.13462	159.42	-0.9362	2.1574	0.13312	159.53	-0.9369	2.1646	0.13161
90	165.11	-0.9664	3.8925	0.07066	165.23	-0.9670	3.9223	0.06952	165.35	-0.9675	3.9528	0.06838
95	169.31	-0.9827	7.8039	0.03709	169.42	-0.9830	7.9103	0.03631	169.53	-0.9834	8.0202	0.03552
100	172.13	-0.9906	15.8729	0.02070	172.23	-0.9908	16.1782	0.02018	172.32	-0.9910	16.4954	0.01967
105	173.99	-0.9945	30.4981	0.01255	174.07	-0.9946	31.2091	0.01224	174.15	-0.9948	31.9503	0.01190
110	175.25	-0.9966	53.9411	0.00831	175.32	-0.9967	55.3432	0.00807	175.38	-0.9968	56.8074	0.00783
115	176.15	-0.9977	87.9272	0.00588	176.21	-0.9978	90.3648	0.00570	176.26	-0.9979	92.9129	0.00553
120	176.82	-0.9985	133.4114	0.00439	176.87	-0.9985	137.2618	0.00426	176.91	-0.9986	141.2894	0.00413
125	177.34	-0.9989	190.4560	0.00343	177.38	-0.9990	196.0996	0.00333	177.42	-0.9990	202.0054	0.00323
130	177.76	-0.9992	258.1889	0.00279	177.79	-0.9993	265.9786	0.00270	177.83	-0.9993	274.1326	0.00262
135	178.11	-0.9995	334.8357	0.00233	178.14	-0.9995	345.0670	0.00226	178.17	-0.9995	355.7789	0.00219
140	178.40	-0.9996	417.8158	0.00201	178.43	-0.9996	430.7005	0.00195	178.45	-0.9996	444.1925	0.00188
145	178.66	-0.9997	503.8971	0.00177	178.68	-0.9997	519.5420	0.00171	178.71	-0.9997	535.9262	0.00166
150	178.90	-0.9998	589.3973	0.00159	178.91	-0.9998	607.7896	0.00154	178.93	-0.9998	627.0523	0.00149
155	179.11	-0.9999	670.4181	0.00146	179.12	-0.9999	691.4176	0.00141	179.13	-0.9999	713.4122	0.00137
160	179.30	-0.9999	743.0950	0.00136	179.31	-0.9999	766.4359	0.00132	179.32	-0.9999	790.8940	0.00127
165	179.49	-1.0000	803.8490	0.00129	179.49	-1.0000	829.1488	0.00125	179.50	-1.0000	855.6495	0.00121
170	179.66	-1.0000	849.6191	0.00124	179.67	-1.0000	876.3956	0.00120	179.67	-1.0000	904.4435	0.00116
175	179.83	-1.0000	878.0631	0.00122	179.83	-1.0000	905.7578	0.00118	179.84	-1.0000	934.7680	0.00114
180	180.00	-1.0000	887.7118	0.00121	180.00	-1.0000	915.7176	0.00117	180.00	-1.0000	945.0539	0.00113

$x = 0.937$					$x = 0.938$					$x = 0.939$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2582	4.13338	0.00	1.0000	0.2581	4.13114	0.00	1.0000	0.2579	4.12890	0.00	1.0000
5	9.84	0.9853	0.2592	4.10299	9.84	0.9853	0.2590	4.10075	9.84	0.9853	0.2589	4.09851	9.84	0.9853
10	19.68	0.9416	0.2622	4.01273	19.68	0.9416	0.2620	4.01049	19.68	0.9415	0.2619	4.00826	19.68	0.9415
15	29.51	0.8703	0.2673	3.86535	29.52	0.8702	0.2672	3.86312	29.52	0.8701	0.2670	3.86088	29.52	0.8701
20	39.33	0.7735	0.2748	3.66533	39.34	0.7733	0.2746	3.66309	39.36	0.7732	0.2745	3.66086	39.36	0.7732
25	49.15	0.6541	0.2849	3.41872	49.16	0.6539	0.2847	3.41649	49.18	0.6538	0.2846	3.41426	49.18	0.6538
30	58.95	0.5158	0.2981	3.13303	58.96	0.5156	0.2979	3.13080	58.98	0.5153	0.2978	3.12858	58.98	0.5153
35	68.73	0.3628	0.3151	2.81691	68.75	0.3625	0.3149	2.81468	68.77	0.3622	0.3148	2.81246	68.77	0.3622
40	78.48	0.1997	0.3369	2.47994	78.50	0.1993	0.3367	2.47773	78.53	0.1989	0.3366	2.47552	78.53	0.1989
45	88.19	0.0315	0.3649	2.13235	88.22	0.0310	0.3647	2.13014	88.25	0.0305	0.3645	2.12794	88.25	0.0305
50	97.86	-0.1368	0.4012	1.78464	97.89	-0.1374	0.4010	1.78245	97.93	-0.1379	0.4008	1.78026	97.93	-0.1379
55	107.46	-0.3000	0.4493	1.44731	107.50	-0.3007	0.4491	1.44513	107.54	-0.3014	0.4489	1.44296	107.54	-0.3014
60	116.96	-0.4534	0.5147	1.13047	117.01	-0.4541	0.5145	1.12832	117.06	-0.4549	0.5143	1.12618	117.06	-0.4549
65	126.32	-0.5923	0.6072	0.84354	126.37	-0.5930	0.6070	0.84143	126.43	-0.5938	0.6068	0.83932	126.43	-0.5938
70	135.45	-0.7127	0.7455	0.59478	135.52	-0.7135	0.7453	0.59273	135.59	-0.7143	0.7452	0.59069	135.59	-0.7143
75	144.23	-0.8114	0.9683	0.39085	144.31	-0.8122	0.9685	0.38891	144.39	-0.8130	0.9687	0.38697	144.39	-0.8130
80	152.42	-0.8863	1.3665	0.23592	152.51	-0.8871	1.3681	0.23415	152.61	-0.8879	1.3696	0.23238	152.61	-0.8879
85	159.65	-0.9376	2.1720	0.13011	159.76	-0.9382	2.1794	0.12861	159.87	-0.9389	2.1869	0.12711	159.87	-0.9389
90	165.46	-0.9880	3.9841	0.06724	165.58	-0.9885	4.0161	0.06610	165.70	-0.9890	4.0489	0.06496	165.70	-0.9890
95	169.65	-0.9837	8.1337	0.03474	169.76	-0.9841	8.2511	0.03397	169.87	-0.9844	8.3726	0.03320	169.87	-0.9844
100	172.42	-0.9913	16.8251	0.01916	172.51	-0.9915	17.1681	0.01866	172.61	-0.9917	17.5252	0.01816	172.61	-0.9917
105	174.23	-0.9949	32.7233	0.01157	174.31	-0.9951	33.5302	0.01123	174.39	-0.9952	34.3731	0.01091	174.39	-0.9952
110	175.45	-0.9969	58.3374	0.00760	175.52	-0.9969	59.9374	0.00737	175.59	-0.9970	61.6119	0.00714	175.59	-0.9970
115	176.32	-0.9979	95.5785	0.00536	176.37	-0.9980	98.3691	0.00519	176.43	-0.9981	101.2927	0.00503	176.43	-0.9981
120	176.96	-0.9986	145.5055	0.00400	177.01	-0.9986	149.9220	0.00387	177.06	-0.9987	154.5522	0.00375	177.06	-0.9987
125	177.46	-0.9990	208.1902	0.00312	177.50	-0.9990	214.6719	0.00302	177.54	-0.9991	221.4700	0.00292	177.54	-0.9991
130	177.86	-0.9993	282.6741	0.00253	177.89	-0.9993	291.6283	0.00245	177.93	-0.9993	301.0222	0.00237	177.93	-0.9993
135	178.19	-0.9995	367.0022	0.00212	178.22	-0.9995	378.7701	0.00205	178.25	-0.9995	391.1184	0.00198	178.25	-0.9995
140	178.48	-0.9996	458.3307	0.00182	178.50	-0.9997	473.1569	0.00176	178.53	-0.9997	488.7167	0.00170	178.53	-0.9997
145	178.73	-0.9998	553.0968	0.00160	178.75	-0.9998	571.1050	0.00155	178.77	-0.9998	590.0062	0.00150	178.77	-0.9998
150	178.95	-0.9998	647.2412	0.00144	178.96	-0.9998	668.4167	0.00140	178.98	-0.9998	690.6439	0.00135	178.98	-0.9998
155	179.15	-0.9999	736.4658	0.00132	179.16	-0.9999	760.6474	0.00128	179.18	-0.9999	786.0315	0.00124	179.18	-0.9999
160	179.33	-0.9999	816.5103	0.00123	179.34	-0.9999	843.3914	0.00119	179.36	-0.9999	871.6107	0.00115	179.36	-0.9999
165	179.51	-1.0000	883.4282	0.00117	179.52	-1.0000	912.5681	0.00113	179.52	-1.0000	943.1595	0.00109	179.52	-1.0000
170	179.68	-1.0000	933.8447	0.00113	179.68	-1.0000	964.6873	0.00109	179.69	-1.0000	997.0785	0.00105	179.69	-1.0000
175	179.84	-1.0000	965.1776	0.00110	179.84	-1.0000	997.0785	0.00107						
180	180.00	-1.0000	975.8060	0.00109										

2 x = 0.940					2 x = 0.941					2 x = 0.942				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2578	4.12667	0.00	1.0000	0.2577	4.12445	0.00	1.0000	0.2575	4.12222		
5	9.85	0.9853	0.2588	4.09628	9.85	0.9853	0.2586	4.09405	9.85	0.9853	0.2585	4.09183		
10	19.69	0.9415	0.2618	4.00603	19.70	0.9415	0.2616	4.00380	19.70	0.9415	0.2615	4.00158		
15	29.53	0.8701	0.2669	3.85865	29.54	0.8700	0.2667	3.85643	29.55	0.8699	0.2666	3.85421		
20	39.37	0.7731	0.2743	3.65863	39.38	0.7730	0.2742	3.65641	39.39	0.7729	0.2740	3.65419		
25	49.19	0.6536	0.2844	3.41204	49.20	0.6534	0.2843	3.40982	49.22	0.6532	0.2841	3.40760		
30	59.00	0.5151	0.2976	3.12636	59.01	0.5148	0.2975	3.12414	59.03	0.5146	0.2973	3.12193		
35	68.79	0.3618	0.3146	2.81025	68.81	0.3615	0.3145	2.80804	68.83	0.3612	0.3143	2.80583		
40	78.55	0.1985	0.3364	2.47331	78.57	0.1981	0.3362	2.47110	78.60	0.1977	0.3360	2.46890		
45	88.28	0.0300	0.3643	2.12574	88.31	0.0295	0.3642	2.12355	88.34	0.0290	0.3640	2.12135		
50	97.96	-0.1385	0.4006	1.77807	98.00	-0.1391	0.4004	1.77589	98.03	-0.1397	0.4002	1.77371		
55	107.58	-0.3020	0.4487	1.44079	107.62	-0.3027	0.4485	1.43862	107.66	-0.3034	0.4483	1.43646		
60	117.10	-0.4556	0.5140	1.12403	117.15	-0.4563	0.5138	1.12189	117.20	-0.4570	0.5136	1.11976		
65	126.49	-0.5946	0.6066	0.83722	126.54	-0.5954	0.6064	0.83511	126.60	-0.5962	0.6062	0.83301		
70	135.65	-0.7151	0.7451	0.58865	135.72	-0.7159	0.7449	0.58661	135.79	-0.7168	0.7448	0.58457		
75	144.47	-0.8138	0.9689	0.38503	144.55	-0.8147	0.9691	0.38308	144.64	-0.8155	0.9692	0.38114		
80	152.71	-0.8887	1.3712	0.23061	152.81	-0.8895	1.3727	0.22883	152.91	-0.8903	1.3743	0.22706		
85	159.98	-0.9396	2.1946	0.12561	160.10	-0.9403	2.2023	0.12411	160.21	-0.9409	2.2101	0.12261		
90	165.82	-0.9695	4.0825	0.06383	165.94	-0.9701	4.1169	0.06270	166.06	-0.9706	4.1523	0.06157		
95	169.98	-0.9848	8.4983	0.03244	170.10	-0.9851	8.6286	0.03168	170.21	-0.9854	8.7636	0.03092		
100	172.71	-0.9919	17.8973	0.01767	172.81	-0.9921	18.2852	0.01718	172.91	-0.9923	18.6899	0.01670		
105	174.47	-0.9953	35.2543	0.01058	174.55	-0.9955	36.1763	0.01026	174.64	-0.9956	37.1416	0.00995		
110	175.65	-0.9971	63.3657	0.00692	175.72	-0.9972	65.2040	0.00670	175.79	-0.9973	67.1327	0.00649		
115	176.49	-0.9981	104.3581	0.00487	176.54	-0.9982	107.5748	0.00471	176.60	-0.9982	110.9531	0.00455		
120	177.10	-0.9987	159.4101	0.00362	177.15	-0.9988	164.5112	0.00350	177.20	-0.9988	169.8722	0.00339		
125	177.58	-0.9991	228.6056	0.00283	177.62	-0.9991	236.1015	0.00273	177.66	-0.9992	243.9827	0.00264		
130	177.96	-0.9994	310.8853	0.00229	178.00	-0.9994	321.2494	0.00221	178.03	-0.9994	332.1494	0.00214		
135	178.28	-0.9995	404.0860	0.00192	178.31	-0.9996	417.7152	0.00185	178.34	-0.9996	432.0519	0.00179		
140	178.55	-0.9997	505.0593	0.00165	178.57	-0.9997	522.2381	0.00159	178.60	-0.9997	540.3113	0.00154		
145	178.79	-0.9998	609.8603	0.00145	178.81	-0.9998	630.7327	0.00140	178.83	-0.9998	652.6940	0.00135		
150	179.00	-0.9998	713.9936	0.00130	179.01	-0.9999	738.5428	0.00126	179.03	-0.9999	764.3747	0.00121		
155	179.19	-0.9999	812.6991	0.00119	179.20	-0.9999	840.7381	0.00115	179.22	-0.9999	870.2442	0.00111		
160	179.37	-0.9999	901.2582	0.00111	179.38	-0.9999	932.4316	0.00108	179.39	-0.9999	965.2310	0.00104		
165	179.53	-1.0000	975.3000	0.00106										

2 x = 0.943					2 x = 0.944					2 x = 0.945				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.2574	4.12000	0.00	1.0000	0.2573	4.11779	0.00	1.0000	0.2571	4.11558	0.00	1.0000
5	9.86	0.9852	0.2584	4.08961	9.86	0.9852	0.2582	4.08740	9.86	0.9852	0.2581	4.08519	9.86	0.9852
10	19.71	0.9414	0.2614	3.99933	19.71	0.9414	0.2612	3.99715	19.72	0.9414	0.2611	3.99494	19.72	0.9414
15	29.56	0.8699	0.2665	3.85199	29.56	0.8698	0.2663	3.84978	29.57	0.8697	0.2662	3.84757	29.57	0.8697
20	39.40	0.7728	0.2739	3.65190	39.41	0.7726	0.2737	3.64977	39.42	0.7725	0.2736	3.64756	39.42	0.7725
25	49.23	0.6530	0.2840	3.40539	49.24	0.6528	0.2838	3.40318	49.26	0.6527	0.2837	3.40098	49.26	0.6527
30	59.05	0.5143	0.2972	3.11972	59.06	0.5141	0.2970	3.11751	59.08	0.5138	0.2969	3.11531	59.08	0.5138
35	68.85	0.3608	0.3141	2.80353	68.87	0.3605	0.3140	2.80143	68.89	0.3602	0.3138	2.79923	68.89	0.3602
40	78.62	0.1973	0.3359	2.46570	78.65	0.1968	0.3357	2.46451	78.67	0.1964	0.3355	2.46232	78.67	0.1964
45	88.37	0.0285	0.3638	2.11917	88.39	0.0280	0.3636	2.11698	88.42	0.0275	0.3634	2.11480	88.42	0.0275
50	98.06	-0.1403	0.4000	1.77153	98.10	-0.1409	0.3999	1.76936	98.13	-0.1414	0.3997	1.76719	98.13	-0.1414
55	107.70	-0.3040	0.4480	1.43430	107.74	-0.3047	0.4478	1.43214	107.78	-0.3053	0.4476	1.42999	107.78	-0.3053
60	117.24	-0.4578	0.5134	1.11762	117.29	-0.4585	0.5132	1.11549	117.34	-0.4592	0.5129	1.11336	117.34	-0.4592
65	126.65	-0.5970	0.6059	0.83092	126.71	-0.5978	0.6057	0.82882	126.77	-0.5986	0.6055	0.82673	126.77	-0.5986
70	135.86	-0.7176	0.7446	0.58253	135.92	-0.7184	0.7445	0.58049	135.99	-0.7192	0.7443	0.57846	135.99	-0.7192
75	144.72	-0.8163	0.9694	0.37920	144.80	-0.8171	0.9696	0.37726	144.88	-0.8180	0.9697	0.37532	144.88	-0.8180
80	153.00	-0.8910	1.3758	0.22529	153.10	-0.8918	1.3774	0.22351	153.20	-0.8926	1.3790	0.22174	153.20	-0.8926
85	160.33	-0.9416	2.2180	0.12111	160.44	-0.9423	2.2260	0.11961	160.56	-0.9430	2.2342	0.11811	160.56	-0.9430
90	166.19	-0.9711	4.1885	0.06044	166.31	-0.9716	4.2258	0.05932	166.44	-0.9721	4.2640	0.05820	166.44	-0.9721
95	170.33	-0.9858	8.9037	0.03017	170.44	-0.9861	9.0491	0.02942	170.56	-0.9865	9.2002	0.02868	170.56	-0.9865
100	173.00	-0.9926	19.1125	0.01622	173.10	-0.9928	19.5542	0.01574	173.20	-0.9930	20.0162	0.01528	173.20	-0.9930
105	174.72	-0.9958	38.1533	0.00963	174.80	-0.9959	39.2145	0.00933	174.88	-0.9960	40.3286	0.00903	174.88	-0.9960
110	175.86	-0.9974	69.1578	0.00627	175.92	-0.9975	71.2861	0.00606	175.99	-0.9976	73.5249	0.00586	175.99	-0.9976
115	176.65	-0.9983	114.5043	0.00440	176.71	-0.9984	118.2406	0.00425	176.77	-0.9984	122.1752	0.00410	176.77	-0.9984
120	177.24	-0.9986	175.5113	0.00327	177.29	-0.9989	161.4482	0.00315	177.34	-0.9989	187.7045	0.00304	177.34	-0.9989
125	177.70	-0.9992	252.2762	0.00255	177.74	-0.9992	261.0115	0.00246	177.78	-0.9992	270.2208	0.00237	177.78	-0.9992
130	178.06	-0.9994	343.6231	0.00206	178.10	-0.9994	355.7113	0.00199	178.13	-0.9995	368.4592	0.00192	178.13	-0.9995
135	178.37	-0.9996	447.1462	0.00172	178.39	-0.9996	463.0522	0.00166	178.42	-0.9996	479.8295	0.00160	178.42	-0.9996
140	178.62	-0.9997	559.3423	0.00140	178.65	-0.9997	579.3997	0.00143	178.67	-0.9997	600.5588	0.00138	178.67	-0.9997
145	178.85	-0.9998	675.8216	0.00130	178.87	-0.9998	700.1991	0.00126	178.89	-0.9998	725.9125	0.00121	178.89	-0.9998
150	179.05	-0.9999	791.5807	0.00117	179.06	-0.9999	820.2593	0.00113	179.08	-0.9999	850.5187	0.00109	179.08	-0.9999
155	179.23	-0.9999	901.3214	0.00107	179.24	-0.9999	934.0828	0.00103	179.26	-0.9999	968.6522	0.00100	179.26	-0.9999
160	179.40	-0.9999	999.7918	0.00100										

2 x = 0.946					2 x = 0.947					2 x = 0.948				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$
0	0.00	1.0000	0.2570	4.11337	0.00	1.0000	0.2569	4.11117	0.00	1.0000	0.2567	4.10897	0.00	1.0000
5	9.86	0.9852	0.2580	4.08298	9.87	0.9852	0.2578	4.08078	9.87	0.9852	0.2577	4.07858	9.87	0.9852
10	19.72	0.9413	0.2609	3.99273	19.73	0.9413	0.2608	3.99053	19.73	0.9413	0.2607	3.98834	19.73	0.9413
15	29.58	0.8697	0.2660	3.84537	29.59	0.8696	0.2659	3.84317	29.60	0.8696	0.2658	3.84097	29.60	0.8696
20	39.43	0.7724	0.2735	3.64536	39.44	0.7723	0.2733	3.64316	39.45	0.7722	0.2732	3.64097	39.45	0.7722
25	49.27	0.6525	0.2835	3.39878	49.28	0.6523	0.2834	3.39658	49.30	0.6521	0.2832	3.39439	49.30	0.6521
30	59.10	0.5136	0.2967	3.11312	59.12	0.5133	0.2965	3.11092	59.13	0.5131	0.2964	3.10874	59.13	0.5131
35	68.91	0.3599	0.3137	2.79704	68.93	0.3595	0.3135	2.79485	68.95	0.3592	0.3133	2.79267	68.95	0.3592
40	78.70	0.1960	0.3354	2.46014	78.72	0.1956	0.3352	2.45795	78.74	0.1952	0.3350	2.45577	78.74	0.1952
45	88.45	0.0270	0.3632	2.11262	88.48	0.0265	0.3631	2.11045	88.51	0.0260	0.3629	2.10828	88.51	0.0260
50	98.17	-0.1420	0.3995	1.76502	98.20	-0.1426	0.3993	1.76286	98.23	-0.1432	0.3991	1.76070	98.23	-0.1432
55	107.82	-0.3060	0.4474	1.42784	107.86	-0.3067	0.4472	1.42569	107.90	-0.3073	0.4470	1.42355	107.90	-0.3073
60	117.39	-0.4600	0.5127	1.11123	117.43	-0.4607	0.5125	1.10911	117.46	-0.4614	0.5123	1.10698	117.46	-0.4614
65	126.82	-0.5994	0.6053	0.82464	126.88	-0.6001	0.6051	0.82255	126.94	-0.6009	0.6048	0.82046	126.94	-0.6009
70	136.06	-0.7201	0.7442	0.57642	136.13	-0.7209	0.7440	0.57439	136.20	-0.7217	0.7438	0.57236	136.20	-0.7217
75	144.97	-0.8168	0.9699	0.37339	145.05	-0.8196	0.9701	0.37145	145.13	-0.8205	0.9702	0.36951	145.13	-0.8205
80	153.31	-0.8934	1.3805	0.21997	153.41	-0.8942	1.3821	0.21819	153.51	-0.8950	1.3837	0.21642	153.51	-0.8950
85	160.68	-0.9437	2.2424	0.11660	160.80	-0.9444	2.2508	0.11510	160.92	-0.9451	2.2592	0.11360	160.92	-0.9451
90	166.56	-0.9726	4.3033	0.05708	166.69	-0.9731	4.3437	0.05597	166.82	-0.9737	4.3853	0.05485	166.82	-0.9737
95	170.68	-0.9868	9.3573	0.02794	170.80	-0.9871	9.5207	0.02721	170.92	-0.9875	9.6908	0.02648	170.92	-0.9875
100	173.31	-0.9932	20.5000	0.01481	173.41	-0.9934	21.0070	0.01436	173.51	-0.9936	21.5388	0.01390	173.51	-0.9936
105	174.97	-0.9961	41.4994	0.00873	175.05	-0.9963	42.7310	0.00843	175.13	-0.9964	44.0279	0.00814	175.13	-0.9964
110	176.06	-0.9976	75.8823	0.00565	176.13	-0.9977	78.3670	0.00545	176.20	-0.9978	80.9886	0.00526	176.20	-0.9978
115	176.82	-0.9985	126.3228	0.00395	176.88	-0.9985	130.6994	0.00381	176.94	-0.9986	135.6222	0.00367	176.94	-0.9986
120	177.39	-0.9990	194.3039	0.00293	177.43	-0.9990	201.2722	0.00282	177.48	-0.9990	208.6377	0.00272	177.48	-0.9990
125	177.82	-0.9993	279.9392	0.00228	177.86	-0.9993	290.2053	0.00220	177.90	-0.9993	301.0614	0.00211	177.90	-0.9993
130	178.17	-0.9995	381.9158	0.00185	178.20	-0.9995	396.1348	0.00178	178.23	-0.9995	411.1752	0.00171	178.23	-0.9995
135	178.45	-0.9996	497.5431	0.00154	178.48	-0.9996	516.2642	0.00148	178.51	-0.9997	536.0709	0.00143	178.51	-0.9997
140	178.70	-0.9997	622.9021	0.00132	178.72	-0.9998	646.5195	0.00127	178.74	-0.9998	671.5100	0.00123	178.74	-0.9998
145	178.91	-0.9998	753.0800	0.00116	178.93	-0.9998	781.7936	0.00112	178.95	-0.9998	812.1797	0.00108	178.95	-0.9998
150	179.10	-0.9999	882.4776	0.00105	179.12	-0.9999	916.2652	0.00101	179.13	-0.9999	952.0238	0.00097	179.13	-0.9999

$x = 0.949$					$x = 0.950$					$x = 0.951$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2566	4.10678	0.00	1.0000	0.2565	4.10459	0.00	1.0000	0.2563	4.10240	0.00	1.0000
5	9.87	0.9852	0.2576	4.07639	9.87	0.9852	0.2574	4.07420	9.88	0.9852	0.2573	4.07201	9.88	0.9852
10	19.74	0.9412	0.2605	3.98614	19.74	0.9412	0.2604	3.98395	19.75	0.9412	0.2603	3.98177	19.75	0.9412
15	29.60	0.8695	0.2656	3.83878	29.61	0.8694	0.2655	3.83659	29.62	0.8693	0.2654	3.83441	29.62	0.8693
20	39.46	0.7720	0.2730	3.63878	39.47	0.7719	0.2729	3.63659	39.48	0.7718	0.2728	3.63441	39.48	0.7718
25	49.31	0.6519	0.2831	3.39220	49.33	0.6518	0.2829	3.39002	49.34	0.6516	0.2828	3.38784	49.34	0.6516
30	59.15	0.5128	0.2962	3.10655	59.17	0.5126	0.2961	3.10437	59.18	0.5123	0.2959	3.10219	59.18	0.5123
35	68.97	0.3589	0.3132	2.79049	68.99	0.3585	0.3130	2.78831	69.01	0.3582	0.3129	2.78614	69.01	0.3582
40	78.77	0.1948	0.3348	2.45360	78.79	0.1944	0.3347	2.45143	78.82	0.1939	0.3345	2.44926	78.82	0.1939
45	88.54	0.0255	0.3627	2.10611	88.57	0.0250	0.3625	2.10395	88.60	0.0245	0.3623	2.10178	88.60	0.0245
50	98.27	-0.1438	0.3989	1.75854	98.30	-0.1444	0.3987	1.75639	98.33	-0.1450	0.3985	1.75424	98.33	-0.1450
55	107.94	-0.3080	0.4468	1.42141	107.98	-0.3087	0.4466	1.41927	108.02	-0.3093	0.4464	1.41713	108.02	-0.3093
60	117.53	-0.4622	0.5120	1.10487	117.58	-0.4629	0.5118	1.10275	117.62	-0.4636	0.5116	1.10064	117.62	-0.4636
65	126.99	-0.6017	0.6046	0.81838	127.05	-0.6025	0.6044	0.81629	127.11	-0.6033	0.6042	0.81421	127.11	-0.6033
70	136.26	-0.7225	0.7437	0.57033	136.33	-0.7234	0.7435	0.56830	136.40	-0.7242	0.7433	0.56627	136.40	-0.7242
75	145.22	-0.8213	0.9703	0.36757	145.30	-0.8221	0.9705	0.36564	145.38	-0.8230	0.9706	0.36370	145.38	-0.8230
80	153.61	-0.8958	1.3852	0.21464	153.71	-0.8966	1.3868	0.21286	153.82	-0.8974	1.3884	0.21109	153.82	-0.8974
85	161.04	-0.9457	2.2678	0.11210	161.16	-0.9464	2.2765	0.11060	161.28	-0.9471	2.2854	0.10910	161.28	-0.9471
90	166.95	-0.9742	4.4281	0.05374	167.08	-0.9747	4.4721	0.05263	167.21	-0.9752	4.5175	0.05152	167.21	-0.9752
95	171.04	-0.9878	9.8682	0.02576	171.16	-0.9881	10.0533	0.02505	171.28	-0.9885	10.2465	0.02433	171.28	-0.9885
100	173.61	-0.9938	22.0972	0.01346	173.71	-0.9940	22.6843	0.01301	173.82	-0.9942	23.3021	0.01258	173.82	-0.9942
105	175.22	-0.9965	45.3949	0.00786	175.30	-0.9966	46.8376	0.00758	175.38	-0.9968	48.3617	0.00730	175.38	-0.9968
110	176.26	-0.9979	83.7576	0.00506	176.33	-0.9980	86.6858	0.00487	176.40	-0.9980	89.7857	0.00469	176.40	-0.9980
115	176.99	-0.9986	140.2106	0.00353	177.05	-0.9987	145.3856	0.00339	177.11	-0.9987	150.8705	0.00326	177.11	-0.9987
120	177.53	-0.9991	216.4316	0.00261	177.58	-0.9991	224.6880	0.00251	177.62	-0.9991	233.4448	0.00241	177.62	-0.9991
125	177.94	-0.9994	312.5537	0.00203	177.98	-0.9994	324.7335	0.00195	178.02	-0.9994	337.6569	0.00187	178.02	-0.9994
130	178.27	-0.9995	427.1019	0.00164	178.30	-0.9996	443.9861	0.00158	178.33	-0.9996	461.9065	0.00151	178.33	-0.9996
135	178.54	-0.9997	557.0488	0.00137	178.57	-0.9997	579.2924	0.00132	178.60	-0.9997	602.9059	0.00126	178.60	-0.9997
140	178.77	-0.9998	697.9822	0.00118	178.79	-0.9998	726.0557	0.00113	178.82	-0.9998	755.8624	0.00108	178.82	-0.9998
145	178.97	-0.9998	844.3709	0.00103	178.99	-0.9998	878.5129	0.00099	179.01	-0.9999	914.7667	0.00095	179.01	-0.9999
150	179.15	-0.9999	989.9096	0.00093										

$x = 0.952$					$x = 0.953$					$x = 0.954$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2562	4.10022	0.00	1.0000	0.2561	4.09804	0.00	1.0000	0.2559	4.09587	0.00	1.0000
5	9.88	0.9852	0.2572	4.06983	9.88	0.9852	0.2570	4.06755	9.88	0.9852	0.2569	4.06548	9.88	0.9852
10	19.75	0.9411	0.2601	3.97959	19.76	0.9411	0.2600	3.97741	19.76	0.9411	0.2599	3.97524	19.76	0.9411
15	29.63	0.8693	0.2652	3.83223	29.64	0.8692	0.2651	3.83005	29.64	0.8691	0.2649	3.82788	29.64	0.8691
20	39.49	0.7717	0.2726	3.63223	39.50	0.7716	0.2725	3.63005	39.52	0.7715	0.2723	3.62788	39.52	0.7715
25	49.35	0.6514	0.2827	3.38566	49.37	0.6512	0.2825	3.38349	49.38	0.6510	0.2824	3.38132	49.38	0.6510
30	59.20	0.5120	0.2958	3.10002	59.22	0.5118	0.2956	3.09785	59.23	0.5115	0.2955	3.09568	59.23	0.5115
35	68.03	0.3579	0.3127	2.78397	68.05	0.3575	0.3125	2.78180	68.07	0.3572	0.3124	2.77964	68.07	0.3572
40	76.84	0.1935	0.3343	2.44710	76.87	0.1931	0.3342	2.44494	76.89	0.1927	0.3340	2.44278	76.89	0.1927
45	86.62	0.0240	0.3621	2.09963	86.65	0.0235	0.3620	2.09747	86.68	0.0230	0.3618	2.09532	86.68	0.0230
50	96.37	-0.1455	0.3983	1.75209	96.40	-0.1461	0.3981	1.74995	96.44	-0.1467	0.3979	1.74781	96.44	-0.1467
55	106.06	-0.3100	0.4461	1.41500	106.10	-0.3107	0.4459	1.41287	106.14	-0.3113	0.4457	1.41075	106.14	-0.3113
60	115.67	-0.4644	0.5114	1.09852	115.72	-0.4651	0.5111	1.09642	115.77	-0.4659	0.5109	1.09431	115.77	-0.4659
65	125.16	-0.6041	0.6039	0.81213	125.22	-0.6049	0.6037	0.81006	125.28	-0.6057	0.6035	0.80798	125.28	-0.6057
70	134.47	-0.7250	0.7432	0.56424	134.54	-0.7259	0.7430	0.56222	134.61	-0.7267	0.7428	0.56020	134.61	-0.7267
75	143.47	-0.8238	0.9707	0.36176	143.55	-0.8247	0.9709	0.35982	143.64	-0.8255	0.9710	0.35789	143.64	-0.8255
80	152.92	-0.8982	1.3899	0.20931	153.03	-0.8990	1.3915	0.20753	153.13	-0.8998	1.3930	0.20575	153.13	-0.8998
85	161.41	-0.9478	2.2943	0.10760	161.53	-0.9485	2.3034	0.10609	161.66	-0.9492	2.3126	0.10459	161.66	-0.9492
90	167.34	-0.9757	4.5644	0.05042	167.48	-0.9762	4.6127	0.04932	167.62	-0.9767	4.6625	0.04822	167.62	-0.9767
95	171.41	-0.9888	10.4485	0.02363	171.53	-0.9891	10.6598	0.02293	171.66	-0.9894	10.8812	0.02223	171.66	-0.9894
100	173.92	-0.9944	23.9529	0.01215	174.03	-0.9946	24.6395	0.01172	174.13	-0.9948	25.3646	0.01130	174.13	-0.9948
105	175.47	-0.9969	49.9740	0.00703	175.55	-0.9970	51.6815	0.00676	175.64	-0.9971	53.4923	0.00650	175.64	-0.9971
110	176.47	-0.9981	93.0714	0.00451	176.54	-0.9982	96.5586	0.00433	176.61	-0.9983	100.2644	0.00415	176.61	-0.9983
115	177.16	-0.9988	156.6909	0.00313	177.22	-0.9988	162.8751	0.00300	177.28	-0.9989	169.4548	0.00288	177.28	-0.9989
120	177.67	-0.9992	242.7436	0.00231	177.72	-0.9992	252.6305	0.00222	177.77	-0.9992	263.1568	0.00212	177.77	-0.9992
125	178.06	-0.9994	351.3862	0.00180	178.10	-0.9994	365.9904	0.00172	178.14	-0.9995	381.5457	0.00165	178.14	-0.9995
130	178.37	-0.9996	480.9500	0.00145	178.40	-0.9996	501.2127	0.00139	178.44	-0.9996	522.8015	0.00133	178.44	-0.9996
135	178.62	-0.9997	628.0044	0.00121	178.65	-0.9997	654.7153	0.00116	178.68	-0.9997	683.1800	0.00111	178.68	-0.9997
140	178.84	-0.9998	787.5482	0.00104	178.87	-0.9998	821.2745	0.00099	178.89	-0.9998	857.2205	0.00095	178.89	-0.9998
145	179.03	-0.9999	953.3101	0.00091	179.05	-0.9999	994.3400	0.00087						

$x = 0.955$					$x = 0.956$					$x = 0.957$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2558	4.09370	0.00	1.0000	0.2557	4.09153	0.00	1.0000	0.2555	4.08937	0.00	1.0000
5	9.89	0.9852	0.2568	4.06331	9.89	0.9851	0.2566	4.06114	9.89	0.9851	0.2565	4.05898	9.89	0.9851
10	19.77	0.9411	0.2597	3.97307	19.78	0.9410	0.2596	3.97090	19.78	0.9410	0.2595	3.96874	19.78	0.9410
15	29.65	0.8691	0.2648	3.82571	29.66	0.8690	0.2647	3.82355	29.67	0.8689	0.2645	3.82139	29.67	0.8689
20	39.53	0.7713	0.2722	3.62572	39.54	0.7712	0.2721	3.62355	39.55	0.7711	0.2719	3.62140	39.55	0.7711
25	49.39	0.6509	0.2822	3.37916	49.41	0.6507	0.2821	3.37700	49.42	0.6505	0.2819	3.37484	49.42	0.6505
30	59.25	0.5113	0.2953	3.09352	59.27	0.5110	0.2952	3.09136	59.28	0.5108	0.2950	3.08921	59.28	0.5108
35	69.09	0.3569	0.3122	2.77748	69.11	0.3565	0.3121	2.77533	69.13	0.3562	0.3119	2.77318	69.13	0.3562
40	78.91	0.1923	0.3338	2.44063	78.94	0.1919	0.3337	2.43848	78.96	0.1914	0.3335	2.43633	78.96	0.1914
45	88.71	0.0225	0.3616	2.09318	88.74	0.0220	0.3614	2.09104	88.77	0.0215	0.3612	2.08890	88.77	0.0215
50	98.47	-0.1473	0.3977	1.74567	98.50	-0.1479	0.3975	1.74354	98.54	-0.1485	0.3973	1.74141	98.54	-0.1485
55	108.18	-0.3120	0.4455	1.40862	108.22	-0.3126	0.4453	1.40650	108.26	-0.3133	0.4451	1.40438	108.26	-0.3133
60	117.81	-0.4666	0.5107	1.09221	117.86	-0.4673	0.5105	1.09011	117.91	-0.4681	0.5102	1.08801	117.91	-0.4681
65	127.34	-0.6065	0.6033	0.80591	127.39	-0.6073	0.6030	0.80384	127.45	-0.6081	0.6028	0.80177	127.45	-0.6081
70	136.68	-0.7275	0.7426	0.55817	136.75	-0.7284	0.7425	0.55615	136.82	-0.7292	0.7423	0.55413	136.82	-0.7292
75	145.72	-0.8263	0.9711	0.35595	145.81	-0.8272	0.9712	0.35401	145.90	-0.8280	0.9713	0.35208	145.90	-0.8280
80	154.24	-0.9006	1.3946	0.20397	154.34	-0.9014	1.3962	0.20219	154.45	-0.9022	1.3977	0.20040	154.45	-0.9022
85	161.79	-0.9499	2.3220	0.10309	161.91	-0.9506	2.3314	0.10158	162.04	-0.9513	2.3411	0.10007	162.04	-0.9513
90	167.75	-0.9772	4.7140	0.04712	167.89	-0.9778	4.7673	0.04602	168.03	-0.9783	4.8224	0.04493	168.03	-0.9783
95	171.79	-0.9897	11.1133	0.02154	171.91	-0.9901	11.3570	0.02085	172.04	-0.9904	11.6132	0.02017	172.04	-0.9904
100	174.24	-0.9949	26.1314	0.01089	174.34	-0.9951	26.3435	0.01048	174.45	-0.9953	27.8047	0.01007	174.45	-0.9953
105	175.72	-0.9972	55.4152	0.00624	175.81	-0.9973	57.4602	0.00598	175.90	-0.9974	59.6381	0.00573	175.90	-0.9974
110	176.68	-0.9983	104.2081	0.00398	176.75	-0.9984	108.4109	0.00381	176.82	-0.9985	112.8965	0.00364	176.82	-0.9985
115	177.34	-0.9989	176.4648	0.00276	177.39	-0.9990	183.9441	0.00264	177.45	-0.9990	191.9363	0.00252	177.45	-0.9990
120	177.81	-0.9993	274.3794	0.00203	177.86	-0.9993	286.3616	0.00194	177.91	-0.9993	299.1742	0.00186	177.91	-0.9993
125	178.18	-0.9995	398.1372	0.00158	178.22	-0.9995	415.8595	0.00151	178.26	-0.9995	434.8185	0.00144	178.26	-0.9995
130	178.47	-0.9996	545.8351	0.00127	178.50	-0.9997	570.4459	0.00121	178.54	-0.9997	596.7817	0.00116	178.54	-0.9997
135	178.71	-0.9997	713.5559	0.00106	178.74	-0.9998	746.0182	0.00101	178.77	-0.9998	780.7630	0.00097	178.77	-0.9998
140	178.91	-0.9998	895.5855	0.00091	178.94	-0.9998	936.5918	0.00087	178.96	-0.9998	980.4876	0.00083	178.96	-0.9998

$x = 0.958$					$x = 0.959$					$x = 0.960$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2554	4.08721	0.00	1.0000	0.2553	4.08506	0.00	1.0000	0.2551	4.08291	0.00	1.0000
5	9.89	0.9851	0.2564	4.05682	9.90	0.9851	0.2562	4.05467	9.90	0.9851	0.2561	4.05252	9.90	0.9851
10	19.79	0.9410	0.2593	3.96658	19.79	0.9409	0.2592	3.96443	19.80	0.9409	0.2591	3.96228	19.80	0.9409
15	29.67	0.8689	0.2644	3.81923	29.68	0.8688	0.2643	3.81708	29.69	0.8687	0.2641	3.81493	29.69	0.8687
20	39.56	0.7710	0.2718	3.61924	39.57	0.7709	0.2716	3.61709	39.58	0.7707	0.2715	3.61494	39.58	0.7707
25	49.43	0.6503	0.2818	3.37269	49.45	0.6501	0.2816	3.37054	49.46	0.6500	0.2815	3.36839	49.46	0.6500
30	59.30	0.5105	0.2949	3.08706	59.32	0.5103	0.2947	3.08491	59.33	0.5100	0.2946	3.08277	59.33	0.5100
35	69.15	0.3559	0.3117	2.77103	69.17	0.3555	0.3116	2.76888	69.19	0.3552	0.3114	2.76675	69.19	0.3552
40	78.99	0.1910	0.3333	2.43419	79.01	0.1906	0.3332	2.43205	79.04	0.1902	0.3330	2.42991	79.04	0.1902
45	88.80	0.0210	0.3611	2.08676	88.83	0.0205	0.3609	2.08463	88.85	0.0200	0.3607	2.08250	88.85	0.0200
50	98.57	-0.1490	0.3971	1.73928	98.61	-0.1496	0.3969	1.73716	98.64	-0.1502	0.3967	1.73503	98.64	-0.1502
55	108.30	-0.3140	0.4449	1.40227	108.34	-0.3146	0.4447	1.40016	108.38	-0.3153	0.4445	1.39805	108.38	-0.3153
60	117.96	-0.4688	0.5100	1.08591	118.00	-0.4695	0.5098	1.08382	118.05	-0.4703	0.5096	1.08173	118.05	-0.4703
65	127.51	-0.6089	0.6026	0.79970	127.56	-0.6097	0.6023	0.79764	127.62	-0.6105	0.6021	0.79557	127.62	-0.6105
70	136.89	-0.7300	0.7421	0.55211	136.96	-0.7309	0.7419	0.55009	137.03	-0.7317	0.7417	0.54808	137.03	-0.7317
75	145.98	-0.8289	0.9714	0.35014	146.07	-0.8297	0.9715	0.34820	146.16	-0.8306	0.9716	0.34627	146.16	-0.8306
80	154.56	-0.9030	1.3992	0.19862	154.67	-0.9038	1.4008	0.19683	154.78	-0.9047	1.4023	0.19505	154.78	-0.9047
85	162.17	-0.9520	2.3508	0.09857	162.31	-0.9527	2.3608	0.09706	162.44	-0.9534	2.3708	0.09555	162.44	-0.9534
90	168.17	-0.9788	4.8795	0.04384	168.32	-0.9793	4.9386	0.04275	168.46	-0.9798	5.0000	0.04167	168.46	-0.9798
95	172.17	-0.9907	11.8829	0.01950	172.31	-0.9910	12.1671	0.01883	172.44	-0.9913	12.4671	0.01817	172.44	-0.9913
100	174.56	-0.9955	28.7193	0.00968	174.67	-0.9957	29.6923	0.00929	174.78	-0.9958	30.7291	0.00890	174.78	-0.9958
105	175.98	-0.9975	61.9613	0.00589	176.07	-0.9976	64.4434	0.00525	176.16	-0.9978	67.1000	0.00501	176.16	-0.9978
110	176.89	-0.9985	117.6917	0.00388	176.96	-0.9986	122.8262	0.00332	177.03	-0.9987	128.3337	0.00317	177.03	-0.9987
115	177.51	-0.9991	200.4899	0.00240	177.56	-0.9991	209.6597	0.00229	177.62	-0.9991	219.5072	0.00218	177.62	-0.9991
120	177.96	-0.9994	312.8966	0.00177	178.00	-0.9994	327.6178	0.00169	178.05	-0.9994	343.4380	0.00160	178.05	-0.9994
125	178.30	-0.9996	455.1325	0.00137	178.34	-0.9996	476.9348	0.00131	178.38	-0.9996	500.3751	0.00124	178.38	-0.9996
130	178.57	-0.9997	625.0081	0.00111	178.61	-0.9997	655.3114	0.00105	178.64	-0.9997	687.9009	0.00100	178.64	-0.9997
135	178.80	-0.9998	818.0099	0.00092	178.83	-0.9998	858.0052	0.00088	178.85	-0.9998	901.0269	0.00083	178.85	-0.9998

$x = 0.961$					$x = 0.962$					$x = 0.963$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.2550	4.08076	0.00	1.0000	0.2549	4.07862	0.00	1.0000	0.2547	4.07648	0.00	4.07648
5	9.90	0.9851	0.2560	4.05037	9.90	0.9851	0.2558	4.04823	9.91	0.9851	0.2557	4.04609	9.91	4.04609
10	19.80	0.9409	0.2589	3.96013	19.81	0.9408	0.2588	3.95799	19.81	0.9408	0.2587	3.95586	19.81	3.95586
15	29.70	0.8686	0.2640	3.81278	29.71	0.8686	0.2639	3.81064	29.71	0.8685	0.2637	3.80851	29.71	3.80851
20	39.59	0.7706	0.2714	3.61280	39.60	0.7705	0.2712	3.61066	39.61	0.7704	0.2711	3.60852	39.61	3.60852
25	49.47	0.6498	0.2813	3.36625	49.49	0.6496	0.2812	3.36411	49.50	0.6494	0.2811	3.36198	49.50	3.36198
30	59.35	0.5098	0.2944	3.08063	59.37	0.5095	0.2943	3.07849	59.38	0.5093	0.2941	3.07636	59.38	3.07636
35	69.21	0.3549	0.3113	2.76461	69.23	0.3546	0.3111	2.76248	69.25	0.3542	0.3109	2.76035	69.25	2.76035
40	79.06	0.1898	0.3328	2.42778	79.08	0.1894	0.3326	2.42565	79.11	0.1890	0.3325	2.42353	79.11	2.42353
45	88.88	0.0195	0.3605	2.08037	88.91	0.0190	0.3603	2.07825	88.94	0.0185	0.3602	2.07613	88.94	2.07613
50	98.67	-0.1508	0.3965	1.73292	98.71	-0.1514	0.3963	1.73080	98.74	-0.1520	0.3961	1.72869	98.74	1.72869
55	108.42	-0.3160	0.4442	1.39594	108.46	-0.3166	0.4440	1.39384	108.50	-0.3173	0.4438	1.39174	108.50	1.39174
60	118.10	-0.4710	0.5093	1.07964	118.15	-0.4717	0.5091	1.07755	118.20	-0.4725	0.5089	1.07547	118.20	1.07547
65	127.68	-0.6113	0.6019	0.79351	127.74	-0.6121	0.6016	0.79145	127.80	-0.6128	0.6014	0.78940	127.80	0.78940
70	137.10	-0.7325	0.7415	0.54606	137.17	-0.7334	0.7413	0.54404	137.24	-0.7342	0.7411	0.54203	137.24	0.54203
75	146.25	-0.8314	0.9716	0.34433	146.33	-0.8323	0.9717	0.34239	146.42	-0.8331	0.9718	0.34046	146.42	0.34046
80	154.89	-0.9055	1.4039	0.19326	155.00	-0.9063	1.4054	0.19147	155.11	-0.9071	1.4069	0.18967	155.11	0.18967
85	162.57	-0.9541	2.3811	0.09404	162.71	-0.9548	2.3915	0.09252	162.85	-0.9555	2.4020	0.09101	162.85	0.09101
90	168.61	-0.9803	5.0637	0.04058	168.76	-0.9808	5.1299	0.03950	168.91	-0.9813	5.1987	0.03842	168.91	0.03842
95	172.57	-0.9916	12.7843	0.01751	172.71	-0.9919	13.1201	0.01686	172.85	-0.9922	13.4763	0.01622	172.85	0.01622
100	174.89	-0.9960	31.8357	0.00852	175.00	-0.9962	33.0191	0.00815	175.11	-0.9964	34.2870	0.00778	175.11	0.00778
105	176.25	-0.9979	69.9485	0.00478	176.33	-0.9980	73.0084	0.00456	176.42	-0.9981	76.3020	0.00434	176.42	0.00434
110	177.10	-0.9987	134.2518	0.00302	177.17	-0.9988	140.6235	0.00287	177.24	-0.9988	147.4974	0.00272	177.24	0.00272
115	177.68	-0.9992	230.1018	0.00208	177.74	-0.9992	241.5220	0.00197	177.80	-0.9993	253.8572	0.00187	177.80	0.00187
120	178.10	-0.9995	360.4704	0.00153	178.15	-0.9995	378.8431	0.00145	178.20	-0.9995	398.7019	0.00137	178.20	0.00137
125	178.42	-0.9996	525.6226	0.00118	178.46	-0.9996	552.8692	0.00112	178.50	-0.9997	582.3325	0.00106	178.50	0.00106
130	178.67	-0.9997	723.0135	0.00095	178.71	-0.9997	760.9173	0.00090	178.74	-0.9998	801.9171	0.00085	178.74	0.00085
135	178.88	-0.9998	947.3887	0.00079	178.91	-0.9998	997.4463	0.00075						

$x = 0.964$					$x = 0.965$					$x = 0.966$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.2546	4.07435	0.00	1.0000	0.2545	4.07222	0.00	1.0000	0.2543	4.07009	0.00	4.07009
5	9.91	0.9851	0.2556	4.04396	9.91	0.9851	0.2554	4.04183	9.91	0.9851	0.2553	4.03970	9.91	4.03970
10	19.82	0.9408	0.2585	3.95372	19.82	0.9408	0.2584	3.95159	19.83	0.9407	0.2583	3.94946	19.83	3.94946
15	29.72	0.8684	0.2636	3.80637	29.73	0.8684	0.2634	3.80424	29.74	0.8683	0.2633	3.80212	29.74	3.80212
20	39.62	0.7703	0.2709	3.60639	39.63	0.7702	0.2708	3.60426	39.64	0.7700	0.2707	3.60214	39.64	3.60214
25	49.52	0.6492	0.2809	3.35985	49.53	0.6491	0.2808	3.35772	49.54	0.6489	0.2806	3.35560	49.54	3.35560
30	59.40	0.5090	0.2940	3.07423	59.42	0.5088	0.2938	3.07211	59.43	0.5085	0.2937	3.06999	59.43	3.06999
35	69.27	0.3539	0.3108	2.75822	69.29	0.3536	0.3106	2.75610	69.31	0.3532	0.3105	2.75398	69.31	2.75398
40	79.13	0.1885	0.3323	2.42141	79.16	0.1881	0.3321	2.41929	79.18	0.1877	0.3320	2.41718	79.18	2.41718
45	88.97	0.0180	0.3600	2.07401	89.00	0.0175	0.3598	2.07190	89.03	0.0170	0.3596	2.06979	89.03	2.06979
50	98.78	-0.1526	0.3959	1.72658	98.81	-0.1531	0.3957	1.72448	98.84	-0.1537	0.3956	1.72238	98.84	1.72238
55	108.54	-0.3180	0.4436	1.38964	108.58	-0.3186	0.4434	1.38755	108.62	-0.3193	0.4432	1.38546	108.62	1.38546
60	118.24	-0.4732	0.5086	1.07339	118.29	-0.4740	0.5084	1.07131	118.34	-0.4747	0.5082	1.06923	118.34	1.06923
65	127.85	-0.6136	0.6011	0.78734	127.91	-0.6144	0.6009	0.78529	127.97	-0.6152	0.6007	0.78323	127.97	0.78323
70	137.31	-0.7351	0.7409	0.54002	137.38	-0.7359	0.7407	0.53800	137.46	-0.7367	0.7405	0.53599	137.46	0.53599
75	146.51	-0.8340	0.9718	0.33852	146.60	-0.8348	0.9719	0.33658	146.69	-0.8357	0.9719	0.33464	146.69	0.33464
80	155.22	-0.9079	1.4084	0.18788	155.33	-0.9088	1.4099	0.18608	155.45	-0.9096	1.4114	0.18428	155.45	0.18428
85	162.89	-0.9562	2.4127	0.08949	163.13	-0.9570	2.4236	0.08797	163.27	-0.9577	2.4347	0.08645	163.27	0.08645
90	168.06	-0.9818	5.2705	0.03734	169.22	-0.9823	5.3452	0.03627	169.37	-0.9829	5.4233	0.03520	169.37	0.03520
95	172.99	-0.9925	13.8548	0.01558	173.13	-0.9928	14.2577	0.01495	173.27	-0.9931	14.6875	0.01433	173.27	0.01433
100	175.22	-0.9965	35.6483	0.00742	175.33	-0.9967	37.1128	0.00707	175.45	-0.9968	38.6922	0.00672	175.45	0.00672
105	176.51	-0.9981	79.8547	0.00412	176.60	-0.9982	83.6954	0.00391	176.69	-0.9983	87.8573	0.00370	176.69	0.00370
110	177.31	-0.9989	154.9288	0.00258	177.38	-0.9990	162.9811	0.00245	177.46	-0.9990	171.7267	0.00231	177.46	0.00231
115	177.85	-0.9993	267.2091	0.00177	177.91	-0.9993	281.6939	0.00168	177.97	-0.9994	297.4455	0.00158	177.97	0.00158
120	178.24	-0.9995	420.2127	0.00130	178.29	-0.9996	443.5655	0.00123	178.34	-0.9996	468.9786	0.00116	178.34	0.00116
125	178.54	-0.9997	614.2612	0.00100	178.58	-0.9997	648.9396	0.00095	178.62	-0.9997	686.6942	0.00089	178.62	0.00089
130	178.78	-0.9998	846.3607	0.00081	178.81	-0.9998	894.6462	0.00076	178.84	-0.9998	947.2305	0.00072	178.84	0.00072

x = 0.967					x = 0.968					x = 0.969				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2542	4.06797	0.00	1.0000	0.2541	4.06585	0.00	1.0000	0.2540	4.06373		
5	9.92	0.9851	0.2552	4.03758	9.92	0.9851	0.2551	4.03546	9.92	0.9850	0.2549	4.03335		
10	19.83	0.9407	0.2581	3.94734	19.84	0.9407	0.2580	3.94522	19.84	0.9406	0.2579	3.94311		
15	29.74	0.8682	0.2632	3.80000	29.75	0.8682	0.2630	3.79788	29.76	0.8681	0.2629	3.79576		
20	39.65	0.7699	0.2705	3.60002	39.66	0.7698	0.2704	3.59790	39.67	0.7697	0.2702	3.59579		
25	49.56	0.6487	0.2805	3.35348	49.57	0.6485	0.2803	3.35136	49.58	0.6483	0.2802	3.34925		
30	59.45	0.5083	0.2935	3.06787	59.47	0.5080	0.2934	3.06576	59.48	0.5078	0.2932	3.06365		
35	69.34	0.3529	0.3103	2.75187	69.36	0.3526	0.3102	2.74976	69.38	0.3522	0.3100	2.74765		
40	79.20	0.1873	0.3318	2.41507	79.23	0.1869	0.3316	2.41296	79.25	0.1865	0.3315	2.41085		
45	89.05	0.0165	0.3594	2.06769	89.08	0.0160	0.3593	2.06559	89.11	0.0155	0.3591	2.06349		
50	98.88	-0.1543	0.3954	1.72028	98.91	-0.1549	0.3952	1.71818	98.94	-0.1555	0.3950	1.71609		
55	108.66	-0.3200	0.4430	1.38337	108.70	-0.3206	0.4428	1.38128	108.74	-0.3213	0.4425	1.37920		
60	118.39	-0.4754	0.5079	1.06716	118.44	-0.4762	0.5077	1.06509	118.48	-0.4769	0.5075	1.06302		
65	128.03	-0.6160	0.6004	0.78118	128.09	-0.6168	0.6002	0.77914	128.14	-0.6176	0.5999	0.77709		
70	137.53	-0.7376	0.7403	0.53398	137.60	-0.7384	0.7401	0.53197	137.67	-0.7393	0.7398	0.52996		
75	146.78	-0.8366	0.9719	0.33270	146.87	-0.8374	0.9720	0.33076	146.96	-0.8383	0.9720	0.32882		
80	155.56	-0.9104	1.4129	0.18248	155.68	-0.9112	1.4143	0.18068	155.79	-0.9121	1.4158	0.17888		
85	163.41	-0.9584	2.4459	0.09492	163.56	-0.9591	2.4574	0.09340	163.71	-0.9598	2.4690	0.09187		
90	169.53	-0.9834	5.5048	0.03413	169.70	-0.9839	5.5902	0.03306	169.86	-0.9844	5.6796	0.03199		
95	173.41	-0.9934	15.1469	0.01371	173.56	-0.9937	15.6391	0.01310	173.71	-0.9940	16.1677	0.01250		
100	175.56	-0.9970	40.3996	0.00638	175.68	-0.9972	42.2500	0.00605	175.79	-0.9973	44.2609	0.00572		
105	176.78	-0.9984	92.3784	0.00350	176.87	-0.9985	97.3027	0.00330	176.96	-0.9986	102.6815	0.00311		
110	177.53	-0.9991	181.2494	0.00218	177.60	-0.9991	191.6458	0.00205	177.67	-0.9992	203.0283	0.00193		
115	178.03	-0.9994	314.6176	0.00149	178.09	-0.9994	333.3886	0.00140	178.14	-0.9995	353.9657	0.00132		
120	178.39	-0.9996	496.7035	0.00109	178.44	-0.9996	527.0316	0.00103	178.48	-0.9997	560.3018	0.00096		
125	178.66	-0.9997	727.9019	0.00084	178.70	-0.9997	772.9990	0.00079	178.74	-0.9998	822.4932	0.00074		

x = 0.970					x = 0.971					x = 0.972				
PSI	θ	cos θ	Q	S	θ	cos θ	Q	S	θ	cos θ	Q	S		
0	0.00	1.0000	0.2538	4.06162	0.00	1.0000	0.2537	4.05951	0.00	1.0000	0.2536	4.05741		
5	9.92	0.9850	0.2548	4.03123	9.93	0.9850	0.2547	4.02913	9.93	0.9850	0.2545	4.02702		
10	19.85	0.9406	0.2577	3.94100	19.85	0.9406	0.2576	3.93889	19.86	0.9405	0.2575	3.93679		
15	29.77	0.8680	0.2628	3.79365	29.78	0.8680	0.2626	3.79155	29.78	0.8679	0.2625	3.78944		
20	39.69	0.7696	0.2701	3.59368	39.70	0.7694	0.2700	3.59157	39.71	0.7693	0.2698	3.58947		
25	49.60	0.6482	0.2801	3.34714	49.61	0.6480	0.2799	3.34504	49.62	0.6478	0.2798	3.34294		
30	59.50	0.5075	0.2931	3.06154	59.52	0.5073	0.2929	3.05944	59.53	0.5070	0.2928	3.05734		
35	69.40	0.3519	0.3098	2.74555	69.42	0.3516	0.3097	2.74345	69.44	0.3512	0.3095	2.74135		
40	79.28	0.1861	0.3313	2.40875	79.30	0.1856	0.3311	2.40666	79.33	0.1852	0.3310	2.40456		
45	89.14	0.0150	0.3589	2.06139	89.17	0.0145	0.3587	2.05930	89.20	0.0140	0.3585	2.05721		
50	98.98	-0.1561	0.3948	1.71400	99.01	-0.1567	0.3946	1.71191	99.05	-0.1572	0.3944	1.70983		
55	108.78	-0.3220	0.4423	1.37712	108.82	-0.3226	0.4421	1.37504	108.86	-0.3233	0.4419	1.37297		
60	118.53	-0.4777	0.5072	1.06095	118.58	-0.4784	0.5070	1.05889	118.63	-0.4791	0.5068	1.05683		
65	128.20	-0.6184	0.5997	0.77504	128.26	-0.6193	0.5994	0.77300	128.32	-0.6201	0.5992	0.77096		
70	137.74	-0.7401	0.7396	0.52795	137.81	-0.7410	0.7394	0.52595	137.89	-0.7418	0.7392	0.52394		
75	147.05	-0.8391	0.9720	0.32688	147.14	-0.8400	0.9720	0.32494	147.23	-0.8409	0.9719	0.32299		
80	155.91	-0.9129	1.4172	0.17707	156.03	-0.9138	1.4186	0.17526	156.15	-0.9146	1.4200	0.17344		
85	163.85	-0.9606	2.4808	0.08033	164.00	-0.9613	2.4928	0.07880	164.16	-0.9620	2.5049	0.07726		
90	170.03	-0.9849	5.7735	0.03093	170.20	-0.9854	5.8722	0.02987	170.37	-0.9859	5.9761	0.02881		
95	173.85	-0.9943	16.7369	0.01191	174.00	-0.9945	17.3515	0.01132	174.16	-0.9948	18.0171	0.01074		
100	175.91	-0.9975	46.4527	0.00540	176.03	-0.9976	48.8491	0.00509	176.15	-0.9977	51.4779	0.00478		
105	177.05	-0.9987	108.5741	0.00293	177.14	-0.9988	115.0505	0.00275	177.23	-0.9988	122.1927	0.00257		
110	177.74	-0.9992	215.5282	0.00181	177.81	-0.9993	229.2994	0.00170	177.89	-0.9993	244.5235	0.00158		
115	178.20	-0.9995	376.5909	0.00123	178.26	-0.9995	401.5486	0.00115	178.32	-0.9996	429.1743	0.00108		
120	178.53	-0.9997	596.9101	0.00090	178.58	-0.9997	637.3216	0.00084	178.63	-0.9997	682.0858	0.00079		
125	178.78	-0.9998	876.9779	0.00069	178.82	-0.9998	937.1502	0.00065						

$x = 0.973$					$x = 0.974$					$x = 0.975$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2534	4.05531	0.00	1.0000	0.2533	4.05321	0.00	1.0000	0.2532	4.05112	0.00	1.0000
5	9.93	0.9850	0.2544	4.02492	9.93	0.9850	0.2543	4.02283	9.94	0.9850	0.2541	4.02073	9.94	0.9850
10	19.86	0.9405	0.2573	3.93469	19.87	0.9405	0.2572	3.93259	19.87	0.9404	0.2571	3.93050	19.87	0.9404
15	29.79	0.8678	0.2624	3.78735	29.80	0.8678	0.2622	3.78525	29.81	0.8677	0.2621	3.78316	29.81	0.8677
20	39.72	0.7692	0.2697	3.58737	39.73	0.7691	0.2696	3.58528	39.74	0.7690	0.2694	3.58319	39.74	0.7690
25	49.64	0.6476	0.2796	3.34084	49.65	0.6474	0.2795	3.33875	49.66	0.6473	0.2793	3.33666	49.66	0.6473
30	59.55	0.5068	0.2926	3.05525	59.57	0.5065	0.2925	3.05315	59.58	0.5063	0.2923	3.05107	59.58	0.5063
35	69.46	0.3509	0.3094	2.73926	69.48	0.3506	0.3092	2.73717	69.50	0.3503	0.3091	2.73508	69.50	0.3503
40	79.35	0.1848	0.3308	2.40247	79.37	0.1844	0.3306	2.40039	79.40	0.1840	0.3305	2.39830	79.40	0.1840
45	89.23	0.0135	0.3584	2.05512	89.26	0.0130	0.3582	2.05304	89.28	0.0125	0.3580	2.05096	89.28	0.0125
50	99.08	-0.1578	0.3942	1.70775	99.11	-0.1584	0.3940	1.70567	99.15	-0.1590	0.3938	1.70360	99.15	-0.1590
55	108.90	-0.3240	0.4417	1.37089	108.94	-0.3246	0.4415	1.36883	108.98	-0.3253	0.4413	1.36676	108.98	-0.3253
60	118.68	-0.4799	0.5065	1.05477	118.73	-0.4806	0.5063	1.05271	118.77	-0.4814	0.5061	1.05065	118.77	-0.4814
65	128.38	-0.6209	0.5989	0.76992	128.44	-0.6217	0.5987	0.76786	128.50	-0.6225	0.5984	0.76580	128.50	-0.6225
70	137.96	-0.7427	0.7389	0.52193	138.03	-0.7435	0.7387	0.51993	138.11	-0.7444	0.7384	0.51792	138.11	-0.7444
75	147.33	-0.8418	0.9719	0.32105	147.42	-0.8426	0.9719	0.31910	147.51	-0.8435	0.9718	0.31716	147.51	-0.8435
80	156.27	-0.9154	1.4214	0.17163	156.39	-0.9163	1.4227	0.16951	156.51	-0.9171	1.4241	0.16798	156.51	-0.9171
85	164.31	-0.9628	2.5173	0.07571	164.47	-0.9635	2.5299	0.07416	164.63	-0.9642	2.5427	0.07261	164.63	-0.9642
90	170.54	-0.9864	6.0858	0.02775	170.72	-0.9869	6.2017	0.02669	170.90	-0.9874	6.3246	0.02564	170.90	-0.9874
95	174.31	-0.9951	18.7403	0.01017	174.47	-0.9953	19.5287	0.00961	174.63	-0.9956	20.3914	0.00905	174.63	-0.9956
100	176.27	-0.9979	54.3721	0.00449	176.39	-0.9980	57.5708	0.00420	176.51	-0.9981	61.1207	0.00391	176.51	-0.9981
105	177.33	-0.9989	130.0984	0.00240	177.42	-0.9990	138.8835	0.00223	177.51	-0.9991	148.6875	0.00207	177.51	-0.9991
110	177.96	-0.9994	261.4160	0.00148	178.03	-0.9994	280.2342	0.00137	178.11	-0.9995	301.2874	0.00127	178.11	-0.9995
115	178.38	-0.9996	459.8664	0.00100	178.44	-0.9996	494.1010	0.00093	178.50	-0.9997	532.4508	0.00086	178.50	-0.9997
120	178.68	-0.9997	731.8551	0.00073	178.73	-0.9998	787.4096	0.00068	178.77	-0.9998	849.6877	0.00063	178.77	-0.9998

$x = 0.976$					$x = 0.977$					$x = 0.978$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2530	4.04903	0.00	1.0000	0.2529	4.04695	0.00	1.0000	0.2528	4.04486	0.00	1.0000
5	9.94	0.9850	0.2540	4.01865	9.94	0.9850	0.2539	4.01656	9.94	0.9850	0.2538	4.01448	9.94	0.9850
10	19.88	0.9404	0.2569	3.92841	19.88	0.9404	0.2568	3.92633	19.89	0.9404	0.2567	3.92425	19.89	0.9404
15	29.81	0.8676	0.2620	3.78107	29.82	0.8676	0.2618	3.77899	29.83	0.8675	0.2617	3.77691	29.83	0.8675
20	39.75	0.7689	0.2693	3.58110	39.76	0.7687	0.2691	3.57902	39.77	0.7686	0.2690	3.57694	39.77	0.7686
25	49.68	0.6471	0.2792	3.33457	49.69	0.6469	0.2791	3.33249	49.70	0.6467	0.2789	3.33041	49.70	0.6467
30	59.60	0.5060	0.2922	3.04898	59.62	0.5058	0.2920	3.04690	59.63	0.5055	0.2919	3.04482	59.63	0.5055
35	69.52	0.3499	0.3089	2.73300	69.54	0.3496	0.3087	2.73092	69.56	0.3493	0.3086	2.72884	69.56	0.3493
40	79.42	0.1836	0.3303	2.39622	79.45	0.1832	0.3301	2.39415	79.47	0.1827	0.3300	2.39207	79.47	0.1827
45	89.31	0.0120	0.3578	2.04888	89.34	0.0115	0.3576	2.04681	89.37	0.0110	0.3575	2.04474	89.37	0.0110
50	99.18	-0.1596	0.3936	1.70153	99.22	-0.1602	0.3934	1.69946	99.25	-0.1608	0.3932	1.69739	99.25	-0.1608
55	109.02	-0.3260	0.4410	1.36470	109.06	-0.3266	0.4408	1.36263	109.10	-0.3273	0.4406	1.36058	109.10	-0.3273
60	118.82	-0.4821	0.5058	1.04860	118.87	-0.4828	0.5056	1.04655	118.92	-0.4836	0.5054	1.04450	118.92	-0.4836
65	128.56	-0.6233	0.5982	0.76281	128.61	-0.6241	0.5979	0.76078	128.67	-0.6249	0.5976	0.75875	128.67	-0.6249
70	138.18	-0.7452	0.7382	0.51592	138.25	-0.7461	0.7380	0.51391	138.33	-0.7469	0.7377	0.51191	138.33	-0.7469
75	147.60	-0.8444	0.9718	0.31521	147.70	-0.8452	0.9717	0.31326	147.79	-0.8461	0.9716	0.31131	147.79	-0.8461
80	156.64	-0.9180	1.4254	0.16615	156.76	-0.9189	1.4266	0.16432	156.88	-0.9197	1.4279	0.16249	156.88	-0.9197
85	164.79	-0.9650	2.5557	0.07105	164.96	-0.9657	2.5690	0.06949	165.12	-0.9665	2.5824	0.06792	165.12	-0.9665
90	171.09	-0.9879	6.4550	0.02459	171.28	-0.9884	6.5938	0.02354	171.47	-0.9889	6.7420	0.02249	171.47	-0.9889
95	174.79	-0.9959	21.3393	0.00851	174.96	-0.9961	22.3854	0.00797	175.12	-0.9964	23.5455	0.00745	175.12	-0.9964
100	176.64	-0.9983	65.0782	0.00364	176.76	-0.9984	69.5116	0.00337	176.88	-0.9985	74.5047	0.00311	176.88	-0.9985
105	177.60	-0.9991	159.6790	0.00192	177.70	-0.9992	172.0633	0.00177	177.79	-0.9993	186.0925	0.00163	177.79	-0.9993
110	178.18	-0.9995	324.9499	0.00117	178.25	-0.9995	351.6784	0.00108	178.33	-0.9996	382.0348	0.00099	178.33	-0.9996
115	178.56	-0.9997	575.6093	0.00079	178.61	-0.9997	624.4231	0.00073	178.67	-0.9997	679.9348	0.00067	178.67	-0.9997
120	178.82	-0.9998	919.8265	0.00058	178.87	-0.9998	999.2150	0.00053						

$x = 0.979$					$x = 0.980$					$x = 0.981$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.2527	4.04279	0.00	1.0000	0.2525	4.04071	0.00	1.0000	0.2524	4.03864		
5	9.95	0.9850	0.2536	4.01240	9.95	0.9850	0.2535	4.01033	9.95	0.9850	0.2534	4.00826		
10	19.89	0.9403	0.2566	3.92217	19.90	0.9403	0.2564	3.92010	19.90	0.9403	0.2563	3.91803		
15	29.84	0.8674	0.2616	3.77483	29.85	0.8674	0.2614	3.77276	29.85	0.8673	0.2613	3.77069		
20	39.78	0.7685	0.2689	3.57486	39.79	0.7684	0.2687	3.57279	39.80	0.7683	0.2686	3.57072		
25	49.72	0.6465	0.2788	3.32834	49.73	0.6464	0.2786	3.32627	49.75	0.6462	0.2785	3.32420		
30	59.65	0.5053	0.2917	3.04275	59.67	0.5050	0.2916	3.04058	59.68	0.5048	0.2914	3.03851		
35	69.58	0.3489	0.3084	2.72677	69.60	0.3486	0.3083	2.72470	69.62	0.3483	0.3081	2.72264		
40	79.49	0.1823	0.3298	2.39000	79.52	0.1819	0.3296	2.38794	79.54	0.1815	0.3295	2.38587		
45	89.40	0.0105	0.3573	2.04267	89.43	0.0100	0.3571	2.04061	89.46	0.0095	0.3569	2.03855		
50	99.26	-0.1613	0.3930	1.69533	99.32	-0.1619	0.3928	1.69327	99.35	-0.1625	0.3926	1.69122		
55	109.15	-0.3280	0.4404	1.35852	109.19	-0.3286	0.4402	1.35647	109.23	-0.3293	0.4400	1.35442		
60	118.97	-0.4843	0.5051	1.04246	119.02	-0.4851	0.5049	1.04041	119.07	-0.4858	0.5046	1.03837		
65	128.73	-0.6257	0.5974	0.75672	128.79	-0.6265	0.5971	0.75469	128.85	-0.6273	0.5969	0.75266		
70	138.40	-0.7478	0.7374	0.50991	138.47	-0.7486	0.7372	0.50791	138.55	-0.7495	0.7369	0.50590		
75	147.89	-0.8470	0.9715	0.30936	147.98	-0.8479	0.9714	0.30741	148.08	-0.8488	0.9713	0.30546		
80	157.01	-0.9206	1.4291	0.16065	157.14	-0.9214	1.4303	0.15881	157.27	-0.9223	1.4314	0.15696		
85	165.29	-0.9672	2.5960	0.06635	165.46	-0.9680	2.6099	0.06477	165.64	-0.9688	2.6239	0.06318		
90	171.67	-0.9894	6.9007	0.02145	171.87	-0.9899	7.0711	0.02041	172.08	-0.9905	7.2548	0.01937		
95	175.29	-0.9966	24.6387	0.00693	175.46	-0.9969	26.2887	0.00643	175.64	-0.9971	27.9250	0.00594		
100	177.01	-0.9986	80.1609	0.00285	177.14	-0.9988	86.6092	0.00262	177.27	-0.9989	94.0124	0.00239		
105	177.89	-0.9993	202.0794	0.00149	177.98	-0.9994	220.4156	0.00135	178.08	-0.9994	241.5966	0.00123		
110	178.40	-0.9996	416.7166	0.00090	178.47	-0.9996	456.5986	0.00082	178.55	-0.9997	502.7898	0.00074		
115	178.73	-0.9998	743.4395	0.00061	178.79	-0.9998	816.5623	0.00055	178.85	-0.9998	901.3648	0.00050		

$x = 0.982$					$x = 0.983$					$x = 0.984$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.2523	4.03658	0.00	1.0000	0.2521	4.03451	0.00	1.0000	0.2520	4.03245		
5	9.95	0.9849	0.2532	4.00619	9.96	0.9849	0.2531	4.00413	9.96	0.9849	0.2530	4.00207		
10	19.91	0.9402	0.2562	3.91596	19.91	0.9402	0.2560	3.91390	19.92	0.9402	0.2559	3.91184		
15	29.86	0.8672	0.2612	3.76852	29.87	0.8672	0.2610	3.76656	29.88	0.8671	0.2609	3.76450		
20	39.81	0.7682	0.2685	3.56865	39.82	0.7680	0.2683	3.56659	39.83	0.7679	0.2682	3.56453		
25	49.76	0.6460	0.2784	3.32213	49.77	0.6458	0.2782	3.32007	49.79	0.6456	0.2781	3.31802		
30	59.70	0.5045	0.2913	3.03655	59.72	0.5043	0.2912	3.03449	59.73	0.5040	0.2910	3.03243		
35	69.64	0.3479	0.3080	2.72058	69.66	0.3476	0.3078	2.71852	69.68	0.3473	0.3077	2.71646		
40	79.57	0.1811	0.3293	2.38381	79.59	0.1807	0.3291	2.38176	79.61	0.1803	0.3290	2.37970		
45	89.48	0.0090	0.3568	2.03649	89.51	0.0085	0.3566	2.03444	89.54	0.0080	0.3564	2.03239		
50	99.39	-0.1631	0.3924	1.68916	99.42	-0.1637	0.3922	1.68711	99.45	-0.1643	0.3920	1.68507		
55	109.27	-0.3300	0.4398	1.35237	109.31	-0.3306	0.4395	1.35032	109.35	-0.3313	0.4393	1.34828		
60	119.11	-0.4866	0.5044	1.03633	119.16	-0.4873	0.5042	1.03430	119.21	-0.4880	0.5039	1.03226		
65	128.91	-0.6281	0.5966	0.75054	128.97	-0.6289	0.5963	0.74851	129.03	-0.6297	0.5961	0.74659		
70	138.62	-0.7504	0.7366	0.50390	138.70	-0.7512	0.7364	0.50190	138.77	-0.7521	0.7361	0.49990		
75	148.17	-0.8497	0.9712	0.30350	148.27	-0.8506	0.9710	0.30154	148.37	-0.8514	0.9709	0.29959		
80	157.40	-0.9232	1.4325	0.15511	157.53	-0.9241	1.4336	0.15325	157.66	-0.9249	1.4346	0.15139		
85	165.82	-0.9695	2.6382	0.05159	166.00	-0.9703	2.6527	0.05999	166.19	-0.9711	2.6673	0.05838		
90	172.29	-0.9910	7.4536	0.01833	172.51	-0.9915	7.6696	0.01729	172.73	-0.9920	7.9057	0.01626		
95	175.82	-0.9973	29.7847	0.00546	176.00	-0.9976	31.9154	0.00499	176.19	-0.9978	34.3784	0.00453		
100	177.40	-0.9990	102.5782	0.00217	177.53	-0.9991	112.5754	0.00195	177.66	-0.9992	124.3568	0.00175		
105	178.17	-0.9995	266.2576	0.00111	178.27	-0.9995	295.2232	0.00099	178.37	-0.9996	329.5800	0.00088		
110	178.62	-0.9997	556.7129	0.00067	178.70	-0.9997	620.2183	0.00060	178.77	-0.9998	695.7477	0.00053		

$x = 0.985$					$x = 0.986$					$x = 0.987$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2519	4.03040	0.00	1.0000	0.2518	4.02835	0.00	1.0000	0.2516	4.02630	0.00	1.0000
5	9.96	0.9849	0.2529	4.00001	9.96	0.9849	0.2527	3.99796	9.97	0.9849	0.2526	3.99591	9.97	0.9849
10	19.92	0.9401	0.2558	3.90978	19.93	0.9401	0.2556	3.90773	19.93	0.9401	0.2555	3.90568	19.93	0.9401
15	29.88	0.8670	0.2608	3.76245	29.89	0.8670	0.2606	3.76039	29.90	0.8669	0.2605	3.75835	29.90	0.8669
20	39.84	0.7678	0.2681	3.56248	39.85	0.7677	0.2679	3.56043	39.86	0.776	0.2678	3.55838	39.86	0.776
25	49.80	0.6455	0.2779	3.31596	49.81	0.6453	0.2778	3.31391	49.83	0.6451	0.2777	3.31185	49.83	0.6451
30	59.75	0.5038	0.2909	3.03038	59.77	0.5035	0.2907	3.02833	59.78	0.5033	0.2906	3.02628	59.78	0.5033
35	69.70	0.3470	0.3075	2.71441	69.72	0.3466	0.3073	2.71236	69.74	0.3463	0.3072	2.71032	69.74	0.3463
40	79.64	0.1798	0.3288	2.37765	79.66	0.1794	0.3286	2.37561	79.69	0.1790	0.3285	2.37356	79.69	0.1790
45	89.57	0.0075	0.3562	2.03034	89.60	0.0070	0.3560	2.02830	89.63	0.0065	0.3559	2.02626	89.63	0.0065
50	99.49	-0.1649	0.3918	1.68302	99.52	-0.1654	0.3917	1.68098	99.56	-0.1660	0.3915	1.67894	99.56	-0.1660
55	109.39	-0.3320	0.4391	1.34624	109.43	-0.3326	0.4389	1.34421	109.47	-0.3333	0.4387	1.34217	109.47	-0.3333
60	119.26	-0.4888	0.5037	1.03023	119.31	-0.4895	0.5034	1.02820	119.36	-0.4903	0.5032	1.02617	119.36	-0.4903
65	129.09	-0.6305	0.5958	0.74457	129.15	-0.6314	0.5955	0.74255	129.21	-0.6322	0.5952	0.74053	129.21	-0.6322
70	138.85	-0.7530	0.7358	0.49790	138.92	-0.7538	0.7355	0.49590	139.00	-0.7547	0.7352	0.49390	139.00	-0.7547
75	148.47	-0.8523	0.9707	0.29763	148.56	-0.8532	0.9705	0.29566	148.66	-0.8541	0.9703	0.29370	148.66	-0.8541
80	157.79	-0.9258	1.4356	0.14952	157.93	-0.9267	1.4365	0.14765	158.07	-0.9276	1.4373	0.14577	158.07	-0.9276
85	166.38	-0.9719	2.6821	0.05675	166.57	-0.9727	2.6971	0.05512	166.77	-0.9735	2.7121	0.05348	166.77	-0.9735
90	172.97	-0.9925	8.1650	0.01523	173.20	-0.9930	8.4515	0.01420	173.45	-0.9935	8.7706	0.01317	173.45	-0.9935
95	176.38	-0.9980	37.2545	0.00409	176.57	-0.9982	40.6521	0.00366	176.77	-0.9984	44.7195	0.00324	176.77	-0.9984
100	177.79	-0.9993	138.3933	0.00155	177.93	-0.9993	155.3253	0.00137	178.07	-0.9994	176.0423	0.00119	178.07	-0.9994
105	178.47	-0.9996	370.7841	0.00078	178.56	-0.9997	420.8231	0.00068	178.66	-0.9997	482.4685	0.00059	178.66	-0.9997
110	178.85	-0.9998	786.5776	0.00047	178.92	-0.9998	897.1874	0.00041						

$x = 0.988$					$x = 0.989$					$x = 0.990$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2515	4.02425	0.00	1.0000	0.2514	4.02221	0.00	1.0000	0.2513	4.02018	0.00	1.0000
5	9.97	0.9849	0.2525	3.99387	9.97	0.9849	0.2523	3.99183	9.97	0.9849	0.2522	3.98979	9.97	0.9849
10	19.94	0.9401	0.2554	3.90364	19.94	0.9400	0.2553	3.90160	19.95	0.9400	0.2551	3.89956	19.95	0.9400
15	29.91	0.8668	0.2604	3.75630	29.92	0.8668	0.2603	3.75426	29.92	0.8667	0.2601	3.75223	29.92	0.8667
20	39.87	0.7675	0.2677	3.55634	39.89	0.7673	0.2675	3.55430	39.90	0.7672	0.2674	3.55226	39.90	0.7672
25	49.84	0.6449	0.2775	3.30982	49.85	0.6448	0.2774	3.30778	49.87	0.6446	0.2772	3.30575	49.87	0.6446
30	59.80	0.5030	0.2904	3.02424	59.82	0.5028	0.2903	3.02220	59.83	0.5025	0.2901	3.02017	59.83	0.5025
35	69.76	0.3460	0.3070	2.70828	69.78	0.3456	0.3069	2.70624	69.80	0.3453	0.3067	2.70420	69.80	0.3453
40	79.71	0.1786	0.3283	2.37153	79.74	0.1782	0.3282	2.36949	79.76	0.1778	0.3280	2.36746	79.76	0.1778
45	89.66	0.0060	0.3557	2.02422	89.68	0.0055	0.3555	2.02218	89.71	0.0050	0.3553	2.02015	89.71	0.0050
50	99.59	-0.1666	0.3913	1.67691	99.62	-0.1672	0.3911	1.67487	99.66	-0.1678	0.3909	1.67284	99.66	-0.1678
55	109.51	-0.3340	0.4385	1.34014	109.55	-0.3346	0.4382	1.33811	109.59	-0.3353	0.4380	1.33609	109.59	-0.3353
60	119.41	-0.4910	0.5030	1.02415	119.46	-0.4918	0.5027	1.02212	119.51	-0.4925	0.5025	1.02010	119.51	-0.4925
65	129.27	-0.6330	0.5950	0.73852	129.33	-0.6338	0.5947	0.73650	129.39	-0.6346	0.5944	0.73449	129.39	-0.6346
70	139.07	-0.7555	0.7349	0.49190	139.15	-0.7564	0.7346	0.48990	139.23	-0.7573	0.7343	0.48790	139.23	-0.7573
75	148.76	-0.8550	0.9701	0.29174	148.86	-0.8559	0.9699	0.28977	148.96	-0.8568	0.9696	0.28780	148.96	-0.8568
80	158.20	-0.9285	1.4381	0.14388	158.34	-0.9294	1.4388	0.14199	158.48	-0.9303	1.4394	0.14009	158.48	-0.9303
85	166.97	-0.9743	2.7273	0.05183	167.18	-0.9751	2.7425	0.05016	167.39	-0.9759	2.7577	0.04848	167.39	-0.9759
90	173.71	-0.9940	9.1287	0.01215	173.98	-0.9945	9.5346	0.01112	174.26	-0.9950	10.0000	0.01010	174.26	-0.9950
95	176.97	-0.9986	49.6645	0.00285	177.18	-0.9988	55.7864	0.00247	177.39	-0.9990	63.5308	0.00210	177.39	-0.9990
100	178.20	-0.9995	201.8103	0.00103	178.34	-0.9996	234.4822	0.00087	178.48	-0.9997	276.8618	0.00073	178.48	-0.9997
105	178.76	-0.9998	559.6805	0.00051	178.86	-0.9998	658.2791	0.00043	178.96	-0.9998	787.1048	0.00035	178.96	-0.9998

$x = 0.991$					$x = 0.992$					$x = 0.993$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2511	4.01814	0.00	1.0000	0.2510	4.01611	0.00	1.0000	0.2509	4.01409	0.00	1.0000
5	9.98	0.9849	0.2521	3.98776	9.98	0.9849	0.2520	3.98573	9.98	0.9849	0.2518	3.98370	9.98	0.9849
10	19.95	0.9400	0.2550	3.89753	19.96	0.9399	0.2549	3.89550	19.96	0.9399	0.2547	3.89347	19.96	0.9399
15	29.93	0.8666	0.2600	3.75019	29.94	0.8666	0.2599	3.74816	29.95	0.8665	0.2597	3.74614	29.95	0.8665
20	39.91	0.7671	0.2672	3.55023	39.92	0.7670	0.2671	3.54820	39.93	0.7669	0.2670	3.54617	39.93	0.7669
25	49.88	0.6444	0.2771	3.30371	49.89	0.6442	0.2770	3.30168	49.91	0.6440	0.2768	3.29966	49.91	0.6440
30	59.85	0.5023	0.2900	3.01814	59.87	0.5020	0.2898	3.01611	59.88	0.5018	0.2897	3.01408	59.88	0.5018
35	69.82	0.3450	0.3066	2.70217	69.84	0.3447	0.3064	2.70015	69.86	0.3443	0.3063	2.69812	69.86	0.3443
40	79.78	0.1774	0.3278	2.36543	79.81	0.1770	0.3277	2.36340	79.83	0.1765	0.3275	2.36137	79.83	0.1765
45	89.74	0.0045	0.3551	2.01812	89.77	0.0040	0.3550	2.01610	89.80	0.0035	0.3548	2.01407	89.80	0.0035
50	99.69	-0.1684	0.3907	1.67082	99.73	-0.1690	0.3905	1.66879	99.76	-0.1695	0.3903	1.66677	99.76	-0.1695
55	109.63	-0.3360	0.4378	1.33406	109.67	-0.3367	0.4376	1.33204	109.71	-0.3373	0.4374	1.33002	109.71	-0.3373
60	119.56	-0.4933	0.5022	1.01808	119.60	-0.4940	0.5020	1.01607	119.65	-0.4948	0.5017	1.01405	119.65	-0.4948
65	129.45	-0.6354	0.5941	0.73248	129.51	-0.6362	0.5939	0.73046	129.57	-0.6371	0.5936	0.72844	129.57	-0.6371
70	139.30	-0.7562	0.7340	0.48590	139.36	-0.7590	0.7337	0.48391	139.46	-0.7599	0.7334	0.48191	139.46	-0.7599
75	149.06	-0.8577	0.9693	0.28582	149.17	-0.8587	0.9690	0.28385	149.27	-0.8596	0.9687	0.28187	149.27	-0.8596
80	158.63	-0.9312	1.4400	0.13818	158.77	-0.9321	1.4404	0.13627	158.92	-0.9331	1.4408	0.13434	158.92	-0.9331
85	167.61	-0.9767	2.7728	0.04679	167.84	-0.9776	2.7878	0.04507	168.07	-0.9784	2.8024	0.04334	168.07	-0.9784
90	174.56	-0.9955	10.5409	0.00908	174.87	-0.9960	11.1803	0.00806	175.20	-0.9965	11.9523	0.00705	175.20	-0.9965
95	177.61	-0.9991	73.5872	0.00176	177.84	-0.9993	87.0732	0.00144	178.07	-0.9994	105.9090	0.00115	178.07	-0.9994
100	178.63	-0.9997	333.3601	0.00060	178.77	-0.9998	411.2553	0.00048	178.92	-0.9998	523.2791	0.00037	178.92	-0.9998
105	179.06	-0.9999	960.1255	0.00029										
$x = 0.994$					$x = 0.995$					$x = 0.996$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2508	4.01206	0.00	1.0000	0.2506	4.01004	0.00	1.0000	0.2505	4.00803	0.00	1.0000
5	9.98	0.9849	0.2517	3.98168	9.99	0.9848	0.2516	3.97966	9.99	0.9848	0.2515	3.97764	9.99	0.9848
10	19.97	0.9399	0.2546	3.89145	19.97	0.9398	0.2545	3.88943	19.98	0.9398	0.2544	3.88741	19.98	0.9398
15	29.95	0.8664	0.2596	3.74411	29.96	0.8664	0.2595	3.74209	29.97	0.8663	0.2593	3.74008	29.97	0.8663
20	39.94	0.7667	0.2668	3.54415	39.95	0.7666	0.2667	3.54213	39.96	0.7665	0.2666	3.54012	39.96	0.7665
25	49.92	0.6439	0.2767	3.29764	49.93	0.6437	0.2765	3.29562	49.95	0.6435	0.2764	3.29360	49.95	0.6435
30	59.90	0.5015	0.2895	3.01206	59.92	0.5013	0.2894	3.01004	59.93	0.5010	0.2893	3.00803	59.93	0.5010
35	69.88	0.3440	0.3061	2.69610	69.90	0.3437	0.3060	2.69408	69.92	0.3433	0.3058	2.69207	69.92	0.3433
40	79.86	0.1761	0.3273	2.35935	79.88	0.1757	0.3272	2.35734	79.90	0.1753	0.3270	2.35532	79.90	0.1753
45	89.83	0.0030	0.3546	2.01205	89.86	0.0025	0.3544	2.01004	89.89	0.0020	0.3543	2.00802	89.89	0.0020
50	99.80	-0.1701	0.3901	1.66475	99.83	-0.1707	0.3899	1.66274	99.86	-0.1713	0.3897	1.66073	99.86	-0.1713
55	109.75	-0.3380	0.4372	1.32800	109.80	-0.3387	0.4369	1.32599	109.84	-0.3393	0.4367	1.32398	109.84	-0.3393
60	119.70	-0.4955	0.5015	1.01204	119.75	-0.4963	0.5012	1.01003	119.80	-0.4970	0.5010	1.00802	119.80	-0.4970
65	129.63	-0.6379	0.5933	0.72645	129.69	-0.6387	0.5930	0.72444	129.76	-0.6395	0.5927	0.72243	129.76	-0.6395
70	139.53	-0.7608	0.7330	0.47991	139.61	-0.7616	0.7327	0.47791	139.69	-0.7625	0.7324	0.47591	139.69	-0.7625
75	149.37	-0.8605	0.9684	0.27989	149.47	-0.8614	0.9680	0.27791	149.58	-0.8623	0.9677	0.27592	149.58	-0.8623
80	159.07	-0.9340	1.4410	0.13241	159.22	-0.9349	1.4412	0.13047	159.37	-0.9359	1.4412	0.12852	159.37	-0.9359
85	168.32	-0.9793	2.8164	0.04158	168.57	-0.9802	2.8298	0.03980	168.83	-0.9810	2.8421	0.03799	168.83	-0.9810
90	175.56	-0.9970	12.9099	0.00604	175.95	-0.9975	14.1421	0.00503	176.37	-0.9980	15.6114	0.00402	176.37	-0.9980
95	178.32	-0.9996	133.6451	0.00088	178.57	-0.9997	177.5134	0.00063	178.83	-0.9998	254.3423	0.00042	178.83	-0.9998
100	179.07	-0.9999	693.4224	0.00028	179.22	-0.9999	971.5169	0.00019						
$x = 0.997$					$x = 0.998$					$x = 0.999$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.2504	4.00602	0.00	1.0000	0.2503	4.00401	0.00	1.0000	0.2501	4.00200	0.00	1.0000
5	9.99	0.9848	0.2513	3.97563	9.99	0.9848	0.2512	3.97362	10.00	0.9848	0.2511	3.97162	10.00	0.9848
10	19.98	0.9398	0.2542	3.88540	19.99	0.9398	0.2541	3.88339	19.99	0.9397	0.2540	3.88139	19.99	0.9397
15	29.98	0.8662	0.2592	3.73807	29.98	0.8662	0.2591	3.73606	29.99	0.8661	0.2589	3.73405	29.99	0.8661
20	39.97	0.7664	0.2664	3.53810	39.98	0.7663	0.2663	3.53610	39.99	0.7662	0.2662	3.53409	39.99	0.7662
25	49.96	0.6433	0.2763	3.29159	49.97	0.6431	0.2761	3.28958	49.99	0.6430	0.2760	3.28758	49.99	0.6430
30	59.95	0.5008	0.2891	3.00602	59.97	0.5005	0.2890	3.00401	59.98	0.5003	0.2888	3.00200	59.98	0.5003
35	69.94	0.3430	0.3057	2.69006	69.96	0.3427	0.3055	2.68805	69.98	0.3423	0.3053	2.68604	69.98	0.3423
40	79.93	0.1749	0.3268	2.35331	79.95	0.1745	0.3267	2.35130	79.98	0.1741	0.3265	2.34930	79.98	0.1741
45	89.91	0.0015	0.3541	2.00601	89.94	0.0010	0.3539	2.00401	89.97	0.0005	0.3537	2.00200	89.97	0.0005
50	99.90	-0.1719	0.3895	1.65872	99.93	-0.1725	0.3893	1.65671	99.97	-0.1731	0.3891	1.65471	99.97	-0.1731
55	109.88	-0.3400	0.4365	1.32197	109.92	-0.3407	0.4363	1.31996	109.96	-0.3413	0.4361	1.31796	109.96	-0.3413
60	119.85	-0.4978	0.5007	1.00601	119.90	-0.4985	0.5005	1.00400	119.95	-0.4993	0.5002	1.00200	119.95	-0.4993
65	129.82	-0.6403	0.5924	0.72043	129.88	-0.6411	0.5921	0.71843	129.94	-0.6420	0.5918	0.71643	129.94	-0.6420
70	139.77	-0.7634	0.7320	0.47391	139.84	-0.7643	0.7317	0.47191	139.92	-0.7652	0.7313	0.46991	139.92	-0.7652
75	149.68	-0.8632	0.9673	0.27393	149.79	-0.8642	0.9668	0.27194	149.89	-0.8651	0.9664	0.26995	149.89	-0.8651
80	159.52	-0.9368	1.4410	0.12656	159.68	-0.9378	1.4408	0.12459	159.84	-0.9387	1.4403	0.12261	159.84	-0.9387
85	169.10	-0.9820	2.8528	0.03615	169.38	-0.9829	2.8615	0.03428	169.68	-0.9838	2.8671	0.03236	169.68	-0.9838
90	176.86	-0.9985	18.2574	0.00301	177.44	-0.9990	22.3606	0.00200	178.19	-0.9995	31.6227	0.00100	178.19	-0.9995
95	179.10	-0.9999	411.8049	0.00025	179.38	-0.9999	837.0573	0.00012						

PSI	$x = 1.000$				$x = 1.050$				$x = 1.100$			
	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2
0	0.00	1.0000	0.2500	4.00000	0.00	1.0000	0.2439	3.90418	0.00	1.0000	0.2382	3.81602
5	10.00	0.9848	0.2510	3.96962	10.12	0.9844	0.2449	3.87379	10.24	0.9841	0.2391	3.78561
10	20.00	0.9397	0.2539	3.87939	20.25	0.9382	0.2477	3.78355	20.49	0.9367	0.2419	3.69533
15	30.00	0.8660	0.2588	3.73205	30.38	0.8627	0.2525	3.63619	30.75	0.8594	0.2466	3.54790
20	40.00	0.7660	0.2660	3.53209	40.52	0.7602	0.2596	3.43619	41.02	0.7545	0.2535	3.34780
25	50.00	0.6428	0.2758	3.28557	50.66	0.6339	0.2691	3.18963	51.31	0.6251	0.2628	3.10109
30	60.00	0.5000	0.2887	3.00000	60.82	0.4875	0.2816	2.90398	61.63	0.4752	0.2750	2.81525
35	70.00	0.3420	0.3052	2.68404	71.00	0.3256	0.2977	2.58792	71.98	0.3093	0.2906	2.48891
40	80.00	0.1736	0.3264	2.34730	81.20	0.1530	0.3183	2.25105	82.39	0.1324	0.3106	2.16165
45	90.00	0.0000	0.3536	2.00000	91.43	-0.0250	0.3448	1.90357	92.87	-0.0501	0.3363	1.81362
50	100.00	-0.1736	0.3889	1.65270	101.72	-0.2031	0.3792	1.55601	103.46	-0.2328	0.3694	1.46524
55	110.00	-0.3420	0.4359	1.31596	112.07	-0.3758	0.4247	1.21886	114.22	-0.4102	0.4129	1.12681
60	120.00	-0.5000	0.5000	1.00000	122.55	-0.5380	0.4866	0.90225	125.27	-0.5774	0.4707	0.80795
65	130.00	-0.6428	0.5916	0.71442	133.23	-0.6849	0.5738	0.61550	136.91	-0.7302	0.5466	0.51661
70	140.00	-0.7660	0.7310	0.46791	144.34	-0.8125	0.7013	0.36648	150.25	-0.8682	0.6073	0.25349
75	150.00	-0.8660	0.9659	0.26795	156.80	-0.9191	0.8574	0.15839				
80	160.00	-0.9397	1.4397	0.12061								
85	170.00	-0.9848	2.6684	0.03038								

	$x = 1.150$					$x = 1.200$					$x = 1.250$			
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2328	3.73457	0.00	1.0000	0.2277	3.65908	0.00	1.0000	0.2229	3.58885		
2	4.14	0.9974	0.2330	3.72970	4.19	0.9973	0.2279	3.65919	4.24	0.9973	0.2230	3.58397		
4	8.29	0.9896	0.2334	3.71509	8.38	0.9893	0.2283	3.63957	8.47	0.9891	0.2234	3.56933		
6	12.44	0.9765	0.2341	3.69082	12.58	0.9760	0.2290	3.61528	12.71	0.9755	0.2241	3.54501		
8	16.58	0.9584	0.2351	3.65700	16.77	0.9575	0.2300	3.58143	16.95	0.9566	0.2251	3.51113		
10	20.73	0.9352	0.2364	3.61381	20.97	0.9338	0.2312	3.53820	21.19	0.9324	0.2263	3.46785		
12	24.88	0.9072	0.2380	3.56144	25.16	0.9051	0.2328	3.48579	25.44	0.9030	0.2278	3.41538		
14	29.04	0.8743	0.2399	3.50015	29.37	0.8716	0.2346	3.42445	29.69	0.8687	0.2296	3.35397		
16	33.19	0.8368	0.2422	3.43027	33.57	0.8332	0.2368	3.36048	33.95	0.8295	0.2318	3.28392		
18	37.35	0.7949	0.2448	3.35209	37.79	0.7903	0.2393	3.27622	38.21	0.7857	0.2342	3.20556		
20	41.52	0.7488	0.2477	3.26601	42.00	0.7431	0.2422	3.19005	42.48	0.7375	0.2370	3.11927		
22	45.69	0.6986	0.2510	3.17245	46.23	0.6918	0.2454	3.09638	46.76	0.6851	0.2401	3.02546		
24	49.86	0.6447	0.2547	3.07185	50.46	0.6366	0.2490	2.99566	51.05	0.6287	0.2436	2.92458		
26	54.04	0.5872	0.2589	2.96471	54.70	0.5779	0.2531	2.88837	55.35	0.5686	0.2475	2.81712		
28	58.23	0.5265	0.2635	2.85155	58.95	0.5158	0.2575	2.77504	59.66	0.5051	0.2519	2.70359		
30	62.42	0.4629	0.2686	2.73291	63.21	0.4507	0.2625	2.65621	63.99	0.4386	0.2567	2.58452		
32	66.63	0.3967	0.2742	2.60935	67.49	0.3829	0.2679	2.53244	68.33	0.3692	0.2619	2.46049		
34	70.85	0.3281	0.2804	2.48149	71.78	0.3127	0.2740	2.40433	72.70	0.2974	0.2677	2.33206		
36	75.07	0.2576	0.2873	2.34992	76.08	0.2405	0.2806	2.27248	77.08	0.2235	0.2741	2.19985		
38	79.32	0.1854	0.2948	2.21529	80.41	0.1666	0.2878	2.13752	81.50	0.1478	0.2811	2.06447		
40	83.58	0.1119	0.3031	2.07824	84.76	0.0913	0.2958	2.00007	85.94	0.0707	0.2888	1.92653		
42	87.85	0.0375	0.3123	1.93942	89.14	0.0150	0.3046	1.86080	90.43	-0.0075	0.2971	1.78667		
44	92.15	-0.0376	0.3224	1.79947	93.55	-0.0619	0.3143	1.72032	94.96	-0.0864	0.3063	1.64549		
46	96.48	-0.1129	0.3335	1.65908	98.00	-0.1392	0.3249	1.57928	99.54	-0.1657	0.3162	1.50360		
48	100.84	-0.1880	0.3458	1.51887	102.50	-0.2164	0.3365	1.43830	104.19	-0.2451	0.3270	1.36157		
50	105.23	-0.2628	0.3594	1.37950	107.05	-0.2932	0.3492	1.29797	108.92	-0.3243	0.3385	1.21991		
52	109.68	-0.3367	0.3745	1.24158	111.68	-0.3694	0.3630	1.15885	113.77	-0.4030	0.3507	1.07909		
54	114.18	-0.4096	0.3911	1.10571	116.40	-0.4447	0.3779	1.02144	118.76	-0.4811	0.3632	0.93899		
56	118.75	-0.4810	0.4094	0.97242	121.25	-0.5188	0.3937	0.88611	123.96	-0.5585	0.3749	0.80094		
58	123.43	-0.5509	0.4294	0.84219	126.28	-0.5917	0.4096	0.75304	129.47	-0.6356	0.3836	0.66292		
60	128.23	-0.6189	0.4508	0.71535	131.57	-0.6635	0.4237	0.62201	135.52	-0.7135	0.3820	0.52361		
62	133.24	-0.6855	0.4725	0.59121	137.29	-0.7348	0.4303	0.49180	142.61	-0.7936	0.3408	0.37493		
64	138.55	-0.7491	0.4951	0.47174	143.92	-0.8082	0.4076	0.35768						
66	144.43	-0.8134	0.4947	0.35262										
68	151.88	-0.8819	0.4127	0.22475										

2 x = 1.300					2 x = 1.350					2 x = 1.400				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.2183	3.52335	0.00	1.0000	0.2140	3.46207	0.00	1.0000	0.2098	3.40459		
2	4.28	0.9972	0.2185	3.51894	4.32	0.9972	0.2141	3.45717	4.37	0.9971	0.2099	3.39939		
4	8.56	0.9889	0.2188	3.50380	8.65	0.9886	0.2145	3.44249	8.73	0.9884	0.2103	3.39499		
6	12.84	0.9750	0.2195	3.47945	12.98	0.9745	0.2151	3.41811	13.10	0.9740	0.2109	3.36058		
8	17.13	0.9556	0.2204	3.44553	17.31	0.9547	0.2160	3.38414	17.48	0.9538	0.2118	3.32656		
10	21.42	0.9309	0.2216	3.40219	21.64	0.9295	0.2172	3.34075	21.86	0.9281	0.2129	3.28309		
12	25.71	0.9010	0.2231	3.34965	25.98	0.8990	0.2186	3.28813	26.24	0.8969	0.2143	3.23039		
14	30.01	0.8659	0.2249	3.28816	30.33	0.8632	0.2203	3.22654	30.63	0.8603	0.2160	3.16870		
16	34.32	0.8259	0.2269	3.21801	34.68	0.8224	0.2223	3.15628	35.03	0.8188	0.2179	3.09832		
18	38.63	0.7812	0.2293	3.13953	39.04	0.7767	0.2246	3.07768	39.45	0.7722	0.2202	3.01957		
20	42.95	0.7319	0.2320	3.05311	43.42	0.7264	0.2273	2.99110	43.87	0.7209	0.2227	2.93283		
22	47.28	0.6784	0.2350	2.95844	47.80	0.6717	0.2302	2.89636	48.31	0.6651	0.2256	2.83849		
24	51.63	0.6207	0.2385	2.85809	52.20	0.6129	0.2335	2.79570	52.77	0.6051	0.2288	2.73701		
26	55.99	0.5594	0.2422	2.75042	56.62	0.5502	0.2372	2.68780	57.24	0.5411	0.2323	2.62894		
28	60.36	0.4945	0.2464	2.63665	61.06	0.4839	0.2412	2.57375	61.74	0.4734	0.2362	2.51449		
30	64.76	0.4265	0.2511	2.51731	65.52	0.4144	0.2457	2.45409	66.27	0.4024	0.2405	2.39448		
32	69.17	0.3561	0.2561	2.39295	70.00	0.3420	0.2506	2.32937	70.83	0.3284	0.2452	2.26934		
34	73.61	0.2821	0.2617	2.26415	74.52	0.2669	0.2559	2.20014	75.43	0.2516	0.2503	2.13963		
36	78.08	0.2065	0.2678	2.13151	79.07	0.1895	0.2618	2.06700	80.07	0.1725	0.2559	2.00591		
38	82.58	0.1291	0.2745	1.99562	83.67	0.1102	0.2681	1.93051	84.7m	0.0914	0.2619	1.86873		
40	87.13	0.0501	0.2818	1.85708	88.32	0.0293	0.2750	1.79125	89.51	0.0085	0.2683	1.72864		
42	91.72	-0.0301	0.2897	1.71649	93.03	-0.0528	0.2824	1.64980	94.35	-0.0758	0.2751	1.58616		
44	96.36	-0.1136	0.2983	1.57382	97.82	-0.1360	0.2903	1.50667	99.28	-0.1612	0.2822	1.44175		
46	101.10	-0.1926	0.3074	1.43144	102.70	-0.2188	0.2985	1.36234	104.34	-0.2476	0.2894	1.29577		
48	105.92	-0.2743	0.3172	1.28806	107.71	-0.3041	0.3070	1.21720	109.56	-0.3348	0.2962	1.14843		
50	110.86	-0.3561	0.3273	1.14464	112.88	-0.3888	0.3151	1.07145	115.01	-0.4228	0.3019	0.99961		
52	115.96	-0.4377	0.3372	1.00144	118.29	-0.4739	0.3220	0.92497	120.81	-0.5122	0.3043	0.84852		
54	121.28	-0.5193	0.3461	0.85839	124.05	-0.5599	0.3253	0.77693	127.18	-0.6044	0.2983	0.69269		
56	126.95	-0.6012	0.3512	0.71474	130.42	-0.6484	0.3185	0.62467	134.79	-0.7045	0.2652	0.52339		
58	133.22	-0.6848	0.3455	0.56795	138.18	-0.7452	0.2759	0.45797						
60	140.90	-0.7761	0.2982	0.40791										

x = 1.450					x = 1.500					x = 1.550				
PSI	θ	cos θ	q	S	θ	cos θ	q	S	θ	cos θ	q	S		
0	0.00	1.0000	0.2058	3.35056	0.00	1.0000	0.2020	3.29966	0.00	1.0000	0.1984	3.25160		
2	4.41	0.9970	0.2060	3.34565	4.45	0.9970	0.2022	3.29474	4.49	0.9969	0.1985	3.24667		
4	8.82	0.9882	0.2063	3.33093	8.90	0.9880	0.2025	3.27999	8.98	0.9877	0.1989	3.23190		
6	13.23	0.9735	0.2069	3.30648	13.36	0.9730	0.2031	3.25550	13.48	0.9725	0.1994	3.20736		
8	17.65	0.9529	0.2078	3.27240	17.81	0.9521	0.2039	3.22136	17.98	0.9512	0.2002	3.17317		
10	22.07	0.9267	0.2089	3.22887	22.28	0.9253	0.2050	3.17775	22.49	0.9240	0.2013	3.12947		
12	26.50	0.8949	0.2102	3.17608	26.75	0.8930	0.2063	3.12487	27.00	0.8910	0.2026	3.07649		
14	30.94	0.8577	0.2118	3.11428	31.24	0.8550	0.2079	3.06295	31.53	0.8524	0.2041	3.01445		
16	35.38	0.8153	0.2137	3.04376	35.73	0.8118	0.2097	2.99230	36.07	0.8083	0.2059	2.94365		
18	39.85	0.7678	0.2159	2.96486	40.24	0.7634	0.2118	2.91323	40.63	0.7590	0.2079	2.86440		
20	44.32	0.7154	0.2184	2.87773	44.76	0.7100	0.2142	2.82611	45.20	0.7046	0.2102	2.77707		
22	48.81	0.6585	0.2211	2.78339	49.31	0.6520	0.2169	2.73133	49.80	0.6455	0.2128	2.68206		
24	53.33	0.5973	0.2242	2.68166	53.88	0.5895	0.2199	2.62934	54.42	0.5818	0.2156	2.57978		
26	57.86	0.5320	0.2276	2.57320	58.47	0.5229	0.2231	2.52057	59.08	0.5139	0.2188	2.47068		
28	62.42	0.4629	0.2314	2.45852	63.10	0.4525	0.2267	2.40553	63.77	0.4420	0.2223	2.35525		
30	67.02	0.3904	0.2355	2.33812	67.76	0.3785	0.2307	2.28470	68.50	0.3665	0.2260	2.23396		
32	71.65	0.3148	0.2400	2.21252	72.47	0.3012	0.2350	2.15860	73.28	0.2877	0.2301	2.10732		
34	76.33	0.2364	0.2449	2.08227	77.23	0.2211	0.2396	2.02775	78.12	0.2058	0.2344	1.97581		
36	81.06	0.1555	0.2501	1.94790	82.05	0.1384	0.2445	1.89266	83.04	0.1212	0.2390	1.85392		
38	85.85	0.0724	0.2557	1.80994	86.94	0.0534	0.2497	1.75382	88.04	0.0342	0.2437	1.70011		
40	90.72	-0.0125	0.2616	1.66890	91.93	-0.0337	0.2551	1.61169	93.16	-0.0550	0.2485	1.55674		
42	95.68	-0.0990	0.2678	1.52522	97.04	-0.1225	0.2605	1.46663	98.41	-0.1463	0.2531	1.41009		
44	100.77	-0.1869	0.2740	1.37928	102.30	-0.2130	0.2656	1.31889	103.86	-0.2396	0.2570	1.26021		
46	106.02	-0.2760	0.2799	1.23139	107.76	-0.3051	0.2699	1.16844	109.58	-0.3352	0.2594	1.10676		
48	111.49	-0.3664	0.2847	1.08117	113.53	-0.3992	0.2721	1.01478	115.70	-0.4337	0.2581	0.94852		
50	117.29	-0.4584	0.2869	0.92826	119.75	-0.4963	0.2694	0.85628	122.50	-0.5373	0.2481	0.78202		
52	123.60	-0.5534	0.2825	0.77046	126.82	-0.5993	0.2537	0.68799	130.83	-0.6539	0.2101	0.59479		
54	130.95	-0.6554	0.2590	0.60103	136.24	-0.7222	0.1848	0.48727						
56	142.65	-0.7950	0.1091	0.36929										

x = 1.600					x = 1.650					x = 1.700				
PSI	θ	cos θ	q	S	θ	cos θ	q	S	θ	cos θ	q	S		
0	0.00	1.0000	0.1949	3.20614	0.00	1.0000	0.1916	3.16306	0.00	1.0000	0.1884	3.12217		
2	4.53	0.9969	0.1950	3.20120	4.57	0.9968	0.1917	3.15811	4.61	0.9968	0.1885	3.11721		
4	9.06	0.9875	0.1954	3.18640	9.14	0.9873	0.1920	3.14329	9.22	0.9871	0.1888	3.10235		
6	13.60	0.9720	0.1959	3.16182	13.72	0.9715	0.1926	3.11866	13.83	0.9710	0.1893	3.07768		
8	18.14	0.9503	0.1967	3.12756	18.30	0.9494	0.1933	3.08433	18.45	0.9486	0.1901	3.04328		
10	22.69	0.9226	0.1977	3.08378	22.89	0.9213	0.1943	3.04047	23.09	0.9199	0.1910	2.99933		
12	27.25	0.8890	0.1990	3.03069	27.49	0.8871	0.1955	2.98726	27.73	0.8852	0.1922	2.94601		
14	31.82	0.8497	0.2004	2.96852	32.10	0.8471	0.1969	2.92496	32.39	0.8445	0.1936	2.88357		
16	36.41	0.8048	0.2022	2.89756	36.74	0.8014	0.1986	2.85384	37.06	0.7980	0.1952	2.81228		
18	41.01	0.7546	0.2041	2.81813	41.39	0.7503	0.2005	2.77422	41.76	0.7459	0.1970	2.73245		
20	45.63	0.6992	0.2064	2.73059	46.06	0.6939	0.2027	2.68644	46.48	0.6886	0.1991	2.64444		
22	50.28	0.6390	0.2088	2.63532	50.76	0.6325	0.2051	2.59090	51.24	0.6261	0.2014	2.54862		
24	54.96	0.5741	0.2116	2.53274	55.50	0.5654	0.2077	2.48801	56.03	0.5588	0.2039	2.44540		
26	59.68	0.5049	0.2146	2.42329	60.27	0.4959	0.2106	2.37619	60.86	0.4870	0.2067	2.33519		
28	64.43	0.4316	0.2179	2.30744	65.09	0.4212	0.2137	2.26190	65.74	0.4108	0.2097	2.21843		
30	69.23	0.3546	0.2215	2.18566	69.96	0.3427	0.2171	2.13959	70.69	0.3307	0.2129	2.09556		
32	74.09	0.2741	0.2253	2.05843	74.90	0.2605	0.2207	2.01172	75.70	0.2469	0.2162	1.96702		
34	79.02	0.1905	0.2294	1.92621	79.91	0.1751	0.2244	1.87873	80.81	0.1597	0.2196	1.83319		
36	84.03	0.1040	0.2336	1.78985	85.03	0.0867	0.2283	1.74102	86.03	0.0692	0.2230	1.69444		
38	89.15	0.0149	0.2378	1.64854	90.26	-0.0046	0.2320	1.59891	91.39	-0.0243	0.2262	1.55100		
40	94.40	-0.0767	0.2420	1.50378	95.66	-0.0986	0.2354	1.45258	96.94	-0.1208	0.2287	1.40291		
42	99.82	-0.1706	0.2456	1.35530	101.26	-0.1953	0.2379	1.30198	102.74	-0.2206	0.2300	1.24987		
44	105.48	-0.2760	0.2481	1.20289	107.16	-0.2951	0.2386	1.14657	108.92	-0.3243	0.2286	1.09084		
46	111.49	-0.3664	0.2479	1.04573	113.52	-0.3991	0.2353	0.98473	115.70	-0.4337	0.2211	0.92297		
48	118.05	-0.4703	0.2419	0.88139	120.67	-0.5100	0.2224	0.81193	123.68	-0.5546	0.1972	0.73752		
50	125.69	-0.5834	0.2199	0.70254	129.74	-0.6393	0.1768	0.61072	137.19	-0.7336	0.0622	0.46288		
52	137.39	-0.7360	0.1089	0.46133										

2 x = 1.750					2 x = 1.800					2 x = 1.850				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.1853	3.08329	0.00	1.0000	0.1824	3.04627	0.00	1.0000	0.1795	3.01097		
2	4.65	0.9967	0.1854	3.07832	4.68	0.9967	0.1825	3.04129	4.72	0.9966	0.1796	3.00598		
4	9.29	0.9869	0.1857	3.06344	9.37	0.9867	0.1828	3.02638	9.44	0.9864	0.1799	2.99104		
6	13.95	0.9705	0.1862	3.03871	14.06	0.9700	0.1833	3.00160	14.17	0.9696	0.1804	2.96621		
8	18.61	0.9477	0.1870	3.00424	18.76	0.9469	0.1839	2.96706	18.91	0.9460	0.1811	2.93159		
10	23.28	0.9186	0.1879	2.96019	23.47	0.9173	0.1848	2.92292	23.66	0.9159	0.1819	2.88735		
12	27.96	0.8832	0.1890	2.90676	28.20	0.8813	0.1859	2.86936	28.43	0.8794	0.1830	2.83367		
14	32.66	0.8418	0.1903	2.84417	32.94	0.8392	0.1872	2.80663	33.21	0.8367	0.1842	2.77079		
16	37.39	0.7946	0.1919	2.77271	37.70	0.7912	0.1887	2.73498	38.02	0.7878	0.1857	2.69896		
18	42.13	0.7416	0.1937	2.69268	42.49	0.7374	0.1904	2.65474	42.85	0.7331	0.1873	2.61850		
20	46.90	0.6833	0.1957	2.60442	47.31	0.6780	0.1923	2.56623	47.72	0.6727	0.1891	2.52972		
22	51.71	0.6197	0.1979	2.50831	52.17	0.6133	0.1945	2.46981	52.63	0.6069	0.1912	2.43299		
24	56.55	0.5512	0.2003	2.40474	57.07	0.5436	0.1968	2.36588	57.59	0.5360	0.1934	2.32869		
26	61.44	0.4780	0.2029	2.29412	62.02	0.4691	0.1993	2.25483	62.60	0.4602	0.1957	2.21719		
28	66.39	0.4005	0.2057	2.17687	67.04	0.3901	0.2019	2.13707	67.68	0.3797	0.1982	2.09889		
30	71.41	0.3188	0.2087	2.05341	72.13	0.3069	0.2047	2.01298	72.85	0.2949	0.2007	1.97415		
32	76.51	0.2333	0.2118	1.92414	77.31	0.2196	0.2075	1.88295	78.12	0.2059	0.2033	1.84330		
34	81.71	0.1442	0.2149	1.78943	82.61	0.1286	0.2102	1.74727	83.52	0.1129	0.2056	1.70660		
36	87.04	0.0517	0.2178	1.64954	88.05	0.0339	0.2127	1.60616	89.08	0.0161	0.2076	1.56415		
38	92.53	-0.0442	0.2204	1.50463	93.69	-0.0644	0.2145	1.45963	94.87	-0.0848	0.2087	1.41582		
40	98.25	-0.1434	0.2220	1.35456	99.59	-0.1665	0.2151	1.30731	100.96	-0.1901	0.2081	1.26096		
42	104.27	-0.2465	0.2218	1.19869	105.86	-0.2733	0.2132	1.14812	107.52	-0.3011	0.2040	1.09785		
44	110.77	-0.3547	0.2177	1.03523	112.75	-0.3866	0.2057	0.97918	114.88	-0.4207	0.1920	0.92189		
46	118.10	-0.4710	0.2044	0.85931	120.82	-0.5123	0.1837	0.79186	124.07	-0.5602	0.1559	0.71676		
48	127.45	-0.6080	0.1605	0.65216	133.59	-0.6894	0.0810	0.52780						

[illegible]

$x = 2.050$					$x = 2.100$					$x = 2.150$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1691	2.88467	0.00	1.0000	0.1667	2.85632	0.00	1.0000	0.1644	2.82910	0.00	2.82910
2	4.86	0.9964	0.1692	2.87963	4.90	0.9963	0.1668	2.85128	4.93	0.9963	0.1645	2.82405	4.93	2.82405
4	9.73	0.9856	0.1694	2.86456	9.80	0.9854	0.1670	2.83618	9.87	0.9852	0.1647	2.80891	9.87	2.80891
6	14.61	0.9677	0.1699	2.83951	14.71	0.9672	0.1674	2.81107	14.82	0.9668	0.1651	2.78375	14.82	2.78375
8	19.49	0.9427	0.1704	2.80459	19.64	0.9419	0.1680	2.77607	19.77	0.9410	0.1657	2.74867	19.77	2.74867
10	24.40	0.9107	0.1712	2.75994	24.57	0.9094	0.1687	2.73131	24.75	0.9081	0.1664	2.70380	24.75	2.70380
12	29.32	0.8719	0.1721	2.70574	29.54	0.8701	0.1696	2.67698	29.75	0.8682	0.1672	2.64933	29.75	2.64933
14	34.27	0.8264	0.1732	2.64222	34.52	0.8239	0.1707	2.61328	34.78	0.8214	0.1682	2.58547	34.78	2.58547
16	39.24	0.7745	0.1744	2.56961	39.54	0.7711	0.1718	2.54048	39.84	0.7679	0.1693	2.55126	39.84	2.55126
18	44.26	0.7162	0.1758	2.48821	44.60	0.7120	0.1732	2.45883	44.94	0.7078	0.1706	2.43056	44.94	2.43056
20	49.32	0.6518	0.1773	2.39831	49.71	0.6466	0.1746	2.36863	50.10	0.6415	0.1720	2.34006	50.10	2.34006
22	54.44	0.5816	0.1790	2.30024	54.88	0.5753	0.1762	2.27020	55.32	0.5690	0.1734	2.24126	55.32	2.24126
24	59.62	0.5058	0.1807	2.19431	60.12	0.4983	0.1778	2.16384	60.61	0.4907	0.1749	2.13445	60.61	2.13445
26	64.88	0.4246	0.1825	2.08086	65.44	0.4157	0.1794	2.04985	66.00	0.4067	0.1764	2.01992	66.00	2.01992
28	70.24	0.3382	0.1843	1.96016	70.87	0.3277	0.1810	1.92849	71.50	0.3173	0.1778	1.89787	71.50	1.89787
30	75.72	0.2467	0.1859	1.83244	76.43	0.2346	0.1823	1.79995	77.15	0.2224	0.1789	1.76845	77.15	1.76845
32	81.35	0.1504	0.1872	1.69704	82.17	0.1363	0.1833	1.66426	82.99	0.1221	0.1794	1.63163	82.99	1.63163
34	87.19	0.0490	0.1878	1.55625	88.13	0.0326	0.1834	1.52123	89.08	0.0161	0.1791	1.48705	89.08	1.48705
36	93.31	-0.0577	0.1872	1.40722	94.41	-0.0768	0.1821	1.37016	95.53	-0.0963	0.1769	1.33376	95.53	1.33376
38	99.82	-0.1706	0.1843	1.24949	101.15	-0.1933	0.1779	1.20934	102.52	-0.2168	0.1711	1.16943	102.52	1.16943
40	106.97	-0.2919	0.1767	1.07999	108.67	-0.3201	0.1675	1.03443	110.48	-0.3498	0.1573	0.98793	110.48	0.98793
42	115.35	-0.4281	0.1571	0.88985	117.85	-0.4672	0.1400	0.83143	120.85	-0.5129	0.1174	0.76559	120.85	0.76559
44	128.04	-0.6162	0.0807	0.62699										

$x = 2.200$					$x = 2.250$					$x = 2.300$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1622	2.80295	0.00	1.0000	0.1600	2.77778	0.00	1.0000	0.1579	2.75354	0.00	2.75354
2	4.97	0.9962	0.1622	2.79788	5.00	0.9962	0.1601	2.77270	5.03	0.9961	0.1580	2.74946	5.03	2.74946
4	9.94	0.9850	0.1625	2.78271	10.01	0.9848	0.1603	2.75750	10.07	0.9846	0.1582	2.73322	10.07	2.73322
6	14.92	0.9663	0.1628	2.75749	15.02	0.9658	0.1607	2.73222	15.12	0.9654	0.1585	2.70788	15.12	2.70788
8	19.91	0.9402	0.1634	2.72233	20.05	0.9394	0.1612	2.69697	20.18	0.9386	0.1590	2.67255	20.18	2.67255
10	24.93	0.9069	0.1640	2.67735	25.10	0.9056	0.1618	2.65189	25.27	0.9043	0.1596	2.62736	25.27	2.62736
12	29.96	0.8664	0.1649	2.62274	30.17	0.8645	0.1626	2.59714	30.38	0.8627	0.1604	2.57247	30.38	2.57247
14	35.03	0.8189	0.1658	2.55871	35.28	0.8164	0.1635	2.53293	35.52	0.8139	0.1613	2.50808	35.52	2.50808
16	40.13	0.7646	0.1669	2.48548	40.42	0.7613	0.1645	2.45950	40.71	0.7580	0.1622	2.43443	40.71	2.43443
18	45.28	0.7036	0.1681	2.40333	45.61	0.6995	0.1657	2.37708	45.95	0.6953	0.1633	2.35176	45.95	2.35176
20	50.48	0.6363	0.1694	2.31252	50.87	0.6311	0.1669	2.28596	51.25	0.6260	0.1645	2.26032	51.25	2.26032
22	55.75	0.5627	0.1707	2.21335	56.19	0.5565	0.1681	2.18640	56.62	0.5502	0.1656	2.16037	56.62	2.16037
24	61.11	0.4832	0.1721	2.10609	61.60	0.4757	0.1694	2.07867	62.09	0.4681	0.1668	2.05215	62.09	2.05215
26	66.56	0.3978	0.1735	1.99098	67.11	0.3889	0.1706	1.96298	67.67	0.3800	0.1678	1.93586	67.67	1.93586
28	72.13	0.3068	0.1746	1.86822	72.77	0.2963	0.1715	1.83949	73.40	0.2857	0.1685	1.81160	73.40	1.81160
30	77.87	0.2101	0.1755	1.73789	78.59	0.1978	0.1721	1.70821	79.31	0.1854	0.1688	1.67933	79.31	1.67933
32	83.81	0.1078	0.1756	1.59987	84.64	0.0933	0.1719	1.56991	85.48	0.0788	0.1682	1.53868	85.48	1.53868
34	90.04	-0.0007	0.1747	1.45363	91.01	-0.0177	0.1703	1.42088	92.00	-0.0349	0.1659	1.38973	92.00	1.38973
36	96.67	-0.1162	0.1715	1.29789	97.85	-0.1365	0.1661	1.26244	99.05	-0.1573	0.1605	1.22728	99.05	1.22728
38	103.95	-0.2410	0.1640	1.12953	105.44	-0.2663	0.1565	1.08943	107.02	-0.2927	0.1484	1.04880	107.02	1.04880
40	112.44	-0.3817	0.1459	0.93981	114.62	-0.4166	0.1326	0.88901	117.12	-0.4558	0.1163	0.83364	117.12	0.83364
42	124.97	-0.5731	0.0816	0.68172										

$x = 2.350$					$x = 2.400$					$x = 2.450$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1559	2.73019	0.00	1.0000	0.1539	2.70766	0.00	1.0000	0.1520	2.68592	0.00	2.68592
2	5.07	0.9961	0.1559	2.72509	5.10	0.9960	0.1539	2.70255	5.13	0.9960	0.1520	2.68080	5.13	2.68080
4	10.14	0.9844	0.1561	2.70982	10.20	0.9842	0.1541	2.68724	10.27	0.9840	0.1522	2.66545	10.27	2.66545
6	15.22	0.9649	0.1565	2.68442	15.32	0.9645	0.1545	2.66179	15.42	0.9640	0.1525	2.63994	15.42	2.63994
8	20.32	0.9378	0.1569	2.64901	20.45	0.9370	0.1549	2.62629	20.58	0.9362	0.1530	2.60436	20.58	2.60436
10	25.44	0.9030	0.1575	2.60370	25.61	0.9018	0.1555	2.58087	25.77	0.9005	0.1535	2.55882	25.77	2.55882
12	30.59	0.8609	0.1583	2.54867	30.79	0.8591	0.1562	2.52570	30.99	0.8572	0.1542	2.50351	30.99	2.50351
14	35.77	0.8114	0.1591	2.48411	36.01	0.8089	0.1570	2.46096	36.25	0.8064	0.1549	2.43858	36.25	2.43858
16	41.00	0.7548	0.1600	2.41024	41.28	0.7515	0.1579	2.38687	41.56	0.7483	0.1557	2.36427	41.56	2.36427
18	46.28	0.6912	0.1610	2.32730	46.60	0.6871	0.1588	2.30366	46.93	0.6829	0.1566	2.28079	46.93	2.28079
20	51.62	0.6209	0.1621	2.23553	52.00	0.6157	0.1598	2.21156	52.37	0.6106	0.1575	2.18835	52.37	2.18835
22	57.05	0.5439	0.1632	2.13518	57.47	0.5377	0.1608	2.11081	57.90	0.5314	0.1584	2.08719	57.90	2.08719
24	62.57	0.4606	0.1642	2.02647	63.06	0.4531	0.1616	2.00159	63.54	0.4455	0.1592	1.97746	63.54	1.97746
26	68.22	0.3710	0.1650	1.90957	68.78	0.3620	0.1623	1.88405	69.33	0.3530	0.1597	1.85926	69.33	1.85926
28	74.03	0.2752	0.1656	1.78452	74.66	0.2645	0.1626	1.75818	75.29	0.2539	0.1598	1.73254	75.29	1.73254
30	80.04	0.1730	0.1655	1.65120	80.77	0.1604	0.1623	1.62377	81.50	0.1478	0.1591	1.59700	81.50	1.59700
32	86.33	0.0641	0.1644	1.50913	87.18	0.0492	0.1607	1.48019	88.04	0.0342	0.1570	1.45180	88.04	1.45180
34	93.01	-0.0525	0.1615	1.35710	94.03	-0.0703	0.1570	1.32591	95.08	-0.0885	0.1524	1.29508	95.08	1.29508
36	100.30	-0.1788	0.1548	1.19231	101.59	-0.2009	0.1488	1.15735	102.93	-0.2238	0.1425	1.12224	102.93	1.12224
38	108.70	-0.3206	0.1396	1.00728	110.51	-0.3504	0.1298	0.96430	112.51	-0.3828	0.1186	0.91905	112.51	0.91905
40	120.19	-0.5029	0.0942	0.76948	124.75	-0.5700	0.0560	0.68084						

$x = 2.500$
 $x = 2.550$
 $x = 2.600$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.1501	2.66491	0.00	1.0000	0.1483	2.64461	0.00	1.0000	0.1465	2.62496
2	5.16	0.9959	0.1502	2.65978	5.19	0.9959	0.1483	2.63946	5.23	0.9958	0.1466	2.61981
4	10.33	0.9838	0.1503	2.64440	10.40	0.9836	0.1485	2.62405	10.46	0.9834	0.1467	2.60436
6	15.51	0.9636	0.1506	2.61883	15.61	0.9631	0.1488	2.59842	15.70	0.9627	0.1470	2.57867
8	20.71	0.9354	0.1511	2.58316	20.84	0.9346	0.1492	2.56266	20.97	0.9338	0.1474	2.54283
10	25.94	0.8993	0.1516	2.53751	26.10	0.8980	0.1497	2.51690	26.26	0.8968	0.1479	2.49695
12	31.19	0.8554	0.1522	2.48205	31.39	0.8536	0.1503	2.46129	31.59	0.8518	0.1484	2.44119
14	36.49	0.8040	0.1529	2.41695	36.73	0.8015	0.1510	2.39601	36.96	0.7991	0.1491	2.37572
16	41.84	0.7450	0.1537	2.34241	42.11	0.7418	0.1517	2.32124	42.39	0.7386	0.1498	2.30073
18	47.25	0.6788	0.1545	2.25865	47.57	0.6747	0.1525	2.23720	47.89	0.6706	0.1505	2.21640
20	52.74	0.6055	0.1553	2.16587	53.10	0.6004	0.1532	2.14408	53.47	0.5953	0.1511	2.12294
22	58.32	0.5252	0.1561	2.06429	58.74	0.5189	0.1539	2.04206	59.16	0.5127	0.1517	2.02048
24	64.02	0.4380	0.1568	1.95403	64.50	0.4304	0.1544	1.93126	64.98	0.4229	0.1521	1.90913
26	69.88	0.3440	0.1571	1.83515	70.43	0.3350	0.1546	1.81170	70.98	0.3259	0.1521	1.78886
28	75.93	0.2431	0.1570	1.70756	76.56	0.2324	0.1542	1.68319	77.20	0.2215	0.1514	1.65940
30	82.24	0.1350	0.1559	1.57082	82.98	0.1222	0.1528	1.54520	83.73	0.1092	0.1497	1.52010
32	88.92	0.0189	0.1533	1.42392	89.80	0.0035	0.1456	1.39648	90.70	-0.0122	0.1459	1.36944
34	96.15	-0.1071	0.1478	1.26452	97.25	-0.1262	0.1430	1.23415	98.38	-0.1457	0.1382	1.20388
36	104.34	-0.2476	0.1359	1.08678	105.82	-0.2726	0.1287	1.05070	107.40	-0.2991	0.1210	1.01368
38	114.77	-0.4189	0.1052	0.87010	117.46	-0.4612	0.0880	0.81459	121.08	-0.5163	0.0622	0.74423

 $x = 2.650$
 $x = 2.700$
 $x = 2.750$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.1448	2.60595	0.00	1.0000	0.1431	2.58753	0.00	1.0000	0.1415	2.56968
2	5.26	0.9958	0.1449	2.60078	5.29	0.9957	0.1432	2.58235	5.32	0.9957	0.1416	2.56449
4	10.52	0.9832	0.1450	2.58530	10.58	0.9830	0.1433	2.56683	10.64	0.9828	0.1417	2.54894
6	15.80	0.9622	0.1453	2.55955	15.89	0.9618	0.1436	2.54102	15.98	0.9613	0.1419	2.52307
8	21.09	0.9330	0.1456	2.52362	21.22	0.9322	0.1439	2.50501	21.34	0.9314	0.1423	2.48696
10	26.42	0.8956	0.1461	2.47763	26.58	0.8943	0.1444	2.45890	26.74	0.8931	0.1427	2.44074
12	31.78	0.8501	0.1466	2.42172	31.98	0.8483	0.1449	2.40285	32.17	0.8465	0.1431	2.38454
14	37.19	0.7966	0.1472	2.35607	37.42	0.7942	0.1454	2.33700	37.65	0.7917	0.1437	2.31850
16	42.66	0.7354	0.1479	2.28084	42.93	0.7322	0.1460	2.26154	43.20	0.7290	0.1442	2.24281
18	48.20	0.6665	0.1485	2.19623	48.52	0.6624	0.1466	2.17664	48.83	0.6583	0.1447	2.15762
20	53.83	0.5901	0.1491	2.10241	54.19	0.5850	0.1471	2.08246	54.55	0.5799	0.1452	2.06307
22	59.58	0.5064	0.1496	1.99951	59.99	0.5001	0.1475	1.97911	60.40	0.4939	0.1454	1.95926
24	65.46	0.4153	0.1498	1.88759	65.94	0.4077	0.1476	1.86652	66.42	0.4001	0.1454	1.84619
26	71.53	0.3168	0.1496	1.76659	72.08	0.3077	0.1472	1.74486	72.63	0.2985	0.1449	1.72365
28	77.84	0.2106	0.1487	1.63616	78.48	0.1997	0.1461	1.61342	79.13	0.1886	0.1434	1.59115
30	84.48	0.0961	0.1466	1.49548	85.24	0.0829	0.1435	1.47130	86.01	0.0695	0.1404	1.444751
32	91.61	-0.0282	0.1422	1.34273	92.55	-0.0444	0.1384	1.31631	93.49	-0.0610	0.1345	1.29012
34	99.55	-0.1659	0.1331	1.17359	100.76	-0.1867	0.1278	1.14317	102.02	-0.2083	0.1223	1.11247
36	109.11	-0.3273	0.1124	0.97522	110.98	-0.3580	0.1027	0.93460	113.09	-0.3922	0.0912	0.89061

 $x = 2.800$
 $x = 2.850$
 $x = 2.900$

PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.1399	2.55237	0.00	1.0000	0.1384	2.53557	0.00	1.0000	0.1369	2.51927
2	5.35	0.9956	0.1400	2.54717	5.38	0.9956	0.1384	2.53036	5.41	0.9956	0.1369	2.51404
4	10.70	0.9826	0.1401	2.53158	10.76	0.9824	0.1386	2.51473	10.82	0.9822	0.1370	2.49835
6	16.07	0.9609	0.1403	2.50565	16.16	0.9605	0.1388	2.48874	16.25	0.9600	0.1372	2.47233
8	21.47	0.9306	0.1406	2.46946	21.59	0.9298	0.1391	2.45247	21.71	0.9291	0.1375	2.43596
10	26.89	0.8919	0.1410	2.42312	27.05	0.8906	0.1394	2.40601	27.20	0.8894	0.1379	2.38939
12	32.36	0.8447	0.1415	2.36676	32.55	0.8429	0.1398	2.34951	32.74	0.8412	0.1382	2.33273
14	37.88	0.7893	0.1420	2.30054	38.11	0.7869	0.1403	2.28309	38.33	0.7845	0.1387	2.26613
16	43.47	0.7258	0.1424	2.22461	43.73	0.7226	0.1407	2.20692	43.99	0.7194	0.1390	2.18972
18	49.14	0.6543	0.1429	2.13913	49.45	0.6502	0.1411	2.12114	49.75	0.6461	0.1394	2.10364
20	54.91	0.5748	0.1433	2.04421	55.27	0.5697	0.1414	2.02585	55.62	0.5646	0.1396	2.00797
22	60.82	0.4876	0.1434	1.93993	61.23	0.4813	0.1415	1.92110	61.64	0.4750	0.1396	1.90274
24	66.89	0.3925	0.1433	1.82626	67.37	0.3849	0.1412	1.80681	67.84	0.3772	0.1391	1.78782
26	73.18	0.2893	0.1425	1.70293	73.74	0.2801	0.1402	1.68266	74.29	0.2708	0.1380	1.66283
28	79.77	0.1775	0.1408	1.56933	80.43	0.1663	0.1382	1.54793	81.08	0.1550	0.1357	1.52692
30	86.79	0.0560	0.1374	1.42409	87.58	0.0423	0.1343	1.40100	88.37	0.0284	0.1312	1.37820
32	94.46	-0.0778	0.1306	1.26410	95.46	-0.0951	0.1266	1.23819	96.48	-0.1128	0.1226	1.21233
34	103.34	-0.2308	0.1165	1.08131	104.74	-0.2544	0.1103	1.04947	106.23	-0.2794	0.1035	1.01665
36	115.59	-0.4320	0.0767	0.84081	118.88	-0.4830	0.0558	0.77864				

$x = 2.950$					$x = 3.000$					$x = 3.050$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1354	2.50343	0.00	1.0000	0.1340	2.48803	0.00	1.0000	0.1326	2.47307	0.00	2.45850
2	5.44	0.9955	0.1354	2.49819	5.47	0.9955	0.1340	2.48278	5.49	0.9954	0.1326	2.46780	5.51	2.45254
4	10.88	0.9920	0.1356	2.48249	10.94	0.9918	0.1341	2.46705	11.00	0.9916	0.1327	2.45203	11.07	2.43636
6	16.34	0.9896	0.1358	2.45638	16.43	0.9892	0.1343	2.44088	16.52	0.9887	0.1329	2.42580	16.61	2.40936
8	21.83	0.9283	0.1360	2.41993	21.95	0.9275	0.1346	2.40434	22.07	0.9267	0.1331	2.38917	22.20	2.36605
10	27.35	0.8882	0.1363	2.37324	27.50	0.8870	0.1348	2.35753	27.65	0.8858	0.1334	2.34225	27.80	2.31289
12	32.92	0.8394	0.1367	2.31643	33.11	0.8377	0.1352	2.30057	33.29	0.8359	0.1337	2.28513	33.47	2.24120
14	38.55	0.7820	0.1371	2.24963	38.77	0.7796	0.1355	2.23358	38.99	0.7772	0.1340	2.21795	39.21	2.17342
16	44.26	0.7162	0.1374	2.17298	44.52	0.7130	0.1358	2.15669	44.78	0.7099	0.1342	2.14081	45.03	2.09554
18	50.06	0.6420	0.1377	2.08660	50.36	0.6380	0.1360	2.06999	50.66	0.6339	0.1344	2.05381	50.96	2.00760
20	55.98	0.5595	0.1378	1.99055	56.33	0.5544	0.1361	1.97356	56.68	0.5493	0.1344	1.95698	57.03	1.90957
22	62.05	0.4688	0.1377	1.88482	62.45	0.4625	0.1358	1.86734	62.86	0.4562	0.1340	1.85026	63.27	1.80128
24	68.31	0.3695	0.1371	1.76926	68.79	0.3618	0.1351	1.75112	69.26	0.3541	0.1331	1.73337	69.74	1.68230
26	74.84	0.2614	0.1357	1.64341	75.40	0.2521	0.1335	1.62438	75.96	0.2426	0.1314	1.60572	76.65	1.55172
28	81.74	0.1437	0.1331	1.50627	82.40	0.1322	0.1306	1.48596	83.07	0.1206	0.1280	1.46596	83.85	1.40760
30	89.18	0.0143	0.1281	1.35565	90.00	0.0000	0.1250	1.33333	90.83	-0.0146	0.1219	1.31120	91.68	1.24551
32	97.53	-0.1310	0.1184	1.18642	98.61	-0.1498	0.1140	1.16040	99.74	-0.1692	0.1095	1.13416	100.91	1.05278
34	107.83	-0.3062	0.0961	0.98241	109.59	-0.3353	0.0877	0.94613	111.58	-0.3678	0.0778	0.90671	113.92	0.86203

$x = 3.100$					$x = 3.150$					$x = 3.200$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1312	2.45850	0.00	1.0000	0.1299	2.44433	0.00	1.0000	0.1286	2.43053	0.00	2.41709
2	5.52	0.9954	0.1312	2.45323	5.55	0.9953	0.1299	2.43905	5.58	0.9953	0.1286	2.42524	5.61	2.40936
4	11.05	0.9814	0.1313	2.43743	11.11	0.9813	0.1300	2.42321	11.17	0.9811	0.1287	2.40936	11.22	2.38917
6	16.61	0.9583	0.1315	2.41113	16.69	0.9579	0.1301	2.39685	16.78	0.9574	0.1288	2.38295	16.86	2.36605
8	22.18	0.9260	0.1317	2.37442	22.30	0.9252	0.1303	2.36005	22.42	0.9244	0.1290	2.34605	22.53	2.31289
10	27.80	0.8846	0.1320	2.32737	27.95	0.8834	0.1306	2.31289	28.10	0.8821	0.1292	2.29877	28.24	2.27160
12	33.47	0.8341	0.1322	2.27010	33.65	0.8324	0.1308	2.25546	33.83	0.8307	0.1294	2.24120	34.01	2.21372
14	39.21	0.7748	0.1325	2.20272	39.43	0.7724	0.1310	2.18789	39.64	0.7700	0.1296	2.17342	39.86	2.14555
16	45.03	0.7067	0.1327	2.12534	45.29	0.7035	0.1312	2.11026	45.54	0.7004	0.1297	2.09554	45.80	2.06717
18	50.96	0.6298	0.1328	2.03803	51.26	0.6258	0.1312	2.02263	51.56	0.6217	0.1297	2.00760	51.85	1.97858
20	57.03	0.5442	0.1327	1.94080	57.37	0.5391	0.1311	1.92500	57.72	0.5340	0.1294	1.90957	58.07	1.87973
22	63.27	0.4498	0.1322	1.83357	63.67	0.4435	0.1305	1.81724	64.08	0.4372	0.1288	1.80128	64.48	1.77035
24	69.74	0.3463	0.1312	1.71600	70.21	0.3386	0.1293	1.69898	70.68	0.3308	0.1274	1.68230	71.16	1.64990
26	76.52	0.2331	0.1292	1.58740	77.08	0.2236	0.1271	1.56940	77.65	0.2140	0.1250	1.55172	78.21	1.53433
28	83.75	0.1089	0.1255	1.44624	84.43	0.0970	0.1230	1.42680	85.12	0.0851	0.1205	1.40760	85.82	1.38861
30	91.68	-0.0294	0.1187	1.28921	92.55	-0.0445	0.1155	1.26733	93.43	-0.0599	0.1122	1.24551	94.34	1.22372
32	100.91	-0.1893	0.1048	1.10758	102.14	-0.2103	0.0998	1.08052	103.43	-0.2323	0.0945	1.05278	104.81	1.02413
34	113.92	-0.4054	0.0655	0.86203	116.96	-0.4534	0.0482	0.80651						

$x = 3.250$					$x = 3.300$					$x = 3.350$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.1273	2.41709	0.00	1.0000	0.1261	2.40399	0.00	1.0000	0.1248	2.39122	0.00	2.37859
2	5.61	0.9952	0.1273	2.41178	5.63	0.9952	0.1261	2.39867	5.66	0.9951	0.1249	2.38589	5.69	2.37337
4	11.22	0.9809	0.1274	2.39587	11.28	0.9807	0.1262	2.38273	11.34	0.9805	0.1249	2.36991	11.40	2.35433
6	16.86	0.9570	0.1275	2.36940	16.95	0.9566	0.1263	2.35619	17.03	0.9562	0.1250	2.34331	17.10	2.32616
8	22.53	0.9237	0.1277	2.33242	22.64	0.9229	0.1264	2.31912	22.76	0.9222	0.1252	2.30616	22.87	2.25852
10	28.24	0.8809	0.1279	2.28502	28.39	0.8797	0.1266	2.27160	28.53	0.8786	0.1253	2.25852	28.67	2.20048
12	34.01	0.8289	0.1281	2.22729	34.19	0.8272	0.1267	2.21372	34.37	0.8254	0.1254	2.20048	34.55	2.13211
14	39.86	0.7676	0.1282	2.15932	40.07	0.7653	0.1269	2.14555	40.28	0.7629	0.1255	2.09554	40.48	2.05347
16	45.80	0.6972	0.1283	2.08118	46.05	0.6941	0.1269	2.06717	46.30	0.6909	0.1255	2.0347	46.54	1.96457
18	51.85	0.6177	0.1282	1.99292	52.15	0.6136	0.1267	1.97858	52.44	0.6095	0.1253	1.96457	52.76	1.88529
20	58.07	0.5289	0.1279	1.89448	58.41	0.5238	0.1263	1.87973	58.76	0.5187	0.1248	1.86529	59.13	1.77536
22	64.48	0.4308	0.1271	1.78565	64.88	0.4245	0.1254	1.77035	65.29	0.4181	0.1238	1.75536	65.72	1.63415
24	71.16	0.3229	0.1256	1.66595	71.64	0.3151	0.1238	1.64990	72.11	0.3072	0.1220	1.63415	72.61	1.50035
26	78.21	0.2043	0.1229	1.53433	78.78	0.1945	0.1208	1.51721	79.36	0.1847	0.1187	1.50035	79.96	1.35122
28	85.82	0.0729	0.1180	1.38861	86.52	0.0607	0.1155	1.36983	87.24	0.0482	0.1130	1.35122	87.98	1.17998
30	94.34	-0.0757	0.1089	1.22372	95.27	-0.0919	0.1055	1.20189	96.23	-0.1085	0.1020	1.17998	97.21	1.05249
32	104.81	-0.2556	0.0888	1.02413	106.29	-0.2805	0.0825	0.99420	107.91	-0.3075	0.0755	0.96249		

$x = 3.400$					$x = 3.450$					$x = 3.500$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1236	2.37877	0.00	1.0000	0.1225	2.36662	0.00	1.0000	0.1213	2.35476	0.00	1.0000
2	5.69	0.9951	0.1237	2.37343	5.72	0.9950	0.1225	2.36126	5.74	0.9950	0.1214	2.34939	5.74	0.9950
4	11.39	0.9803	0.1237	2.35741	11.44	0.9801	0.1226	2.34521	11.50	0.9799	0.1214	2.33330	11.50	0.9799
6	17.11	0.9557	0.1238	2.33075	17.20	0.9553	0.1226	2.31849	17.28	0.9549	0.1215	2.30652	17.28	0.9549
8	22.87	0.9214	0.1239	2.29351	22.98	0.9206	0.1227	2.28116	23.09	0.9199	0.1216	2.26910	23.09	0.9199
10	28.67	0.8774	0.1241	2.24575	28.82	0.8762	0.1229	2.23328	28.96	0.8750	0.1217	2.22111	28.96	0.8750
12	34.54	0.8237	0.1242	2.18755	34.72	0.8220	0.1229	2.17493	34.89	0.8202	0.1217	2.16260	34.89	0.8202
14	40.49	0.7605	0.1242	2.11898	40.70	0.7581	0.1229	2.10616	40.91	0.7557	0.1217	2.09363	40.91	0.7557
16	46.55	0.6878	0.1242	2.04009	46.80	0.6846	0.1228	2.02701	47.04	0.6815	0.1215	2.01422	47.04	0.6815
18	52.74	0.6055	0.1239	1.95086	53.03	0.6014	0.1225	1.93745	53.32	0.5974	0.1211	1.92433	53.32	0.5974
20	59.10	0.5136	0.1233	1.85116	59.44	0.5084	0.1218	1.83732	59.78	0.5033	0.1204	1.82376	59.78	0.5033
22	65.69	0.4117	0.1222	1.74066	66.09	0.4053	0.1206	1.72625	66.49	0.3989	0.1190	1.71211	66.49	0.3989
24	72.59	0.2992	0.1202	1.61867	73.07	0.2912	0.1184	1.60346	73.55	0.2832	0.1167	1.58850	73.55	0.2832
26	79.93	0.1748	0.1167	1.48374	80.51	0.1648	0.1147	1.46735	81.10	0.1548	0.1127	1.45117	81.10	0.1548
28	87.96	0.0356	0.1105	1.33276	88.69	0.0228	0.1079	1.31443	89.44	0.0098	0.1054	1.29620	89.44	0.0098
30	97.21	-0.1256	0.0984	1.15792	98.23	-0.1432	0.0946	1.13564	99.30	-0.1615	0.0908	1.11304	99.30	-0.1615
32	109.72	-0.3374	0.0674	0.92812	111.83	-0.3718	0.0576	0.88950	114.48	-0.4143	0.0444	0.84281	114.48	-0.4143

$x = 3.550$					$x = 3.600$					$x = 3.650$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1202	2.34318	0.00	1.0000	0.1191	2.33187	0.00	1.0000	0.1180	2.32082	0.00	1.0000
2	5.77	0.9949	0.1202	2.33780	5.80	0.9949	0.1191	2.32648	5.82	0.9948	0.1181	2.31542	5.82	0.9948
4	11.55	0.9797	0.1203	2.32168	11.61	0.9796	0.1192	2.31032	11.66	0.9794	0.1181	2.29922	11.66	0.9794
6	17.36	0.9545	0.1203	2.29484	17.44	0.9540	0.1192	2.28342	17.52	0.9536	0.1181	2.27226	17.52	0.9536
8	23.20	0.9191	0.1204	2.25733	23.31	0.9184	0.1193	2.24582	23.42	0.9176	0.1182	2.23458	23.42	0.9176
10	29.10	0.8738	0.1205	2.20921	29.24	0.8726	0.1193	2.19759	29.38	0.8714	0.1182	2.18622	29.38	0.8714
12	35.06	0.8185	0.1205	2.15055	35.23	0.8168	0.1193	2.13877	35.40	0.8151	0.1182	2.12724	35.40	0.8151
14	41.12	0.7534	0.1205	2.08138	41.32	0.7510	0.1193	2.06939	41.53	0.7486	0.1181	2.05767	41.53	0.7486
16	47.29	0.6783	0.1203	2.00171	47.53	0.6752	0.1190	1.98947	47.78	0.6720	0.1178	1.97748	47.78	0.6720
18	53.61	0.5933	0.1198	1.91148	53.90	0.5893	0.1185	1.89890	54.18	0.5852	0.1172	1.88658	54.18	0.5852
20	60.12	0.4982	0.1190	1.81048	60.46	0.4930	0.1176	1.79745	60.80	0.4879	0.1162	1.78468	60.80	0.4879
22	66.90	0.3924	0.1175	1.69823	67.30	0.3859	0.1160	1.68460	67.70	0.3795	0.1145	1.67122	67.70	0.3795
24	74.03	0.2752	0.1150	1.57379	74.51	0.2671	0.1133	1.55931	74.99	0.2589	0.1116	1.54504	74.99	0.2589
26	81.69	0.1446	0.1106	1.43519	82.28	0.1343	0.1086	1.41939	82.88	0.1240	0.1066	1.40377	82.88	0.1240
28	90.20	-0.0034	0.1028	1.27805	90.97	-0.0169	0.1002	1.25995	91.76	-0.0307	0.0976	1.24188	91.76	-0.0307
30	100.40	-0.1806	0.0867	1.09003	101.57	-0.2005	0.0824	1.06645	102.79	-0.2215	0.0778	1.04215	102.79	-0.2215
32	118.80	-0.4818	0.0204	0.77025										

$x = 3.700$					$x = 3.750$					$x = 3.800$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1170	2.31002	0.00	1.0000	0.1160	2.29946	0.00	1.0000	0.1150	2.28914	0.00	1.0000
2	5.85	0.9948	0.1170	2.30461	5.88	0.9947	0.1160	2.29404	5.90	0.9947	0.1150	2.28370	5.90	0.9947
4	11.71	0.9792	0.1170	2.28838	11.76	0.9790	0.1160	2.27777	11.82	0.9788	0.1150	2.26740	11.82	0.9788
6	17.60	0.9532	0.1171	2.26136	17.68	0.9528	0.1160	2.25069	17.76	0.9524	0.1150	2.24026	17.76	0.9524
8	23.53	0.9169	0.1171	2.22358	23.63	0.9161	0.1161	2.21283	23.74	0.9154	0.1150	2.20231	23.74	0.9154
10	29.51	0.8702	0.1171	2.17511	29.65	0.8691	0.1160	2.16423	29.79	0.8679	0.1150	2.15359	29.79	0.8679
12	35.57	0.8134	0.1171	2.11597	35.74	0.8117	0.1160	2.10494	35.91	0.8099	0.1149	2.09414	35.91	0.8099
14	41.73	0.7463	0.1169	2.04619	41.94	0.7439	0.1158	2.03496	42.14	0.7415	0.1147	2.02396	42.14	0.7415
16	48.02	0.6689	0.1166	1.96574	48.26	0.6657	0.1154	1.95425	48.50	0.6626	0.1142	1.94298	48.50	0.6626
18	54.47	0.5811	0.1159	1.87450	54.76	0.5771	0.1147	1.86265	55.04	0.5730	0.1135	1.85103	55.04	0.5730
20	61.14	0.4827	0.1149	1.77214	61.48	0.4775	0.1135	1.75984	61.81	0.4723	0.1122	1.74776	61.81	0.4723
22	68.10	0.3730	0.1130	1.65806	68.50	0.3664	0.1116	1.64512	68.91	0.3599	0.1101	1.63239	68.91	0.3599
24	75.48	0.2507	0.1099	1.53098	75.97	0.2425	0.1083	1.51712	76.46	0.2342	0.1067	1.50345	76.46	0.2342
26	83.48	0.1135	0.1047	1.38830	84.09	0.1029	0.1027	1.37297	84.71	0.0922	0.1007	1.35776	84.71	0.0922
28	92.56	-0.0447	0.0949	1.22380	93.39	-0.0590	0.0921	1.20568	94.23	-0.0738	0.0893	1.18749	94.23	-0.0738
30	104.11	-0.2437	0.0728	1.01687	105.52	-0.2676	0.0673	0.99027	107.08	-0.2937	0.0612	0.96184	107.08	-0.2937

$x = 3.850$					$x = 3.900$					$x = 3.950$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.1140	2.27903	0.00	1.0000	0.1130	2.26915	0.00	1.0000	0.1120	2.25947		
2	5.93	0.9947	0.1140	2.27359	5.95	0.9946	0.1130	2.26369	5.98	0.9946	0.1120	2.25400		
4	11.87	0.9786	0.1140	2.25725	11.92	0.9784	0.1130	2.24732	11.97	0.9783	0.1120	2.23760		
6	17.84	0.9519	0.1140	2.23005	17.91	0.9515	0.1130	2.22006	17.99	0.9511	0.1120	2.21027		
8	23.85	0.9146	0.1140	2.19201	23.95	0.9139	0.1130	2.18193	24.06	0.9131	0.1120	2.17206		
10	29.92	0.8667	0.1139	2.14318	30.06	0.8655	0.1129	2.13298	30.19	0.8644	0.1119	2.12299		
12	36.08	0.8082	0.1138	2.08357	36.24	0.8065	0.1128	2.07321	36.41	0.8048	0.1117	2.06306		
14	42.34	0.7392	0.1136	2.01318	42.54	0.7368	0.1125	2.00261	42.74	0.7345	0.1114	1.99226		
16	48.74	0.6595	0.1131	1.93193	48.98	0.6563	0.1120	1.92110	49.22	0.6532	0.1109	1.91048		
18	55.32	0.5689	0.1123	1.83964	55.61	0.5648	0.1111	1.82845	55.89	0.5608	0.1099	1.81747		
20	62.15	0.4671	0.1109	1.73589	62.49	0.4619	0.1097	1.72423	62.82	0.4567	0.1084	1.71277		
22	69.31	0.3533	0.1087	1.61987	69.71	0.3467	0.1073	1.60754	70.12	0.3401	0.1059	1.59540		
24	76.95	0.2259	0.1050	1.48996	77.44	0.2175	0.1034	1.47663	77.94	0.2090	0.1018	1.46347		
26	85.33	0.0814	0.0987	1.34267	85.96	0.0704	0.0967	1.32769	86.60	0.0592	0.0947	1.31278		
28	95.10	-0.0889	0.0865	1.16917	95.99	-0.1044	0.0835	1.15069	96.92	-0.1204	0.0805	1.13198		
30	108.83	-0.3228	0.0540	0.93068	110.90	-0.3568	0.0453	0.89509	113.58	-0.4000	0.0333	0.85060		

$x = 4.000$					$x = 4.050$					$x = 4.100$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.1111	2.25000	0.00	1.0000	0.1102	2.24072	0.00	1.0000	0.1093	2.23163		
2	6.00	0.9945	0.1111	2.24452	6.03	0.9945	0.1102	2.23523	6.05	0.9944	0.1093	2.22613		
4	12.02	0.9781	0.1111	2.22808	12.07	0.9779	0.1102	2.21875	12.12	0.9777	0.1093	2.20962		
6	18.07	0.9507	0.1111	2.20069	18.14	0.9503	0.1102	2.19131	18.22	0.9499	0.1092	2.18211		
8	24.16	0.9124	0.1110	2.16240	24.27	0.9117	0.1101	2.15292	24.37	0.9109	0.1092	2.14364		
10	30.32	0.8632	0.1109	2.11320	30.45	0.8620	0.1100	2.10361	30.59	0.8609	0.1090	2.09421		
12	36.57	0.8031	0.1107	2.05312	36.73	0.8014	0.1098	2.04337	36.90	0.7997	0.1088	2.03381		
14	42.94	0.7321	0.1104	1.98211	43.13	0.7298	0.1094	1.97215	43.33	0.7274	0.1084	1.96238		
16	49.45	0.6501	0.1098	1.90005	49.69	0.6469	0.1087	1.88982	49.93	0.6438	0.1077	1.87978		
18	56.17	0.5567	0.1088	1.80669	56.45	0.5526	0.1077	1.79610	56.73	0.5485	0.1065	1.78569		
20	63.16	0.4515	0.1072	1.70150	63.50	0.4463	0.1060	1.69041	63.83	0.4410	0.1048	1.67951		
22	70.52	0.3334	0.1046	1.58344	70.93	0.3268	0.1032	1.57165	71.33	0.3201	0.1019	1.56003		
24	78.44	0.2005	0.1002	1.45045	78.94	0.1919	0.0987	1.43758	79.44	0.1832	0.0971	1.42484		
26	87.25	0.0479	0.0926	1.29795	87.91	0.0365	0.0906	1.28317	88.58	0.0248	0.0886	1.26842		
28	97.87	-0.1370	0.0773	1.11299	98.87	-0.1542	0.0740	1.09363	99.92	-0.1722	0.0705	1.07380		
30	119.99	-0.4998	0.0001	0.75021										

$x = 4.150$					$x = 4.200$					$x = 4.250$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.1084	2.22273	0.00	1.0000	0.1075	2.21400	0.00	1.0000	0.1067	2.20544		
2	6.08	0.9944	0.1084	2.21721	6.10	0.9943	0.1075	2.20847	6.13	0.9943	0.1067	2.19990		
4	12.17	0.9775	0.1084	2.20066	12.22	0.9773	0.1075	2.19189	12.27	0.9772	0.1067	2.18328		
6	18.29	0.9495	0.1083	2.17310	18.37	0.9490	0.1075	2.18427	18.44	0.9486	0.1066	2.17560		
8	24.47	0.9102	0.1083	2.13454	24.57	0.9094	0.1074	2.12562	24.67	0.9087	0.1065	2.11687		
10	30.72	0.8597	0.1081	2.08499	30.85	0.8585	0.1072	2.07594	30.98	0.8574	0.1063	2.06707		
12	37.06	0.7980	0.1078	2.02443	37.22	0.7963	0.1069	2.01522	37.38	0.7946	0.1060	2.00619		
14	43.53	0.7251	0.1074	1.95279	43.72	0.7227	0.1064	1.94338	43.92	0.7204	0.1054	1.93414		
16	50.15	0.6406	0.1066	1.86992	50.39	0.6375	0.1056	1.86023	50.63	0.6344	0.1046	1.85071		
18	57.01	0.5444	0.1055	1.77546	57.29	0.5403	0.1044	1.76541	57.57	0.5362	0.1033	1.75551		
20	64.17	0.4358	0.1036	1.66877	64.50	0.4305	0.1024	1.65820	64.84	0.4252	0.1013	1.64779		
22	71.74	0.3133	0.1006	1.54856	72.15	0.3065	0.0992	1.53725	72.56	0.2997	0.0980	1.52608		
24	79.95	0.1744	0.0955	1.41223	80.47	0.1656	0.0940	1.39973	80.98	0.1567	0.0924	1.38734		
26	89.26	0.0130	0.0865	1.25370	89.95	0.0009	0.0844	1.23899	90.65	-0.0114	0.0823	1.22425		
28	101.02	-0.1911	0.0668	1.05337	102.18	-0.2110	0.0629	1.03217	103.43	-0.2323	0.0586	1.00997		

$x = 4.300$					$x = 4.350$					$x = 4.400$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1059	2.19704	0.00	1.0000	0.1050	2.18881	0.00	1.0000	0.1042	2.18074	0.00	1.0000
2	6.15	0.9942	0.1058	2.19149	6.17	0.9942	0.1050	2.18325	6.20	0.9942	0.1042	2.17516	6.20	0.9942
4	12.32	0.9770	0.1058	2.17484	12.37	0.9768	0.1050	2.16657	12.41	0.9766	0.1042	2.15844	12.41	0.9766
6	18.52	0.9482	0.1057	2.14710	18.59	0.9478	0.1049	2.13877	18.67	0.9474	0.1041	2.13059	18.67	0.9474
8	24.77	0.9080	0.1056	2.10828	24.87	0.9072	0.1048	2.09986	24.97	0.9065	0.1039	2.09159	24.97	0.9065
10	31.11	0.8562	0.1054	2.05837	31.23	0.8551	0.1045	2.04982	31.36	0.8539	0.1037	2.04144	31.36	0.8539
12	37.54	0.7929	0.1051	1.99733	37.70	0.7912	0.1042	1.98863	37.86	0.7895	0.1033	1.98008	37.86	0.7895
14	44.11	0.7180	0.1045	1.92506	44.30	0.7157	0.1036	1.91615	44.49	0.7133	0.1027	1.90739	44.49	0.7133
16	50.86	0.6312	0.1036	1.84136	51.09	0.6281	0.1027	1.83216	51.32	0.6249	0.1017	1.82312	51.32	0.6249
18	57.85	0.5321	0.1023	1.74579	58.13	0.5280	0.1012	1.73621	58.41	0.5239	0.1002	1.72679	58.41	0.5239
20	65.17	0.4199	0.1001	1.63754	65.51	0.4146	0.0990	1.62743	65.84	0.4092	0.0979	1.61747	65.84	0.4092
22	72.97	0.2929	0.0967	1.51505	73.38	0.2860	0.0954	1.50416	73.79	0.2791	0.0941	1.49339	73.79	0.2791
24	81.50	0.1477	0.0909	1.37506	82.03	0.1387	0.0893	1.36286	82.56	0.1295	0.0878	1.35075	82.56	0.1295
26	91.37	-0.0739	0.0801	1.20948	92.11	-0.0367	0.0779	1.19465	92.86	-0.0499	0.0757	1.17973	92.86	-0.0499
28	104.78	-0.2552	0.0539	0.98644	106.28	-0.2804	0.0486	0.96103	107.99	-0.3088	0.0424	0.93282	107.99	-0.3088

$x = 4.450$					$x = 4.500$					$x = 4.550$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1034	2.17281	0.00	1.0000	0.1026	2.16503	0.00	1.0000	0.1019	2.15739	0.00	1.0000
2	6.22	0.9941	0.1034	2.16723	6.25	0.9941	0.1026	2.15944	6.27	0.9940	0.1019	2.15179	6.27	0.9940
4	12.46	0.9764	0.1034	2.15047	12.51	0.9763	0.1026	2.14265	12.56	0.9761	0.1018	2.13497	12.56	0.9761
6	18.74	0.9470	0.1033	2.12256	18.81	0.9466	0.1025	2.11467	18.88	0.9462	0.1017	2.10693	18.88	0.9462
8	25.07	0.9058	0.1031	2.08347	25.17	0.9050	0.1023	2.07550	25.27	0.9043	0.1015	2.06767	25.27	0.9043
10	31.49	0.8527	0.1028	2.03320	31.61	0.8516	0.1020	2.02511	31.74	0.8504	0.1012	2.01716	31.74	0.8504
12	38.01	0.7879	0.1024	1.97168	38.17	0.7862	0.1016	1.96343	38.32	0.7845	0.1007	1.95533	38.32	0.7845
14	44.69	0.7110	0.1018	1.89878	44.88	0.7086	0.1009	1.89032	45.07	0.7063	0.1000	1.88200	45.07	0.7063
16	51.55	0.6218	0.1008	1.81423	51.78	0.6186	0.0998	1.80548	52.01	0.6155	0.0989	1.79688	52.01	0.6155
18	58.68	0.5198	0.0992	1.71751	58.96	0.5156	0.0982	1.70838	59.24	0.5115	0.0973	1.69938	59.24	0.5115
20	66.18	0.4039	0.0968	1.60765	66.51	0.3985	0.0957	1.59797	66.85	0.3932	0.0946	1.58841	66.85	0.3932
22	74.21	0.2722	0.0929	1.48275	74.62	0.2652	0.0916	1.47222	75.04	0.2581	0.0904	1.46181	75.04	0.2581
24	83.09	0.1202	0.0862	1.33872	83.63	0.1109	0.0847	1.32675	84.18	0.1014	0.0831	1.31484	84.18	0.1014
26	93.63	-0.0633	0.0734	1.16469	94.42	-0.0771	0.0711	1.14951	95.24	-0.0913	0.0687	1.13414	95.24	-0.0913
28	110.03	-0.3426	0.0346	0.89992	112.81	-0.3877	0.0235	0.85672						

$x = 4.600$					$x = 4.650$					$x = 4.700$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.1011	2.14990	0.00	1.0000	0.1004	2.14253	0.00	1.0000	0.0996	2.13520	0.00	1.0000
2	6.29	0.9940	0.1011	2.14428	6.32	0.9939	0.1004	2.13690	6.34	0.9939	0.0996	2.12966	6.34	0.9939
4	12.60	0.9759	0.1010	2.12742	12.65	0.9757	0.1003	2.12001	12.70	0.9755	0.0995	2.11273	12.70	0.9755
6	18.96	0.9458	0.1009	2.09933	19.03	0.9454	0.1002	2.09186	19.10	0.9450	0.0994	2.08452	19.10	0.9450
8	25.37	0.9036	0.1007	2.05999	25.46	0.9029	0.1000	2.05243	25.56	0.9021	0.0992	2.04501	25.56	0.9021
10	31.87	0.8493	0.1004	2.00936	31.99	0.8481	0.0996	2.00168	32.11	0.8470	0.0988	1.99414	32.11	0.8470
12	38.48	0.7828	0.0999	1.94736	38.64	0.7811	0.0991	1.93952	38.79	0.7794	0.0983	1.93182	38.79	0.7794
14	45.26	0.7039	0.0992	1.87382	45.44	0.7016	0.0983	1.86577	45.63	0.6993	0.0975	1.85786	45.63	0.6993
16	52.24	0.6123	0.0980	1.78841	52.47	0.6092	0.0972	1.78007	52.70	0.6060	0.0963	1.77186	52.70	0.6060
18	59.51	0.5074	0.0963	1.69051	59.79	0.5032	0.0953	1.68178	60.06	0.4991	0.0944	1.67317	60.06	0.4991
20	67.18	0.3878	0.0936	1.57898	67.52	0.3823	0.0925	1.56967	67.86	0.3769	0.0915	1.56047	67.86	0.3769
22	75.46	0.2511	0.0892	1.45150	75.88	0.2439	0.0880	1.44130	76.30	0.2368	0.0867	1.43119	76.30	0.2368
24	84.73	0.0918	0.0816	1.30299	85.29	0.0821	0.0800	1.29118	85.86	0.0722	0.0784	1.27939	85.86	0.0722
26	96.09	-0.1060	0.0662	1.11854	96.96	-0.1212	0.0636	1.10265	97.87	-0.1370	0.0609	1.08641	97.87	-0.1370

$x = 4.750$					$x = 4.800$					$x = 4.850$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0989	2.12819	0.00	1.0000	0.0982	2.12120	0.00	1.0000	0.0975	2.11434	0.00	1.0000
2	6.36	0.9938	0.0989	2.12254	6.39	0.9938	0.0982	2.11554	6.41	0.9938	0.0975	2.10866	6.41	0.9938
4	12.74	0.9754	0.0988	2.10558	12.79	0.9752	0.0981	2.09855	12.84	0.9750	0.0974	2.09164	12.84	0.9750
6	19.17	0.9446	0.0987	2.07731	19.24	0.9442	0.0980	2.07022	19.31	0.9437	0.0972	2.06326	19.31	0.9437
8	25.66	0.9014	0.0984	2.03771	25.75	0.9007	0.0977	2.03053	25.85	0.9000	0.0970	2.02348	25.85	0.9000
10	32.24	0.8458	0.0981	1.98672	32.36	0.8447	0.0973	1.97943	32.48	0.8435	0.0966	1.97225	32.48	0.8435
12	38.94	0.7778	0.0975	1.92424	39.10	0.7761	0.0968	1.97179	39.25	0.7744	0.0960	1.96445	39.25	0.7744
14	45.82	0.6969	0.0967	1.85006	46.01	0.6946	0.0959	1.84239	46.19	0.6922	0.0951	1.83483	46.19	0.6922
16	52.92	0.6029	0.0954	1.76378	53.15	0.5997	0.0946	1.75581	53.37	0.5966	0.0937	1.74797	53.37	0.5966
18	60.34	0.4949	0.0935	1.66468	60.61	0.4907	0.0926	1.65631	60.89	0.4866	0.0917	1.64805	60.89	0.4866
20	68.19	0.3715	0.0905	1.55139	68.53	0.3660	0.0894	1.54242	68.87	0.3605	0.0884	1.53356	68.87	0.3605
22	76.73	0.2295	0.0855	1.42117	77.16	0.2223	0.0843	1.41124	77.59	0.2150	0.0832	1.40140	77.59	0.2150
24	86.43	0.0622	0.0769	1.26764	87.01	0.0521	0.0753	1.25589	87.60	0.0418	0.0737	1.24415	87.60	0.0418
26	98.83	-0.1534	0.0581	1.06974	99.83	-0.1707	0.0551	1.05254	100.89	-0.1889	0.0520	1.03466	100.89	-0.1889

$x = 4.900$					$x = 4.950$					$x = 5.000$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0968	2.10759	0.00	1.0000	0.0962	2.10095	0.00	1.0000	0.0955	2.09443	0.00	1.0000
2	6.43	0.9937	0.0968	2.10190	6.45	0.9937	0.0961	2.09526	6.48	0.9936	0.0955	2.08872	6.50	0.9935
4	12.88	0.9748	0.0967	2.09485	12.93	0.9747	0.0960	2.07817	12.97	0.9745	0.0954	2.07160	13.00	0.9743
6	19.38	0.9433	0.0965	2.05640	19.45	0.9429	0.0959	2.04966	19.52	0.9425	0.0952	2.04304	19.60	0.9420
8	25.94	0.8992	0.0963	2.01654	26.04	0.8985	0.0956	2.00972	26.13	0.8978	0.0949	2.00300	26.25	0.8968
10	32.61	0.8424	0.0959	1.96520	32.73	0.8413	0.0952	1.95825	32.85	0.8401	0.0944	1.95142	33.00	0.8387
12	39.40	0.7727	0.0952	1.90223	39.55	0.7710	0.0945	1.89513	39.70	0.7694	0.0938	1.88813	40.00	0.7669
14	46.38	0.6899	0.0943	1.82740	46.56	0.6875	0.0935	1.82008	46.75	0.6852	0.0928	1.81286	47.00	0.6825
16	53.60	0.5934	0.0929	1.74024	53.83	0.5903	0.0921	1.73262	54.05	0.5871	0.0913	1.72510	54.30	0.5837
18	61.16	0.4824	0.0908	1.63990	61.43	0.4782	0.0899	1.63186	61.71	0.4740	0.0890	1.62393	62.00	0.4695
20	69.21	0.3550	0.0874	1.52480	69.55	0.3494	0.0865	1.51613	69.89	0.3439	0.0855	1.50756	70.25	0.3375
22	78.02	0.2076	0.0820	1.39163	78.45	0.2001	0.0808	1.38194	78.89	0.1927	0.0796	1.37231	79.30	0.1852
24	88.20	0.0313	0.0721	1.23240	88.81	0.0207	0.0704	1.22062	89.44	0.0099	0.0688	1.20882	90.00	0.0000
26	102.02	-0.2082	0.0485	1.01594	103.24	-0.2291	0.0448	0.99610	104.59	-0.2519	0.0406	0.97473	106.00	-0.2774
$x = 5.050$					$x = 5.100$					$x = 5.150$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0948	2.08801	0.00	1.0000	0.0942	2.08169	0.00	1.0000	0.0936	2.07548	0.00	1.0000
2	6.50	0.9936	0.0948	2.08229	6.52	0.9935	0.0942	2.07596	6.54	0.9935	0.0935	2.06974	6.56	0.9935
4	13.02	0.9743	0.0947	2.06513	13.06	0.9741	0.0941	2.05877	13.11	0.9739	0.0934	2.05252	13.16	0.9737
6	19.59	0.9421	0.0945	2.03651	19.65	0.9417	0.0939	2.03010	19.72	0.9413	0.0932	2.02378	19.80	0.9408
8	26.23	0.8971	0.0942	1.99640	26.32	0.8963	0.0935	1.98989	26.41	0.8956	0.0929	1.98349	26.50	0.8948
10	32.97	0.8390	0.0938	1.94469	33.09	0.8378	0.0931	1.93807	33.21	0.8367	0.0924	1.93155	33.36	0.8353
12	39.85	0.7677	0.0931	1.88124	40.00	0.7660	0.0924	1.87446	40.15	0.7643	0.0917	1.86778	40.30	0.7625
14	46.93	0.6829	0.0920	1.80576	47.12	0.6805	0.0913	1.79875	47.30	0.6782	0.0906	1.79185	47.50	0.6758
16	54.27	0.5839	0.0905	1.71770	54.50	0.5807	0.0897	1.71039	54.72	0.5776	0.0889	1.70319	55.00	0.5743
18	61.98	0.4698	0.0882	1.61609	62.26	0.4655	0.0873	1.60836	62.53	0.4613	0.0865	1.60072	63.00	0.4570
20	70.23	0.3383	0.0845	1.49909	70.57	0.3327	0.0835	1.49070	70.91	0.3270	0.0826	1.48239	71.30	0.3212
22	79.33	0.1851	0.0784	1.36275	79.78	0.1775	0.0773	1.35325	80.22	0.1698	0.0761	1.34381	80.70	0.1612
24	90.07	-0.0012	0.0671	1.19696	90.71	-0.0125	0.0654	1.18505	91.37	-0.0240	0.0637	1.17305	92.00	-0.0348
26	106.10	-0.2774	0.0358	0.95118	107.88	-0.3071	0.0300	0.92413	110.17	-0.3448	0.0222	0.89034	113.00	-0.4141
$x = 5.200$					$x = 5.250$					$x = 5.300$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0929	2.06937	0.00	1.0000	0.0923	2.06335	0.00	1.0000	0.0917	2.05742	0.00	1.0000
2	6.56	0.9934	0.0929	2.06362	6.59	0.9934	0.0923	2.05759	6.61	0.9934	0.0917	2.05165	6.64	0.9934
4	13.15	0.9738	0.0928	2.04636	13.20	0.9736	0.0922	2.04030	13.24	0.9734	0.0915	2.03433	13.29	0.9732
6	19.79	0.9409	0.0926	2.01757	19.86	0.9405	0.0919	2.01145	19.92	0.9401	0.0913	2.00542	20.00	0.9400
8	26.50	0.8949	0.0922	1.97719	26.60	0.8942	0.0916	1.97099	26.69	0.8935	0.0910	1.96488	26.80	0.8925
10	33.33	0.8355	0.0917	1.92513	33.45	0.8344	0.0911	1.91881	33.56	0.8333	0.0904	1.91258	33.70	0.8318
12	40.30	0.7627	0.0910	1.86120	40.45	0.7610	0.0903	1.85471	40.60	0.7593	0.0896	1.84832	40.80	0.7568
14	47.48	0.6758	0.0899	1.78505	47.66	0.6735	0.0891	1.77834	47.84	0.6711	0.0884	1.77173	48.10	0.6675
16	54.94	0.5744	0.0882	1.69608	55.17	0.5712	0.0874	1.68907	55.39	0.5680	0.0867	1.68214	55.70	0.5637
18	62.80	0.4571	0.0856	1.59317	63.08	0.4528	0.0848	1.58572	63.35	0.4485	0.0840	1.57835	63.70	0.4433
20	71.25	0.3214	0.0816	1.47471	71.60	0.3157	0.0807	1.46603	71.94	0.3100	0.0798	1.45797	72.30	0.3043
22	80.68	0.1620	0.0749	1.33442	81.13	0.1542	0.0738	1.32507	81.59	0.1463	0.0726	1.31577	82.10	0.1373
24	92.05	-0.0357	0.0619	1.16095	92.74	-0.0478	0.0601	1.14873	93.45	-0.0602	0.0583	1.13637	94.20	-0.0730
26	114.46	-0.4141	0.0062	0.82912										
$x = 5.350$					$x = 5.400$					$x = 5.450$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0911	2.05159	0.00	1.0000	0.0905	2.04585	0.00	1.0000	0.0899	2.04019	0.00	1.0000
2	6.63	0.9933	0.0911	2.04581	6.65	0.9933	0.0905	2.04005	6.67	0.9932	0.0899	2.03439	6.70	0.9932
4	13.29	0.9732	0.0909	2.02845	13.33	0.9731	0.0903	2.02266	13.37	0.9729	0.0898	2.01697	13.42	0.9727
6	19.99	0.9397	0.0907	1.99949	20.06	0.9393	0.0901	1.99365	20.12	0.9389	0.0895	1.98789	20.20	0.9385
8	26.78	0.8928	0.0903	1.95886	26.87	0.8920	0.0897	1.95293	26.96	0.8913	0.0891	1.94709	27.06	0.8907
10	33.68	0.8321	0.0898	1.90644	33.80	0.8310	0.0892	1.90039	33.92	0.8299	0.0885	1.89444	34.06	0.8287
12	40.74	0.7576	0.0890	1.84202	40.89	0.7560	0.0883	1.83581	41.04	0.7543	0.0877	1.82969	41.20	0.7528
14	48.03	0.6688	0.0878	1.76521	48.21	0.6664	0.0871	1.75877	48.39	0.6641	0.0864	1.75243	48.60	0.6617
16	55.61	0.5648	0.0860	1.67531	55.83	0.5616	0.0852	1.66857	56.05	0.5584	0.0845	1.66191	56.30	0.5551
18	63.62	0.4443	0.0832	1.57106	63.90	0.4400	0.0824	1.56386	64.17	0.4357	0.0816	1.55674	64.50	0.4313
20	72.29	0.3042	0.0789	1.44498	72.63	0.2985	0.0779	1.44206	72.98	0.2927	0.0770	1.43421	73.36	0.2878
22	82.05	0.1383	0.0714	1.30650	82.52	0.1302	0.0703	1.29726	82.99	0.1221	0.0691	1.28805	83.50	0.1137
24	94.18	-0.0730	0.0564	1.12383	94.94	-0.0861	0.0544	1.11109	95.72	-0.0997	0.0524	1.09810	96.60	-0.1127

2 x = 5.500					2 x = 5.550					2 x = 5.600				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0894	2.03462	0.00	1.0000	0.0888	2.02913	0.00	1.0000	0.0882	2.02373		
2	6.69	0.9932	0.0893	2.02881	6.72	0.9931	0.0888	2.02331	6.74	0.9931	0.0882	2.01789		
4	13.42	0.9727	0.0892	2.01135	13.46	0.9725	0.0886	2.00582	13.50	0.9724	0.0880	2.00037		
6	20.19	0.9386	0.0889	1.98222	20.26	0.9382	0.0883	1.97663	20.32	0.9378	0.0878	1.97112		
8	27.05	0.8906	0.0885	1.94133	27.14	0.8899	0.0879	1.93566	27.23	0.8892	0.0874	1.93007		
10	34.03	0.8287	0.0879	1.88856	34.15	0.8276	0.0873	1.88277	34.26	0.8265	0.0867	1.87706		
12	41.18	0.7526	0.0870	1.82365	41.33	0.7509	0.0864	1.81769	41.47	0.7493	0.0858	1.81182		
14	48.57	0.6618	0.0857	1.74616	48.75	0.6594	0.0851	1.73999	48.92	0.6571	0.0844	1.73389		
16	56.27	0.5552	0.0838	1.65533	56.49	0.5520	0.0831	1.64883	56.71	0.5488	0.0824	1.64241		
18	64.44	0.4314	0.0808	1.54970	64.72	0.4271	0.0801	1.54274	64.99	0.4227	0.0793	1.53585		
20	73.33	0.2868	0.0761	1.42643	73.68	0.2810	0.0752	1.41870	74.03	0.2751	0.0743	1.41104		
22	83.47	0.1138	0.0679	1.27887	83.95	0.1054	0.0667	1.26970	84.43	0.0970	0.0656	1.26054		
24	96.53	-0.1137	0.0503	1.08481	97.38	-0.1284	0.0481	1.07118	98.26	-0.1437	0.0458	1.05712		

2 x = 5.650					2 x = 5.700					2 x = 5.750				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0877	2.01840	0.00	1.0000	0.0871	2.01315	0.00	1.0000	0.0866	2.00797		
2	6.76	0.9931	0.0876	2.01255	6.78	0.9930	0.0871	2.00729	6.80	0.9930	0.0866	2.00210		
4	13.54	0.9722	0.0875	1.99500	13.59	0.9720	0.0869	1.98970	13.63	0.9718	0.0864	1.98448		
6	20.39	0.9374	0.0872	1.96570	20.45	0.9370	0.0867	1.96034	20.52	0.9366	0.0861	1.95507		
8	27.32	0.8885	0.0868	1.92456	27.41	0.8878	0.0862	1.91912	27.50	0.8871	0.0857	1.91376		
10	34.38	0.8253	0.0861	1.87143	34.49	0.8242	0.0856	1.86587	34.61	0.8231	0.0850	1.86040		
12	41.62	0.7476	0.0852	1.80603	41.76	0.7459	0.0846	1.80031	41.90	0.7443	0.0840	1.79467		
14	49.10	0.6547	0.0838	1.72787	49.28	0.6524	0.0832	1.72192	49.46	0.6500	0.0825	1.71651		
16	56.93	0.5456	0.0817	1.63607	57.15	0.5424	0.0811	1.62981	57.37	0.5392	0.0804	1.62361		
18	65.27	0.4184	0.0785	1.52903	65.54	0.4140	0.0778	1.52228	65.82	0.4097	0.0771	1.51559		
20	74.39	0.2691	0.0734	1.40344	74.74	0.2632	0.0726	1.39589	75.10	0.2572	0.0717	1.38840		
22	84.93	0.0884	0.0644	1.25139	85.43	0.0797	0.0632	1.24224	85.93	0.0709	0.0620	1.23378		
24	99.20	-0.1598	0.0434	1.04254	100.18	-0.1768	0.0408	1.02731	101.24	-0.1950	0.0380	1.01128		

2 x = 5.800					2 x = 5.850					2 x = 5.900				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0861	2.00287	0.00	1.0000	0.0856	1.99784	0.00	1.0000	0.0850	1.99288		
2	6.82	0.9929	0.0860	1.99699	6.84	0.9929	0.0855	1.99195	6.86	0.9928	0.0850	1.98698		
4	13.67	0.9717	0.0859	1.97934	13.71	0.9715	0.0853	1.97427	13.76	0.9713	0.0848	1.96926		
6	20.58	0.9362	0.0856	1.94987	20.64	0.9358	0.0850	1.94474	20.71	0.9354	0.0845	1.93968		
8	27.58	0.8863	0.0851	1.90848	27.67	0.8856	0.0846	1.90327	27.76	0.8849	0.0840	1.89812		
10	34.72	0.8219	0.0844	1.85499	34.83	0.8208	0.0839	1.84966	34.95	0.8197	0.0833	1.84440		
12	42.05	0.7426	0.0834	1.78910	42.19	0.7409	0.0828	1.78361	42.33	0.7393	0.0823	1.77818		
14	49.64	0.6475	0.0819	1.71026	49.81	0.6453	0.0813	1.70453	49.99	0.6429	0.0807	1.69888		
16	57.59	0.5359	0.0797	1.61749	57.81	0.5327	0.0791	1.61144	58.03	0.5295	0.0784	1.60545		
18	66.09	0.4053	0.0763	1.50898	66.37	0.4009	0.0756	1.50243	66.64	0.3965	0.0749	1.49594		
20	75.46	0.2511	0.0708	1.38096	75.82	0.2450	0.0699	1.37356	76.18	0.2389	0.0691	1.36621		
22	86.45	0.0620	0.0608	1.22391	86.97	0.0529	0.0595	1.21472	87.49	0.0437	0.0583	1.20550		
24	102.39	-0.2146	0.0349	0.99418	103.66	-0.2362	0.0314	0.97564	105.10	-0.2605	0.0275	0.95500		

2 x = 5.950					2 x = 6.000					2 x = 6.050				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0845	1.98799	0.00	1.0000	0.0840	1.98316	0.00	1.0000	0.0835	1.97840		
2	6.88	0.9928	0.0845	1.98208	6.90	0.9927	0.0840	1.97724	6.92	0.9927	0.0835	1.97247		
4	13.80	0.9711	0.0843	1.96433	13.84	0.9710	0.0838	1.95946	13.88	0.9708	0.0833	1.95466		
6	20.77	0.9350	0.0840	1.93469	20.84	0.9346	0.0835	1.92977	20.90	0.9342	0.0830	1.92491		
8	27.85	0.8842	0.0835	1.89305	27.93	0.8835	0.0830	1.88805	28.02	0.8828	0.0825	1.88311		
10	35.06	0.8185	0.0828	1.83921	35.17	0.8174	0.0822	1.83409	35.28	0.8163	0.0817	1.82903		
12	42.47	0.7376	0.0817	1.77282	42.62	0.7359	0.0811	1.76754	42.76	0.7342	0.0806	1.76231		
14	50.16	0.6406	0.0801	1.69329	50.34	0.6382	0.0795	1.68777	50.52	0.6359	0.0790	1.68232		
16	58.25	0.5262	0.0778	1.59953	58.47	0.5230	0.0771	1.59368	58.69	0.5197	0.0765	1.58789		
18	66.92	0.3920	0.0741	1.48951	67.19	0.3876	0.0734	1.48314	67.47	0.3831	0.0727	1.47683		
20	76.54	0.2328	0.0682	1.35891	76.91	0.2266	0.0673	1.35165	77.27	0.2203	0.0665	1.34442		
22	88.03	0.0344	0.0571	1.19624	88.58	0.0248	0.0558	1.18694	89.13	0.0151	0.0545	1.17759		
24	106.81	-0.2892	0.0226	0.93094	109.07	-0.3267	0.0159	0.89993						

$x = 6.100$					$x = 6.150$					$x = 6.200$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	S
0	0.00	1.0000	0.0831	1.97371	0.00	1.0000	0.0826	1.96908	0.00	1.0000	0.0821	1.96451	0.00	1.96451
2	6.94	0.9927	0.0830	1.96177	6.97	0.9926	0.0825	1.96313	6.99	0.9926	0.0820	1.95855	6.99	1.95855
4	13.87	0.9706	0.0828	1.94993	13.96	0.9705	0.0823	1.94525	14.00	0.9703	0.0818	1.94064	14.00	1.94064
6	20.96	0.9338	0.0825	1.92012	21.02	0.9334	0.0820	1.91539	21.09	0.9330	0.0815	1.91073	21.09	1.91073
8	28.10	0.8821	0.0820	1.87823	28.19	0.8814	0.0815	1.87342	28.28	0.8807	0.0810	1.86867	28.28	1.86867
10	35.40	0.8152	0.0812	1.82403	35.51	0.8140	0.0807	1.81910	35.62	0.8129	0.0802	1.81424	35.62	1.81424
12	42.90	0.7326	0.0801	1.75715	43.04	0.7309	0.0795	1.75206	43.18	0.7292	0.0790	1.74702	43.18	1.74702
14	50.69	0.6335	0.0784	1.67693	50.87	0.6311	0.0778	1.67160	51.04	0.6288	0.0773	1.66633	51.04	1.66633
16	58.90	0.5165	0.0759	1.58216	59.12	0.5132	0.0753	1.57649	59.34	0.5099	0.0747	1.57088	59.34	1.57088
18	67.75	0.3787	0.0720	1.47057	68.03	0.3742	0.0713	1.46437	68.30	0.3697	0.0706	1.45822	68.30	1.45822
20	77.64	0.2140	0.0656	1.33723	78.01	0.2077	0.0648	1.33008	78.39	0.2013	0.0639	1.32296	78.39	1.32296
22	89.70	0.0052	0.0533	1.16817	90.28	-0.0049	0.0519	1.15868	90.87	-0.0152	0.0506	1.14910	90.87	1.14910

$x = 6.250$					$x = 6.300$					$x = 6.350$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	S
0	0.00	1.0000	0.0816	1.96000	0.00	1.0000	0.0812	1.95555	0.00	1.0000	0.0807	1.95116	0.00	1.95116
2	7.01	0.9925	0.0816	1.95403	7.03	0.9925	0.0811	1.94957	7.05	0.9924	0.0806	1.94516	7.05	1.94516
4	14.04	0.9701	0.0814	1.93609	14.08	0.9699	0.0809	1.93160	14.12	0.9698	0.0804	1.92716	14.12	1.92716
6	21.15	0.9326	0.0810	1.90612	21.21	0.9323	0.0805	1.90157	21.27	0.9319	0.0801	1.89708	21.27	1.89708
8	28.36	0.8800	0.0805	1.86398	28.45	0.8793	0.0800	1.85935	28.53	0.8786	0.0795	1.85477	28.53	1.85477
10	35.73	0.8118	0.0797	1.80943	35.84	0.8107	0.0792	1.80468	35.95	0.8095	0.0787	1.79999	35.95	1.79999
12	43.32	0.7276	0.0785	1.74205	43.46	0.7259	0.0779	1.73714	43.60	0.7242	0.0774	1.73228	43.60	1.73228
14	51.21	0.6264	0.0767	1.66112	51.39	0.6240	0.0762	1.65597	51.56	0.6217	0.0756	1.65088	51.56	1.65088
16	59.56	0.5067	0.0741	1.56533	59.78	0.5034	0.0735	1.55983	59.99	0.5001	0.0729	1.55439	59.99	1.55439
18	68.58	0.3652	0.0700	1.45213	68.86	0.3606	0.0693	1.44608	69.14	0.3561	0.0686	1.44008	69.14	1.44008
20	78.77	0.1948	0.0631	1.31586	79.14	0.1883	0.0622	1.30880	79.53	0.1818	0.0614	1.30176	79.53	1.30176
22	91.47	-0.0257	0.0492	1.13941	92.09	-0.0365	0.0478	1.12961	92.73	-0.0476	0.0464	1.11967	92.73	1.11967

$x = 6.400$					$x = 6.450$					$x = 6.500$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	S
0	0.00	1.0000	0.0803	1.94682	0.00	1.0000	0.0798	1.94254	0.00	1.0000	0.0794	1.93831	0.00	1.93831
2	7.07	0.9924	0.0802	1.94082	7.09	0.9924	0.0797	1.93652	7.10	0.9923	0.0793	1.93229	7.10	1.93229
4	14.10	0.9696	0.0800	1.92278	14.20	0.9694	0.0795	1.91846	14.24	0.9693	0.0791	1.91419	14.24	1.91419
6	21.33	0.9315	0.0796	1.89265	21.39	0.9311	0.0792	1.88827	21.46	0.9307	0.0787	1.88395	21.46	1.88395
8	28.61	0.8779	0.0790	1.85026	28.70	0.8772	0.0786	1.84580	28.78	0.8765	0.0781	1.84139	28.78	1.84139
10	36.06	0.8084	0.0782	1.79535	36.17	0.8073	0.0777	1.79078	36.28	0.8062	0.0772	1.78625	36.28	1.78625
12	43.73	0.7226	0.0769	1.72748	43.87	0.7209	0.0764	1.72273	44.01	0.7192	0.0759	1.71804	44.01	1.71804
14	51.74	0.6193	0.0751	1.64584	51.91	0.6169	0.0745	1.64086	52.08	0.6145	0.0740	1.63593	52.08	1.63593
16	60.21	0.4968	0.0723	1.54900	60.43	0.4935	0.0717	1.54366	60.65	0.4902	0.0711	1.53838	60.65	1.53838
18	69.42	0.3515	0.0679	1.43412	69.70	0.3469	0.0673	1.42822	69.98	0.3423	0.0666	1.42235	69.98	1.42235
20	79.91	0.1752	0.0605	1.29474	80.30	0.1685	0.0597	1.28774	80.69	0.1618	0.0588	1.28075	80.69	1.28075
22	93.39	-0.0591	0.0449	1.10956	94.06	-0.0708	0.0434	1.09927	94.76	-0.0830	0.0419	1.08877	94.76	1.08877

$x = 6.550$					$x = 6.600$					$x = 6.650$				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	S
0	0.00	1.0000	0.0789	1.93414	0.00	1.0000	0.0785	1.93001	0.00	1.0000	0.0781	1.92594	0.00	1.92594
2	7.12	0.9923	0.0789	1.92810	7.14	0.9922	0.0784	1.92397	7.16	0.9922	0.0780	1.91989	7.16	1.91989
4	14.28	0.9691	0.0786	1.90998	14.32	0.9689	0.0782	1.90581	14.36	0.9687	0.0778	1.90170	14.36	1.90170
6	21.52	0.9303	0.0783	1.87968	21.58	0.9299	0.0778	1.87546	21.64	0.9295	0.0774	1.87129	21.64	1.87129
8	28.87	0.8758	0.0777	1.83704	28.95	0.8750	0.0772	1.83274	29.03	0.8743	0.0768	1.82849	29.03	1.82849
10	36.39	0.8050	0.0768	1.78178	36.49	0.8039	0.0763	1.77736	36.60	0.8028	0.0758	1.77299	36.60	1.77299
12	44.15	0.7175	0.0754	1.71341	44.29	0.7159	0.0750	1.70882	44.42	0.7142	0.0745	1.70429	44.42	1.70429
14	52.25	0.6122	0.0735	1.63105	52.43	0.6098	0.0730	1.62623	52.60	0.6074	0.0725	1.62145	52.60	1.62145
16	60.86	0.4869	0.0706	1.53314	61.08	0.4835	0.0700	1.52796	61.30	0.4802	0.0695	1.52382	61.30	1.52382
18	70.27	0.3376	0.0660	1.41653	70.55	0.3330	0.0653	1.41075	70.83	0.3283	0.0647	1.40501	70.83	1.40501
20	81.08	0.1550	0.0580	1.27379	81.48	0.1481	0.0571	1.26683	81.88	0.1412	0.0562	1.25988	81.88	1.25988
22	95.48	-0.0955	0.0403	1.07802	96.23	-0.1086	0.0386	1.06697	97.02	-0.1222	0.0368	1.05558	97.02	1.05558

$\frac{2}{x} = 6.700$					$\frac{2}{x} = 6.750$					$\frac{2}{x} = 6.800$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0777	1.92192	0.00	1.0000	0.0772	1.91795	0.00	1.0000	0.0768	1.91402		
2	7.18	0.9922	0.0776	1.91586	7.20	0.9921	0.0772	1.91187	7.22	0.9921	0.0768	1.90794		
4	14.40	0.9686	0.0774	1.89764	14.44	0.9684	0.0769	1.89362	14.48	0.9682	0.0765	1.88966		
6	21.70	0.9291	0.0770	1.86717	21.76	0.9288	0.0765	1.86311	21.82	0.9284	0.0761	1.85909		
8	29.11	0.8736	0.0763	1.82429	29.20	0.8729	0.0759	1.82014	29.28	0.8722	0.0755	1.81604		
10	36.71	0.8017	0.0754	1.76868	36.82	0.8005	0.0749	1.76441	36.92	0.7994	0.0745	1.76019		
12	44.56	0.7125	0.0740	1.69980	44.70	0.7109	0.0735	1.69537	44.83	0.7092	0.0731	1.69098		
14	52.77	0.6050	0.0720	1.61673	52.94	0.6026	0.0715	1.61205	53.11	0.6002	0.0710	1.60742		
16	61.52	0.4769	0.0689	1.51773	61.74	0.4735	0.0684	1.51268	61.95	0.4702	0.0678	1.50768		
18	71.12	0.3236	0.0640	1.39931	71.40	0.3189	0.0634	1.39364	71.69	0.3142	0.0627	1.38802		
20	82.29	0.1342	0.0554	1.25294	82.70	0.1271	0.0545	1.24600	83.11	0.1200	0.0537	1.23906		
22	97.85	-0.1365	0.0350	1.04377	98.72	-0.1516	0.0330	1.03145	99.65	-0.1676	0.0309	1.01851		

$\frac{2}{x} = 6.850$					$\frac{2}{x} = 6.900$				$\frac{2}{x} = 6.950$			
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2
0	0.00	1.0000	0.0764	1.91015	0.00	1.0000	0.0760	1.90631	0.00	1.0000	0.0756	1.90253
2	7.24	0.9920	0.0764	1.90405	7.26	0.9920	0.0759	1.90321	7.28	0.9919	0.0756	1.89841
4	14.52	0.9681	0.0761	1.88574	14.56	0.9679	0.0757	1.88187	14.60	0.9677	0.0753	1.87804
6	21.88	0.9280	0.0757	1.85511	21.94	0.9276	0.0753	1.85119	22.00	0.9272	0.0749	1.84731
8	29.36	0.8715	0.0750	1.81198	29.44	0.8708	0.0746	1.80798	29.52	0.8701	0.0742	1.80401
10	37.03	0.7983	0.0741	1.75602	37.14	0.7972	0.0736	1.75189	37.24	0.7961	0.0732	1.74781
12	44.97	0.7075	0.0726	1.68664	45.10	0.7058	0.0722	1.68234	45.24	0.7042	0.0717	1.67800
14	53.28	0.5978	0.0705	1.60283	53.46	0.5954	0.0700	1.59829	53.63	0.5931	0.0695	1.59380
16	62.17	0.4668	0.0673	1.50272	62.39	0.4635	0.0667	1.49780	62.61	0.4601	0.0662	1.49293
18	71.98	0.3094	0.0621	1.38242	72.26	0.3046	0.0615	1.37686	72.55	0.2998	0.0608	1.37134
20	83.53	0.1127	0.0528	1.23212	83.95	0.1054	0.0519	1.22517	84.38	0.0980	0.0511	1.21821
22	100.65	-0.1848	0.0286	1.00478	101.74	-0.2035	0.0261	0.99000	102.96	-0.2242	0.0232	0.97379

$\frac{2}{x} = 7.000$					$\frac{2}{x} = 7.050$					$\frac{2}{x} = 7.100$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0752	1.89879	0.00	1.0000	0.0748	1.89509	0.00	1.0000	0.0745	1.89143		
2	7.30	0.9919	0.0752	1.89266	7.32	0.9919	0.0748	1.88895	7.34	0.9918	0.0744	1.88529		
4	14.64	0.9676	0.0749	1.87426	14.67	0.9674	0.0745	1.87052	14.71	0.9672	0.0741	1.86682		
6	22.05	0.9268	0.0745	1.84347	22.11	0.9264	0.0741	1.83968	22.17	0.9261	0.0737	1.83593		
8	29.61	0.8694	0.0738	1.80010	29.69	0.8687	0.0734	1.79622	29.77	0.8680	0.0730	1.79239		
10	37.35	0.7949	0.0728	1.74378	37.46	0.7938	0.0723	1.73978	37.56	0.7927	0.0719	1.73583		
12	45.37	0.7025	0.0713	1.67389	45.51	0.7008	0.0708	1.66973	45.64	0.6991	0.0704	1.66561		
14	53.80	0.5907	0.0691	1.58935	53.97	0.5883	0.0686	1.58494	54.14	0.5858	0.0681	1.58057		
16	62.83	0.4567	0.0657	1.48810	63.04	0.4533	0.0652	1.48330	63.26	0.4499	0.0646	1.47855		
18	72.84	0.2950	0.0607	1.36584	73.13	0.2901	0.0596	1.36038	73.43	0.2852	0.0590	1.35494		
20	84.81	0.0905	0.0502	1.21124	85.25	0.0828	0.0493	1.20425	85.69	0.0751	0.0484	1.19724		
22	104.36	-0.2480	0.0199	0.95542	106.07	-0.2768	0.0157	0.93333	108.53	-0.3179	0.0094	0.90227		

$\frac{2}{x} = 7.150$					$\frac{2}{x} = 7.200$					$\frac{2}{x} = 7.250$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0741	1.88782	0.00	1.0000	0.0737	1.88424	0.00	1.0000	0.0733	1.88071		
2	7.35	0.9918	0.0740	1.88166	7.37	0.9917	0.0736	1.87808	7.39	0.9917	0.0733	1.87454		
4	14.75	0.9670	0.0737	1.86317	14.79	0.9669	0.0734	1.85956	14.83	0.9667	0.0730	1.85598		
6	22.23	0.9257	0.0733	1.83222	22.29	0.9253	0.0729	1.82855	22.35	0.9249	0.0725	1.82493		
8	29.85	0.8674	0.0726	1.78860	29.93	0.8667	0.0722	1.78485	30.01	0.8660	0.0718	1.78115		
10	37.67	0.7916	0.0715	1.73193	37.77	0.7905	0.0711	1.72806	37.88	0.7893	0.0707	1.72424		
12	45.78	0.6975	0.0700	1.66154	45.91	0.6958	0.0695	1.65750	46.04	0.6941	0.0691	1.65351		
14	54.31	0.5834	0.0677	1.57625	54.48	0.5810	0.0672	1.57196	54.65	0.5786	0.0668	1.56772		
16	63.48	0.4465	0.0641	1.47383	63.70	0.4431	0.0636	1.46915	63.92	0.4397	0.0631	1.46451		
18	73.72	0.2803	0.0584	1.34954	74.01	0.2754	0.0578	1.34415	74.31	0.2704	0.0571	1.33880		
20	86.14	0.0673	0.0475	1.19020	86.60	0.0594	0.0466	1.18313	87.06	0.0513	0.0457	1.17602		

$x = 7.300$					$x = 7.350$					$x = 7.400$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0730	1.87722	0.00	1.0000	0.0726	1.87377	0.00	1.0000	0.0723	1.87035	0.00	1.0000
2	7.41	0.9916	0.0729	1.87104	7.43	0.9916	0.0725	1.86757	7.45	0.9916	0.0722	1.86415	7.47	0.9916
4	14.86	0.9665	0.0726	1.85245	14.90	0.9664	0.0723	1.84896	14.94	0.9662	0.0719	1.84550	14.98	0.9662
6	22.40	0.9245	0.0721	1.82134	22.46	0.9241	0.0718	1.81780	22.52	0.9237	0.0714	1.81429	22.58	0.9237
8	30.09	0.8653	0.0714	1.77748	30.17	0.8646	0.0710	1.77385	30.25	0.8639	0.0707	1.77026	30.33	0.8639
10	37.98	0.7882	0.0703	1.72045	38.08	0.7871	0.0699	1.71671	38.19	0.7860	0.0695	1.71300	38.29	0.7860
12	46.18	0.6924	0.0687	1.64955	46.31	0.6908	0.0683	1.64564	46.44	0.6891	0.0679	1.64176	46.56	0.6891
14	54.82	0.5762	0.0663	1.56351	54.99	0.5738	0.0659	1.55934	55.16	0.5714	0.0654	1.55521	55.32	0.5714
16	64.14	0.4362	0.0626	1.45990	64.36	0.4328	0.0621	1.45533	64.57	0.4293	0.0616	1.45079	64.79	0.4293
18	74.61	0.2654	0.0565	1.33347	74.91	0.2604	0.0559	1.32816	75.21	0.2554	0.0553	1.32288	75.51	0.2554
20	87.53	0.0431	0.0448	1.16887	88.01	0.0347	0.0439	1.16168	88.50	0.0262	0.0429	1.15443	89.01	0.0176
$x = 7.450$					$x = 7.500$					$x = 7.550$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0719	1.86697	0.00	1.0000	0.0715	1.86363	0.00	1.0000	0.0712	1.86032	0.00	1.0000
2	7.47	0.9915	0.0718	1.86076	7.48	0.9915	0.0712	1.85741	7.50	0.9914	0.0711	1.85409	7.52	0.9914
4	14.98	0.9660	0.0715	1.84208	15.01	0.9659	0.0712	1.83870	15.05	0.9657	0.0708	1.83536	15.09	0.9657
6	22.58	0.9234	0.0710	1.81082	22.63	0.9230	0.0707	1.80738	22.69	0.9226	0.0703	1.80398	22.75	0.9226
8	30.33	0.8632	0.0703	1.76671	30.40	0.8625	0.0699	1.76320	30.48	0.8618	0.0695	1.75972	30.56	0.8618
10	38.29	0.7849	0.0691	1.70933	38.40	0.7837	0.0688	1.70570	38.50	0.7826	0.0684	1.70210	38.60	0.7826
12	46.58	0.6874	0.0675	1.63792	46.71	0.6857	0.0671	1.63411	46.84	0.6840	0.0667	1.63035	46.97	0.6840
14	55.32	0.5689	0.0650	1.55111	55.49	0.5665	0.0646	1.54705	55.66	0.5641	0.0641	1.54303	55.83	0.5641
16	64.79	0.4259	0.0611	1.44629	65.01	0.4224	0.0607	1.44181	65.23	0.4189	0.0602	1.43737	65.45	0.4189
18	75.51	0.2503	0.0547	1.31761	75.81	0.2452	0.0541	1.31237	76.11	0.2400	0.0535	1.30714	76.41	0.2400
20	88.99	0.0176	0.0419	1.14711	89.50	0.0088	0.0410	1.13973	90.01	-0.0002	0.0400	1.13227	90.52	-0.0002
$x = 7.600$					$x = 7.650$					$x = 7.700$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0709	1.85706	0.00	1.0000	0.0705	1.85382	0.00	1.0000	0.0702	1.85062	0.00	1.0000
2	7.52	0.9914	0.0708	1.85081	7.54	0.9914	0.0704	1.84757	7.56	0.9913	0.0701	1.84436	7.58	0.9913
4	15.09	0.9655	0.0705	1.83205	15.12	0.9654	0.0701	1.82877	15.16	0.9652	0.0698	1.82553	15.20	0.9652
6	22.75	0.9222	0.0700	1.80062	22.80	0.9218	0.0696	1.79730	22.86	0.9214	0.0693	1.79400	22.92	0.9214
8	30.56	0.8611	0.0692	1.75628	30.64	0.8604	0.0688	1.75287	30.72	0.8597	0.0685	1.74950	30.80	0.8597
10	38.60	0.7815	0.0680	1.69854	38.70	0.7804	0.0676	1.69502	38.81	0.7793	0.0673	1.69153	38.92	0.7793
12	46.97	0.6824	0.0663	1.62861	47.10	0.6807	0.0659	1.62292	47.24	0.6790	0.0655	1.61925	47.38	0.6790
14	55.83	0.5616	0.0637	1.53903	56.00	0.5592	0.0633	1.53508	56.17	0.5568	0.0629	1.53116	56.34	0.5568
16	65.45	0.4154	0.0597	1.43296	65.67	0.4119	0.0592	1.42858	65.89	0.4084	0.0587	1.42423	66.12	0.4084
18	76.42	0.2348	0.0529	1.30193	76.73	0.2296	0.0523	1.29674	77.04	0.2243	0.0517	1.29157	77.35	0.2243
20	90.54	-0.0095	0.0390	1.12472	91.08	-0.0189	0.0379	1.11707	91.63	-0.0285	0.0369	1.10931	92.18	-0.0381
$x = 7.750$					$x = 7.800$					$x = 7.850$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0698	1.84745	0.00	1.0000	0.0695	1.84432	0.00	1.0000	0.0692	1.84122	0.00	1.0000
2	7.58	0.9913	0.0697	1.84118	7.59	0.9912	0.0694	1.83804	7.61	0.9912	0.0691	1.83495	7.63	0.9912
4	15.20	0.9650	0.0695	1.82233	15.23	0.9649	0.0691	1.81916	15.27	0.9647	0.0688	1.81602	15.31	0.9647
6	22.92	0.9211	0.0689	1.79075	22.97	0.9207	0.0686	1.78752	23.03	0.9203	0.0683	1.78433	23.09	0.9203
8	30.80	0.8590	0.0681	1.74616	30.87	0.8583	0.0678	1.74285	30.95	0.8576	0.0674	1.73958	31.03	0.8576
10	38.91	0.7781	0.0669	1.68807	39.01	0.7770	0.0666	1.68465	39.11	0.7759	0.0662	1.68126	39.21	0.7759
12	47.37	0.6773	0.0651	1.61563	47.50	0.6756	0.0647	1.61203	47.63	0.6739	0.0644	1.60847	47.77	0.6739
14	56.34	0.5543	0.0625	1.52726	56.50	0.5519	0.0620	1.52341	56.67	0.5494	0.0616	1.51958	56.84	0.5494
16	66.12	0.4049	0.0583	1.41991	66.34	0.4014	0.0578	1.41562	66.56	0.3978	0.0573	1.41136	66.79	0.3978
18	77.35	0.2191	0.0511	1.28640	77.66	0.2137	0.0505	1.28126	77.97	0.2084	0.0500	1.27612	78.28	0.2084
20	92.20	-0.0384	0.0358	1.10142	92.79	-0.0486	0.0347	1.09339	93.39	-0.0591	0.0336	1.08519	93.99	-0.0696

$x = 7.900$					$x = 7.950$					$x = 8.000$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0689	1.83815	0.00	1.0000	0.0685	1.83511	0.00	1.0000	0.0682	1.83211	0.00	1.0000
2	7.63	0.9911	0.0688	1.83185	7.65	0.9911	0.0684	1.82880	7.66	0.9911	0.0681	1.82579	7.66	0.9911
4	15.31	0.9645	0.0685	1.81291	15.34	0.9644	0.0681	1.80983	15.38	0.9642	0.0678	1.80679	15.38	0.9642
6	23.09	0.9199	0.0679	1.78117	23.14	0.9195	0.0676	1.77804	23.20	0.9192	0.0673	1.77494	23.20	0.9192
8	31.03	0.8569	0.0671	1.73634	31.10	0.8562	0.0668	1.73313	31.18	0.8555	0.0664	1.72995	31.18	0.8555
10	39.21	0.7748	0.0656	1.67790	39.32	0.7737	0.0655	1.67457	39.42	0.7726	0.0652	1.67128	39.42	0.7726
12	47.76	0.6723	0.0640	1.60493	47.89	0.6706	0.0636	1.60144	48.02	0.6689	0.0633	1.59797	48.02	0.6689
14	56.84	0.5470	0.0612	1.51578	57.01	0.5445	0.0608	1.51202	57.18	0.5420	0.0604	1.50828	57.18	0.5420
16	66.78	0.3943	0.0569	1.40712	67.00	0.3907	0.0564	1.40291	67.23	0.3871	0.0560	1.39872	67.23	0.3871
18	78.29	0.2029	0.0494	1.27099	78.61	0.1975	0.0488	1.26587	78.93	0.1920	0.0482	1.26076	78.93	0.1920
20	94.01	-0.0699	0.0324	1.07681	94.66	-0.0812	0.0312	1.06822	95.33	-0.0928	0.0299	1.05938	95.33	-0.0928

$x = 8.050$					$x = 8.100$					$x = 8.150$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0679	1.82913	0.00	1.0000	0.0676	1.82619	0.00	1.0000	0.0673	1.82327	0.00	1.0000
2	7.68	0.9910	0.0678	1.82280	7.70	0.9910	0.0675	1.81985	7.72	0.9909	0.0672	1.81692	7.72	0.9909
4	15.42	0.9640	0.0675	1.80377	15.45	0.9639	0.0672	1.80079	15.49	0.9637	0.0669	1.79783	15.49	0.9637
6	23.25	0.9188	0.0670	1.77188	23.31	0.9184	0.0666	1.76884	23.36	0.9180	0.0663	1.76583	23.36	0.9180
8	31.26	0.8548	0.0661	1.72681	31.33	0.8541	0.0658	1.72369	31.41	0.8535	0.0654	1.72060	31.41	0.8535
10	39.52	0.7714	0.0648	1.66801	39.62	0.7703	0.0645	1.66478	39.72	0.7692	0.0641	1.66158	39.72	0.7692
12	48.15	0.6672	0.0629	1.59453	48.28	0.6655	0.0625	1.59112	48.41	0.6638	0.0622	1.58774	48.41	0.6638
14	57.35	0.5396	0.0600	1.50457	57.51	0.5371	0.0597	1.50090	57.68	0.5346	0.0593	1.49725	57.68	0.5346
16	67.45	0.3835	0.0555	1.39456	67.67	0.3799	0.0551	1.39042	67.90	0.3763	0.0546	1.38631	67.90	0.3763
18	79.25	0.1865	0.0476	1.25566	79.58	0.1809	0.0470	1.25056	79.91	0.1752	0.0464	1.24547	79.91	0.1752
20	96.02	-0.1049	0.0286	1.05025	96.76	-0.1177	0.0272	1.04078	97.53	-0.1310	0.0257	1.03090	97.53	-0.1310

$x = 8.200$					$x = 8.250$					$x = 8.300$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0670	1.82038	0.00	1.0000	0.0667	1.81752	0.00	1.0000	0.0664	1.81469	0.00	1.0000
2	7.74	0.9909	0.0669	1.81403	7.75	0.9909	0.0666	1.81116	7.77	0.9908	0.0663	1.80832	7.77	0.9908
4	15.52	0.9635	0.0665	1.79491	15.56	0.9634	0.0663	1.79201	15.59	0.9632	0.0660	1.78914	15.59	0.9632
6	23.42	0.9176	0.0660	1.76286	23.47	0.9173	0.0657	1.75991	23.53	0.9169	0.0654	1.75699	23.53	0.9169
8	31.49	0.8528	0.0651	1.71755	31.56	0.8521	0.0648	1.71452	31.64	0.8514	0.0645	1.71152	31.64	0.8514
10	39.82	0.7681	0.0638	1.65840	39.92	0.7670	0.0635	1.65525	40.02	0.7658	0.0631	1.65214	40.02	0.7658
12	48.54	0.6621	0.0618	1.58439	48.67	0.6604	0.0615	1.58107	48.80	0.6587	0.0611	1.57777	48.80	0.6587
14	57.85	0.5322	0.0589	1.49362	58.02	0.5297	0.0585	1.49003	58.18	0.5272	0.0581	1.48646	58.18	0.5272
16	68.12	0.3727	0.0542	1.38222	68.35	0.3690	0.0537	1.37816	68.57	0.3654	0.0533	1.37411	68.57	0.3654
18	80.24	0.1696	0.0458	1.24037	80.57	0.1638	0.0452	1.23528	80.91	0.1580	0.0446	1.23019	80.91	0.1580
20	96.35	-0.1452	0.0241	1.02053	99.23	-0.1604	0.0224	1.00955	100.18	-0.1768	0.0205	0.99778	100.18	-0.1768

$x = 8.350$					$x = 8.400$					$x = 8.450$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0661	1.81189	0.00	1.0000	0.0658	1.80911	0.00	1.0000	0.0655	1.80636	0.00	1.0000
2	7.79	0.9908	0.0660	1.80551	7.81	0.9907	0.0657	1.80272	7.82	0.9907	0.0654	1.79996	7.82	0.9907
4	15.63	0.9630	0.0657	1.78630	15.66	0.9629	0.0654	1.78348	15.70	0.9627	0.0651	1.78070	15.70	0.9627
6	23.58	0.9165	0.0651	1.75409	23.64	0.9161	0.0648	1.75123	23.69	0.9157	0.0645	1.74839	23.69	0.9157
8	31.71	0.8507	0.0642	1.70855	31.79	0.8500	0.0639	1.70560	31.86	0.8493	0.0636	1.70266	31.86	0.8493
10	40.12	0.7647	0.0628	1.64905	40.22	0.7636	0.0625	1.64598	40.32	0.7625	0.0622	1.64295	40.32	0.7625
12	48.93	0.6570	0.0608	1.57451	49.06	0.6553	0.0605	1.57127	49.18	0.6536	0.0601	1.56806	49.18	0.6536
14	58.35	0.5247	0.0577	1.48292	58.52	0.5222	0.0574	1.47940	58.69	0.5197	0.0570	1.47591	58.69	0.5197
16	68.80	0.3617	0.0529	1.37009	69.02	0.3580	0.0524	1.36609	69.25	0.3543	0.0520	1.36211	69.25	0.3543
18	81.25	0.1522	0.0440	1.22510	81.59	0.1463	0.0434	1.22000	81.93	0.1403	0.0428	1.21490	81.93	0.1403
20	101.23	-0.1948	0.0185	0.98495	102.42	-0.2151	0.0162	0.97060	103.83	-0.2391	0.0133	0.95383	103.83	-0.2391

$\frac{2}{x} = 8.500$					$\frac{2}{x} = 8.550$					$\frac{2}{x} = 8.600$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0652	1.80364	0.00	1.0000	0.0649	1.80094	0.00	1.0000	0.0647	1.79827	0.00	1.0000
2	7.84	0.9907	0.0651	1.79723	7.86	0.9906	0.0648	1.79452	7.87	0.9906	0.0646	1.79184	7.88	0.9906
4	15.73	0.9625	0.0648	1.77794	15.77	0.9624	0.0645	1.77520	15.80	0.9622	0.0642	1.77249	15.83	0.9620
6	23.74	0.9154	0.0642	1.74558	23.80	0.9150	0.0639	1.74279	23.85	0.9146	0.0636	1.74003	23.90	0.9142
8	31.94	0.8486	0.0633	1.69979	32.01	0.8479	0.0630	1.69693	32.09	0.8472	0.0627	1.69409	32.16	0.8465
10	40.42	0.7614	0.0619	1.63994	40.51	0.7602	0.0616	1.63695	40.61	0.7591	0.0612	1.63400	40.71	0.7580
12	49.31	0.6519	0.0598	1.56487	49.44	0.6502	0.0595	1.56171	49.57	0.6485	0.0591	1.55857	49.70	0.6468
14	58.86	0.5172	0.0566	1.47245	59.02	0.5147	0.0563	1.46900	59.19	0.5122	0.0559	1.46559	59.36	0.5097
16	69.48	0.3506	0.0516	1.35815	69.70	0.3469	0.0511	1.35421	69.93	0.3431	0.0507	1.35029	70.16	0.3394
18	82.28	0.1343	0.0422	1.20979	82.63	0.1282	0.0416	1.20467	82.99	0.1221	0.0410	1.19954	83.35	0.1159
20	105.67	-0.2702	0.0095	0.93231										

$\frac{2}{x} = 8.650$					$\frac{2}{x} = 8.700$					$\frac{2}{x} = 8.750$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0644	1.79563	0.00	1.0000	0.0641	1.79301	0.00	1.0000	0.0638	1.79041	0.00	1.0000
2	7.89	0.9905	0.0643	1.78919	7.91	0.9905	0.0640	1.78656	7.93	0.9904	0.0637	1.78395	7.95	0.9903
4	15.84	0.9620	0.0639	1.76981	15.87	0.9619	0.0637	1.76715	15.91	0.9617	0.0634	1.76452	15.95	0.9615
6	23.90	0.9142	0.0633	1.73730	23.96	0.9138	0.0630	1.73459	24.01	0.9135	0.0628	1.73190	24.06	0.9132
8	32.16	0.8465	0.0624	1.69127	32.24	0.8459	0.0621	1.68849	32.31	0.8452	0.0618	1.68572	32.39	0.8445
10	40.71	0.7580	0.0609	1.63107	40.81	0.7569	0.0606	1.62816	40.91	0.7558	0.0603	1.62528	41.01	0.7546
12	49.70	0.6468	0.0588	1.55546	49.82	0.6451	0.0585	1.55238	49.95	0.6434	0.0582	1.54932	50.08	0.6417
14	59.36	0.5097	0.0556	1.46219	59.53	0.5071	0.0552	1.45882	59.69	0.5046	0.0548	1.45547	59.86	0.5021
16	70.16	0.3394	0.0503	1.34638	70.39	0.3356	0.0499	1.34250	70.62	0.3318	0.0494	1.33863	70.85	0.3280
18	83.35	0.1159	0.0404	1.19440	83.71	0.1096	0.0398	1.18924	84.08	0.1032	0.0391	1.18407	84.45	0.0968

$\frac{2}{x} = 8.800$					$\frac{2}{x} = 8.850$					$\frac{2}{x} = 8.900$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0636	1.78794	0.00	1.0000	0.0633	1.78529	0.00	1.0000	0.0630	1.78276	0.00	1.0000
2	7.94	0.9904	0.0634	1.78137	7.96	0.9904	0.0632	1.77881	7.98	0.9903	0.0629	1.77628	8.00	0.9902
4	15.94	0.9615	0.0631	1.76190	15.98	0.9614	0.0628	1.75932	16.01	0.9612	0.0626	1.75675	16.04	0.9610
6	24.06	0.9131	0.0625	1.72924	24.12	0.9127	0.0622	1.72660	24.17	0.9123	0.0619	1.72399	24.23	0.9119
8	32.38	0.8445	0.0615	1.68298	32.46	0.8438	0.0612	1.68027	32.53	0.8431	0.0609	1.67757	32.60	0.8424
10	41.01	0.7546	0.0600	1.62242	41.10	0.7535	0.0597	1.61958	41.20	0.7524	0.0594	1.61677	41.30	0.7513
12	50.08	0.6417	0.0578	1.54628	50.21	0.6400	0.0575	1.54327	50.34	0.6383	0.0572	1.54027	50.46	0.6366
14	59.86	0.5021	0.0545	1.45215	60.03	0.4996	0.0541	1.44885	60.20	0.4970	0.0538	1.44556	60.36	0.4945
16	70.85	0.3280	0.0490	1.33477	71.08	0.3242	0.0486	1.33094	71.32	0.3203	0.0482	1.32712	71.55	0.3165
18	84.45	0.0968	0.0385	1.17887	84.82	0.0902	0.0379	1.17366	85.20	0.0836	0.0373	1.16842	85.59	0.0769

$\frac{2}{x} = 8.950$					$\frac{2}{x} = 9.000$					$\frac{2}{x} = 9.050$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0628	1.78026	0.00	1.0000	0.0625	1.77778	0.00	1.0000	0.0622	1.77532	0.00	1.0000
2	7.99	0.9903	0.0626	1.77376	8.01	0.9902	0.0624	1.77127	8.03	0.9902	0.0621	1.76881	8.05	0.9901
4	16.05	0.9610	0.0623	1.75421	16.08	0.9609	0.0620	1.75170	16.11	0.9607	0.0618	1.74920	16.14	0.9605
6	24.22	0.9120	0.0617	1.72140	24.28	0.9116	0.0614	1.71883	24.33	0.9112	0.0611	1.71629	24.38	0.9108
8	32.60	0.8424	0.0607	1.67490	32.68	0.8417	0.0604	1.67226	32.75	0.8410	0.0601	1.66963	32.83	0.8403
10	41.30	0.7513	0.0592	1.61398	41.40	0.7502	0.0589	1.61122	41.49	0.7490	0.0586	1.60848	41.59	0.7478
12	50.46	0.6366	0.0569	1.53731	50.59	0.6349	0.0566	1.53436	50.72	0.6332	0.0563	1.53144	50.85	0.6315
14	60.36	0.4945	0.0535	1.44230	60.53	0.4919	0.0531	1.43906	60.70	0.4894	0.0528	1.43584	60.87	0.4869
16	71.55	0.3165	0.0478	1.32331	71.78	0.3126	0.0474	1.31952	72.02	0.3087	0.0469	1.31575	72.26	0.3048
18	85.59	0.0769	0.0366	1.16315	85.96	0.0701	0.0360	1.15785	86.38	0.0632	0.0353	1.15252	86.83	0.0563

$x = 9.100$					$x = 9.150$					$x = 9.200$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0620	1.77288	0.00	1.0000	0.0617	1.77047	0.00	1.0000	0.0615	1.76808	0.00	1.0000
2	8.04	0.9902	0.0619	1.76636	8.06	0.9901	0.0616	1.76394	8.08	0.9901	0.0614	1.76154	8.10	0.9901
4	16.15	0.9605	0.0615	1.74673	16.18	0.9604	0.0612	1.74428	16.22	0.9602	0.0610	1.74185	16.24	0.9602
6	24.38	0.9108	0.0609	1.71376	24.43	0.9104	0.0606	1.71126	24.48	0.9101	0.0603	1.70878	24.52	0.9101
8	32.82	0.8403	0.0598	1.66703	32.90	0.8397	0.0596	1.66445	32.97	0.8390	0.0593	1.66189	33.04	0.8383
10	41.59	0.7479	0.0583	1.60576	41.69	0.7468	0.0580	1.60306	41.78	0.7457	0.0577	1.60038	41.88	0.7445
12	50.84	0.6314	0.0560	1.52853	50.97	0.6297	0.0557	1.52565	51.10	0.6280	0.0554	1.52279	51.22	0.6263
14	60.87	0.4868	0.0524	1.43265	61.04	0.4843	0.0521	1.42947	61.20	0.4817	0.0518	1.42631	61.36	0.4791
16	72.25	0.3048	0.0465	1.31199	72.49	0.3009	0.0461	1.30824	72.73	0.2970	0.0457	1.30460	72.97	0.2931
18	86.78	0.0562	0.0347	1.14715	87.19	0.0491	0.0340	1.14174	87.60	0.0418	0.0333	1.13628	88.01	0.0345

$x = 9.250$					$x = 9.300$					$x = 9.350$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0612	1.76570	0.00	1.0000	0.0610	1.76335	0.00	1.0000	0.0607	1.76102	0.00	1.0000
2	8.09	0.9900	0.0611	1.75915	8.11	0.9900	0.0609	1.75679	8.13	0.9900	0.0606	1.75445	8.15	0.9900
4	16.25	0.9601	0.0607	1.73944	16.28	0.9599	0.0605	1.73705	16.32	0.9597	0.0602	1.73468	16.36	0.9597
6	24.54	0.9097	0.0601	1.70632	24.59	0.9093	0.0598	1.70388	24.64	0.9089	0.0596	1.70146	24.69	0.9089
8	33.04	0.8383	0.0590	1.65935	33.11	0.8376	0.0588	1.65684	33.19	0.8369	0.0585	1.65434	33.27	0.8361
10	41.88	0.7446	0.0575	1.59772	41.98	0.7434	0.0572	1.59509	42.07	0.7423	0.0569	1.59247	42.17	0.7412
12	51.22	0.6263	0.0551	1.51996	51.35	0.6246	0.0548	1.51714	51.48	0.6228	0.0545	1.51434	51.61	0.6210
14	61.37	0.4791	0.0514	1.42317	61.54	0.4765	0.0511	1.42005	61.71	0.4739	0.0508	1.41694	61.88	0.4714
16	72.96	0.2930	0.0453	1.30078	73.20	0.2890	0.0449	1.29706	73.44	0.2850	0.0445	1.29336	73.68	0.2810
18	86.02	0.0345	0.0327	1.13078	86.45	0.0270	0.0320	1.12522	86.89	0.0193	0.0313	1.11960	87.33	0.0115

$x = 9.400$					$x = 9.450$					$x = 9.500$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0605	1.75871	0.00	1.0000	0.0602	1.75642	0.00	1.0000	0.0600	1.75415	0.00	1.0000
2	8.14	0.9899	0.0604	1.75214	8.16	0.9899	0.0601	1.74984	8.18	0.9898	0.0599	1.74755	8.20	0.9898
4	16.35	0.9596	0.0600	1.73233	16.38	0.9594	0.0597	1.73001	16.42	0.9592	0.0595	1.72770	16.46	0.9592
6	24.69	0.9086	0.0593	1.69907	24.74	0.9082	0.0591	1.69669	24.79	0.9078	0.0588	1.69433	24.84	0.9074
8	33.26	0.8362	0.0582	1.65187	33.33	0.8355	0.0580	1.64941	33.40	0.8348	0.0577	1.64697	33.47	0.8341
10	42.17	0.7412	0.0566	1.58988	42.26	0.7401	0.0564	1.58731	42.36	0.7389	0.0561	1.58475	42.46	0.7377
12	51.60	0.6211	0.0542	1.51156	51.73	0.6194	0.0539	1.50880	51.85	0.6177	0.0537	1.50606	51.97	0.6160
14	61.88	0.4714	0.0505	1.41386	62.05	0.4688	0.0501	1.41079	62.22	0.4662	0.0498	1.40774	62.40	0.4637
16	73.68	0.2810	0.0441	1.28967	73.92	0.2769	0.0437	1.28599	74.17	0.2729	0.0433	1.28232	74.42	0.2689
18	89.34	0.0115	0.0306	1.11391	89.79	0.0036	0.0298	1.10815	90.26	-0.0046	0.0291	1.10231	90.73	-0.0115

$x = 9.550$					$x = 9.600$					$x = 9.650$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0598	1.75190	0.00	1.0000	0.0595	1.74966	0.00	1.0000	0.0593	1.74745	0.00	1.0000
2	8.19	0.9898	0.0596	1.74529	8.21	0.9898	0.0594	1.74305	8.22	0.9897	0.0592	1.74083	8.24	0.9897
4	16.45	0.9591	0.0593	1.72541	16.48	0.9589	0.0590	1.72314	16.51	0.9587	0.0588	1.72089	16.54	0.9587
6	24.85	0.9074	0.0586	1.69199	24.90	0.9071	0.0583	1.68967	24.95	0.9067	0.0581	1.68737	25.00	0.9067
8	33.47	0.8341	0.0575	1.64456	33.54	0.8335	0.0572	1.64216	33.62	0.8328	0.0570	1.63978	33.70	0.8321
10	42.45	0.7378	0.0558	1.58222	42.55	0.7367	0.0556	1.57970	42.64	0.7356	0.0553	1.57720	42.74	0.7345
12	51.98	0.6159	0.0534	1.50334	52.11	0.6142	0.0531	1.50064	52.23	0.6125	0.0528	1.49796	52.35	0.6108
14	62.38	0.4635	0.0495	1.40471	62.55	0.4609	0.0492	1.40170	62.72	0.4583	0.0489	1.39870	62.90	0.4558
16	74.41	0.2688	0.0429	1.27866	74.65	0.2647	0.0425	1.27501	74.90	0.2605	0.0421	1.27136	75.14	0.2563
18	90.74	-0.0129	0.0283	1.09638	91.23	-0.0214	0.0276	1.09035	91.73	-0.0302	0.0268	1.08421	92.23	-0.0390

$\frac{2}{x} = 9.700$					$\frac{2}{x} = 9.750$					$\frac{2}{x} = 9.800$				
PSI	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$
0	0.00	1.0000	0.0591	1.74525	0.00	1.0000	0.0589	1.74308	0.00	1.0000	0.0586	1.74092	0.00	1.0000
2	8.24	0.9897	0.0589	1.73862	8.26	0.9896	0.0587	1.73644	8.27	0.9896	0.0585	1.73427	8.28	0.9895
4	16.55	0.9586	0.0586	1.71866	16.58	0.9584	0.0583	1.71644	16.61	0.9583	0.0581	1.71425	16.63	0.9581
6	25.00	0.9063	0.0578	1.68509	25.05	0.9059	0.0576	1.68283	25.10	0.9056	0.0574	1.68059	25.14	0.9054
8	33.69	0.8321	0.0567	1.63742	33.76	0.8314	0.0565	1.63508	33.83	0.8307	0.0563	1.63276	33.89	0.8300
10	42.74	0.7344	0.0551	1.57472	42.83	0.7333	0.0548	1.57226	42.93	0.7322	0.0546	1.56982	43.02	0.7311
12	52.36	0.6108	0.0525	1.49529	52.48	0.6090	0.0523	1.49265	52.61	0.6073	0.0520	1.49002	52.74	0.6056
14	62.89	0.4557	0.0486	1.39571	63.06	0.4531	0.0483	1.39275	63.23	0.4504	0.0479	1.38980	63.40	0.4478
16	75.14	0.2564	0.0417	1.26773	75.39	0.2522	0.0413	1.26410	75.64	0.2480	0.0409	1.26047	75.89	0.2438
18	92.24	-0.0392	0.0260	1.07795	92.78	-0.0484	0.0251	1.07155	93.32	-0.0580	0.0243	1.06499	93.86	-0.0679

$\frac{2}{x} = 9.850$					$\frac{2}{x} = 9.900$					$\frac{2}{x} = 9.950$				
PSI	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$
0	0.00	1.0000	0.0584	1.73878	0.00	1.0000	0.0582	1.73665	0.00	1.0000	0.0579	1.73455	0.00	1.0000
2	8.29	0.9896	0.0583	1.73212	8.30	0.9895	0.0580	1.72999	8.32	0.9895	0.0578	1.72787	8.33	0.9894
4	16.65	0.9581	0.0579	1.71207	16.78	0.9579	0.0576	1.70991	16.71	0.9578	0.0574	1.70777	16.73	0.9576
6	25.15	0.9052	0.0571	1.67836	25.20	0.9048	0.0569	1.67615	25.25	0.9044	0.0567	1.67396	25.29	0.9040
8	33.90	0.8300	0.0560	1.63046	33.97	0.8293	0.0558	1.62817	34.04	0.8286	0.0555	1.62590	34.11	0.8278
10	43.02	0.7311	0.0543	1.56740	43.12	0.7299	0.0541	1.56499	43.21	0.7288	0.0538	1.56260	43.29	0.7276
12	52.73	0.6055	0.0517	1.48741	52.86	0.6038	0.0515	1.48481	52.98	0.6021	0.0512	1.48223	53.09	0.6004
14	63.40	0.4478	0.0476	1.38686	63.57	0.4451	0.0473	1.38395	63.74	0.4425	0.0470	1.38104	63.89	0.4399
16	75.89	0.2438	0.0405	1.25686	76.14	0.2395	0.0401	1.25324	76.40	0.2352	0.0397	1.24964	76.65	0.2309
18	93.89	-0.0679	0.0234	1.05826	94.48	-0.0782	0.0225	1.05133	95.10	-0.0889	0.0215	1.04417	95.74	-0.1000

$\frac{2}{x} = 10.000$					$\frac{2}{x} = 10.050$					$\frac{2}{x} = 10.100$				
PSI	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$
0	0.00	1.0000	0.0577	1.73246	0.00	1.0000	0.0575	1.73038	0.00	1.0000	0.0573	1.72833	0.00	1.0000
2	8.34	0.9894	0.0576	1.72577	8.35	0.9894	0.0574	1.72369	8.37	0.9894	0.0572	1.72163	8.38	0.9893
4	16.74	0.9576	0.0572	1.70564	16.78	0.9574	0.0570	1.70353	16.81	0.9573	0.0567	1.70144	16.83	0.9571
6	25.30	0.9041	0.0565	1.67178	25.35	0.9037	0.0562	1.66962	25.40	0.9033	0.0560	1.66748	25.44	0.9029
8	34.11	0.8280	0.0553	1.62365	34.18	0.8273	0.0551	1.62141	34.25	0.8266	0.0548	1.61919	34.31	0.8258
10	43.31	0.7277	0.0536	1.56023	43.40	0.7266	0.0533	1.55788	43.49	0.7254	0.0531	1.55554	43.57	0.7241
12	53.11	0.6003	0.0509	1.47967	53.23	0.5986	0.0507	1.47713	53.36	0.5968	0.0504	1.47460	53.47	0.5949
14	63.91	0.4398	0.0467	1.37815	64.08	0.4371	0.0464	1.37528	64.25	0.4344	0.0461	1.37242	64.41	0.4316
16	76.65	0.2309	0.0393	1.24603	76.91	0.2266	0.0389	1.24243	77.16	0.2222	0.0385	1.23884	77.40	0.2178
18	95.74	-0.1000	0.0205	1.03674	96.42	-0.1118	0.0194	1.02898	97.13	-0.1242	0.0183	1.02085	97.86	-0.1374

$\frac{2}{x} = 10.150$					$\frac{2}{x} = 10.200$					$\frac{2}{x} = 10.250$				
PSI	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$	q	$\frac{2}{S}$	θ	$\cos \theta$
0	0.00	1.0000	0.0571	1.72629	0.00	1.0000	0.0569	1.72426	0.00	1.0000	0.0566	1.72226	0.00	1.0000
2	8.38	0.9893	0.0569	1.71958	8.40	0.9893	0.0567	1.71755	8.42	0.9892	0.0565	1.71553	8.43	0.9891
4	16.84	0.9571	0.0565	1.69937	16.87	0.9570	0.0563	1.69731	16.90	0.9568	0.0561	1.69526	16.92	0.9566
6	25.45	0.9029	0.0558	1.66538	25.50	0.9026	0.0556	1.66325	25.55	0.9022	0.0553	1.66116	25.59	0.9018
8	34.32	0.8259	0.0546	1.61699	34.39	0.8252	0.0544	1.61481	34.46	0.8245	0.0542	1.61264	34.53	0.8237
10	43.59	0.7243	0.0528	1.55322	43.68	0.7232	0.0526	1.55091	43.78	0.7221	0.0524	1.54862	43.86	0.7209
12	53.48	0.5951	0.0501	1.47209	53.61	0.5933	0.0499	1.46959	53.73	0.5916	0.0496	1.46711	53.84	0.5899
14	64.42	0.4318	0.0458	1.36957	64.59	0.4291	0.0455	1.36674	64.76	0.4264	0.0452	1.36392	64.91	0.4236
16	77.42	0.2178	0.0382	1.23524	77.68	0.2134	0.0378	1.23165	77.94	0.2089	0.0374	1.22806	78.19	0.2043
18	97.90	-0.1374	0.0171	1.01225	98.72	-0.1517	0.0158	1.00307	99.63	-0.1672	0.0143	0.99311	100.63	-0.1842

$x = 10.300$					$x = 10.350$					$x = 10.400$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0564	1.72026	0.00	1.0000	0.0562	1.71829	0.00	1.0000	0.0560	1.71633	0.00	1.0000
2	8.43	0.9892	0.0563	1.71353	8.45	0.9892	0.0561	1.71155	8.46	0.9891	0.0559	1.70958	8.47	0.9890
4	16.94	0.9566	0.0559	1.69324	16.97	0.9565	0.0557	1.69122	17.00	0.9563	0.0555	1.68923	17.03	0.9561
6	25.60	0.9016	0.0551	1.65908	25.65	0.9015	0.0549	1.65702	25.70	0.9011	0.0547	1.65498	25.75	0.9007
8	34.53	0.8238	0.0539	1.61048	34.60	0.8231	0.0537	1.60835	34.67	0.8225	0.0535	1.60622	34.74	0.8218
10	43.87	0.7209	0.0521	1.54635	43.96	0.7198	0.0519	1.54409	44.06	0.7187	0.0517	1.54185	44.15	0.7175
12	53.86	0.5898	0.0494	1.46465	53.98	0.5881	0.0491	1.46220	54.11	0.5863	0.0489	1.45976	54.23	0.5845
14	64.93	0.4237	0.0450	1.36111	65.10	0.4210	0.0447	1.35832	65.28	0.4182	0.0444	1.35553	65.45	0.4155
16	78.20	0.2044	0.0370	1.22447	78.47	0.1999	0.0366	1.22088	78.74	0.1953	0.0362	1.21729	79.00	0.1907
18	100.63	-0.1845	0.0127	0.98209	101.80	-0.2045	0.0108	0.96949	103.24	-0.2290	0.0084	0.95412	105.36	-0.2650
$x = 10.450$					$x = 10.500$					$x = 10.550$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0558	1.71438	0.00	1.0000	0.0556	1.71245	0.00	1.0000	0.0554	1.71054	0.00	1.0000
2	8.44	0.9891	0.0557	1.70762	8.49	0.9890	0.0555	1.70568	8.51	0.9890	0.0553	1.70376	8.53	0.9889
4	17.03	0.9561	0.0553	1.68725	17.06	0.9560	0.0550	1.68528	17.10	0.9558	0.0548	1.68333	17.13	0.9556
6	25.75	0.9007	0.0545	1.65295	25.80	0.9003	0.0543	1.65093	25.85	0.9000	0.0541	1.64894	25.90	0.8996
8	34.74	0.8218	0.0533	1.60412	34.81	0.8211	0.0531	1.60202	34.87	0.8204	0.0528	1.59995	34.94	0.8197
10	44.15	0.7175	0.0514	1.53962	44.24	0.7164	0.0512	1.53741	44.33	0.7153	0.0510	1.53522	44.41	0.7141
12	54.23	0.5845	0.0466	1.45734	54.35	0.5828	0.0464	1.45493	54.48	0.5810	0.0461	1.45254	54.61	0.5792
14	65.45	0.4155	0.0441	1.35277	65.62	0.4128	0.0438	1.35001	65.79	0.4100	0.0435	1.34727	66.00	0.4073
16	79.00	0.1907	0.0358	1.21370	79.27	0.1861	0.0354	1.21011	79.55	0.1814	0.0350	1.20651	80.00	0.1767
$x = 10.600$					$x = 10.650$					$x = 10.700$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0552	1.70863	0.00	1.0000	0.0550	1.70675	0.00	1.0000	0.0548	1.70488	0.00	1.0000
2	8.52	0.9890	0.0551	1.70185	8.54	0.9889	0.0549	1.69995	8.56	0.9889	0.0547	1.69807	8.58	0.9888
4	17.13	0.9557	0.0546	1.68139	17.16	0.9555	0.0544	1.67947	17.19	0.9553	0.0542	1.67756	17.22	0.9551
6	25.90	0.8996	0.0539	1.64695	25.95	0.8992	0.0537	1.64498	25.99	0.8988	0.0535	1.64302	26.04	0.8985
8	34.94	0.8197	0.0526	1.59789	35.01	0.8190	0.0524	1.59584	35.08	0.8183	0.0522	1.59381	35.15	0.8177
10	44.43	0.7141	0.0508	1.53303	44.52	0.7130	0.0505	1.53087	44.61	0.7119	0.0503	1.52871	44.70	0.7107
12	54.60	0.5792	0.0479	1.45017	54.73	0.5775	0.0476	1.44780	54.85	0.5757	0.0474	1.44545	54.98	0.5739
14	65.97	0.4073	0.0432	1.34453	66.14	0.4045	0.0429	1.34181	66.31	0.4018	0.0427	1.33910	66.49	0.3990
16	79.82	0.1767	0.0346	1.20291	80.10	0.1720	0.0342	1.19931	80.37	0.1672	0.0338	1.19570	80.65	0.1624
$x = 10.750$					$x = 10.800$					$x = 10.850$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0546	1.70302	0.00	1.0000	0.0544	1.70117	0.00	1.0000	0.0542	1.69934	0.00	1.0000
2	8.57	0.9888	0.0545	1.69621	8.59	0.9888	0.0543	1.69435	8.60	0.9888	0.0541	1.69251	8.62	0.9886
4	17.22	0.9552	0.0540	1.67567	17.25	0.9550	0.0538	1.67379	17.28	0.9548	0.0537	1.67193	17.31	0.9547
6	26.04	0.8985	0.0533	1.64108	26.09	0.8981	0.0531	1.63916	26.14	0.8977	0.0529	1.63724	26.19	0.8974
8	35.15	0.8177	0.0520	1.59179	35.22	0.8170	0.0518	1.58978	35.29	0.8163	0.0516	1.58779	35.35	0.8156
10	44.70	0.7107	0.0501	1.52657	44.80	0.7096	0.0499	1.52445	44.89	0.7085	0.0497	1.52234	44.98	0.7073
12	54.98	0.5739	0.0472	1.44312	55.10	0.5722	0.0469	1.44079	55.22	0.5704	0.0467	1.43848	55.35	0.5686
14	66.49	0.3990	0.0424	1.33640	66.66	0.3962	0.0421	1.33372	66.83	0.3934	0.0418	1.33104	67.01	0.3906
16	80.65	0.1624	0.0334	1.19209	80.94	0.1575	0.0330	1.18846	81.22	0.1526	0.0326	1.18484	81.51	0.1477
$x = 10.900$					$x = 10.950$					$x = 11.000$				
PSI	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$	g	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0540	1.69753	0.00	1.0000	0.0539	1.69572	0.00	1.0000	0.0537	1.69393	0.00	1.0000
2	8.62	0.9887	0.0539	1.69069	8.63	0.9887	0.0537	1.68888	8.65	0.9886	0.0535	1.68708	8.67	0.9885
4	17.31	0.9547	0.0535	1.67007	17.35	0.9545	0.0533	1.66824	17.38	0.9544	0.0531	1.66641	17.41	0.9542
6	26.19	0.8974	0.0527	1.63534	26.24	0.8970	0.0525	1.63346	26.28	0.8966	0.0523	1.63158	26.33	0.8961
8	35.35	0.8156	0.0514	1.58582	35.42	0.8149	0.0512	1.58385	35.49	0.8142	0.0510	1.58190	35.56	0.8136
10	44.98	0.7073	0.0494	1.52024	45.07	0.7062	0.0492	1.51816	45.16	0.7051	0.0490	1.51608	45.25	0.7040
12	55.35	0.5686	0.0465	1.43619	55.47	0.5668	0.0462	1.43391	55.60	0.5650	0.0460	1.43163	55.73	0.5632
14	67.01	0.3906	0.0416	1.32837	67.18	0.3878	0.0413	1.32572	67.36	0.3850	0.0410	1.32307	67.54	0.3822
16	81.51	0.1477	0.0322	1.18120	81.80	0.1427	0.0318	1.17755	82.09	0.1376	0.0314	1.17389	82.38	0.1325

$x = 11.050$					$x = 11.100$					$x = 11.150$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0535	1.69215	0.00	1.0000	0.0533	1.69039	0.00	1.0000	0.0531	1.68864		
2	8.66	0.9886	0.0533	1.68529	8.68	0.9886	0.0531	1.68352	8.69	0.9885	0.0530	1.68176		
4	17.41	0.9542	0.0529	1.66460	17.44	0.9540	0.0527	1.66280	17.47	0.9539	0.0525	1.66101		
6	26.33	0.8962	0.0521	1.62972	26.38	0.8959	0.0519	1.62788	26.43	0.8955	0.0517	1.62604		
8	35.56	0.8135	0.0508	1.57997	35.62	0.8128	0.0506	1.57804	35.69	0.8122	0.0504	1.57613		
10	45.26	0.7039	0.0488	1.51403	45.35	0.7028	0.0486	1.51198	45.44	0.7017	0.0484	1.50995		
12	55.72	0.5632	0.0458	1.42938	55.84	0.5615	0.0455	1.42713	55.97	0.5597	0.0453	1.42490		
14	67.53	0.3822	0.0407	1.32043	67.71	0.3793	0.0405	1.31781	67.88	0.3785	0.0402	1.31519		
16	82.39	0.1325	0.0310	1.17022	82.68	0.1274	0.0306	1.16654	82.98	0.1221	0.0302	1.16284		

$x = 11.200$					$x = 11.250$					$x = 11.300$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0529	1.68690	0.00	1.0000	0.0527	1.68517	0.00	1.0000	0.0526	1.68346		
2	8.71	0.9885	0.0528	1.68001	8.72	0.9884	0.0526	1.67828	8.74	0.9884	0.0524	1.67656		
4	17.50	0.9537	0.0523	1.65924	17.53	0.9536	0.0521	1.65748	17.56	0.9534	0.0520	1.65573		
6	26.48	0.8951	0.0515	1.62422	26.52	0.8947	0.0513	1.62241	26.57	0.8944	0.0511	1.62062		
8	35.76	0.8115	0.0502	1.57424	35.83	0.8108	0.0500	1.57235	35.89	0.8101	0.0498	1.57048		
10	45.53	0.7005	0.0482	1.50793	45.62	0.6994	0.0480	1.50592	45.71	0.6983	0.0478	1.50393		
12	56.09	0.5579	0.0451	1.42268	56.22	0.5561	0.0449	1.42047	56.34	0.5543	0.0446	1.41827		
14	68.06	0.3736	0.0399	1.31258	68.24	0.3708	0.0397	1.30998	68.41	0.3679	0.0394	1.30739		
16	83.29	0.1169	0.0297	1.15913	83.60	0.1115	0.0293	1.15540	83.91	0.1062	0.0289	1.15166		

$x = 11.350$					$x = 11.400$					$x = 11.450$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0524	1.68176	0.00	1.0000	0.0522	1.68007	0.00	1.0000	0.0520	1.67839		
2	8.75	0.9884	0.0522	1.67485	8.77	0.9883	0.0521	1.67315	8.78	0.9883	0.0519	1.67146		
4	17.59	0.9532	0.0518	1.65399	17.62	0.9531	0.0516	1.65227	17.65	0.9529	0.0514	1.65056		
6	26.62	0.8940	0.0509	1.61883	26.67	0.8936	0.0508	1.61706	26.71	0.8933	0.0506	1.61530		
8	35.96	0.8094	0.0496	1.56862	36.03	0.8087	0.0494	1.56677	36.09	0.8080	0.0492	1.56493		
10	45.80	0.6971	0.0476	1.50195	45.90	0.6960	0.0474	1.49998	45.99	0.6948	0.0472	1.49802		
12	56.46	0.5525	0.0444	1.41608	56.59	0.5507	0.0442	1.41391	56.71	0.5489	0.0440	1.41175		
14	68.59	0.3650	0.0391	1.30481	68.77	0.3621	0.0389	1.30224	68.95	0.3592	0.0386	1.29967		
16	84.22	0.1007	0.0285	1.14789	84.54	0.0952	0.0281	1.14411	84.86	0.0896	0.0276	1.14030		

$x = 11.500$					$x = 11.550$					$x = 11.600$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0519	1.67672	0.00	1.0000	0.0517	1.67507	0.00	1.0000	0.0515	1.67343		
2	8.80	0.9882	0.0517	1.66979	8.81	0.9882	0.0515	1.66812	8.83	0.9882	0.0514	1.66647		
4	17.68	0.9527	0.0512	1.64886	17.71	0.9526	0.0511	1.64717	17.74	0.9524	0.0509	1.64549		
6	26.76	0.8929	0.0504	1.61356	26.81	0.8925	0.0502	1.61182	26.86	0.8921	0.0500	1.61009		
8	36.16	0.8074	0.0490	1.56311	36.23	0.8067	0.0489	1.56130	36.29	0.8060	0.0487	1.55950		
10	46.08	0.6937	0.0470	1.49607	46.17	0.6926	0.0468	1.49414	46.26	0.6914	0.0466	1.49222		
12	56.83	0.5471	0.0437	1.40959	56.96	0.5452	0.0435	1.40745	57.08	0.5434	0.0433	1.40532		
14	69.12	0.3563	0.0383	1.29711	69.30	0.3534	0.0381	1.29456	69.48	0.3505	0.0378	1.29202		
16	85.18	0.0839	0.0272	1.13646	85.51	0.0782	0.0268	1.13260	85.85	0.0724	0.0263	1.12871		

$x = 11.650$					$x = 11.700$					$x = 11.750$				
PSI	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	$\cos \theta$	q	S^2	θ	S^2
0	0.00	1.0000	0.0513	1.67180	0.00	1.0000	0.0512	1.67018	0.00	1.0000	0.0510	1.66857		
2	8.84	0.9881	0.0512	1.66483	8.86	0.9881	0.0510	1.66230	8.87	0.9880	0.0509	1.66159		
4	17.77	0.9523	0.0507	1.64383	17.80	0.9521	0.0505	1.64217	17.83	0.9519	0.0504	1.64053		
6	26.90	0.8918	0.0499	1.60838	26.95	0.8914	0.0497	1.60668	27.00	0.8910	0.0495	1.60499		
8	36.36	0.8053	0.0485	1.55771	36.43	0.8046	0.0483	1.55593	36.49	0.8039	0.0481	1.55416		
10	46.35	0.6903	0.0464	1.49031	46.44	0.6891	0.0462	1.48841	46.53	0.6880	0.0460	1.48652		
12	57.21	0.5416	0.0431	1.40320	57.33	0.5398	0.0429	1.40109	57.45	0.5380	0.0427	1.39900		
14	69.66	0.3475	0.0375	1.28949	69.84	0.3446	0.0373	1.28696	70.02	0.3416	0.0370	1.28444		
16	86.19	0.0665	0.0259	1.12480	86.53	0.0605	0.0254	1.12084	86.88	0.0544	0.0250	1.11686		

$x = 11.800$					$x = 11.850$					$x = 11.900$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0508	1.66697	0.00	1.0000	0.0507	1.66538	0.00	1.0000	0.0505	1.66380	0.00	1.0000
2	8.89	0.9880	0.0507	1.65998	8.90	0.9880	0.0505	1.65839	8.91	0.9879	0.0504	1.65680	8.92	0.9878
4	17.86	0.9518	0.0502	1.63890	17.89	0.9516	0.0500	1.63728	17.92	0.9515	0.0499	1.63567	17.95	0.9513
6	27.04	0.8907	0.0493	1.60331	27.09	0.8903	0.0492	1.60164	27.14	0.8899	0.0490	1.59999	27.18	0.8896
8	36.56	0.8032	0.0479	1.55241	36.63	0.8025	0.0478	1.55066	36.69	0.8019	0.0476	1.54893	36.76	0.8012
10	46.62	0.6868	0.0458	1.48464	46.71	0.6857	0.0456	1.48277	46.80	0.6845	0.0454	1.48091	46.89	0.6834
12	57.58	0.5362	0.0425	1.39691	57.70	0.5343	0.0423	1.39483	57.83	0.5325	0.0420	1.39276	57.95	0.5307
14	70.20	0.3387	0.0368	1.28192	70.39	0.3357	0.0365	1.27942	70.57	0.3327	0.0363	1.27691	70.75	0.3297
16	87.23	0.0482	0.0245	1.11283	87.60	0.0420	0.0240	1.10877	87.96	0.0356	0.0236	1.10466	88.33	0.0291
$x = 11.950$					$x = 12.000$					$x = 12.050$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0503	1.66224	0.00	1.0000	0.0502	1.66068	0.00	1.0000	0.0500	1.65914	0.00	1.0000
2	8.93	0.9879	0.0502	1.65523	8.94	0.9878	0.0500	1.65366	8.96	0.9878	0.0499	1.65211	8.97	0.9877
4	17.95	0.9513	0.0497	1.63407	17.98	0.9511	0.0495	1.63248	18.01	0.9510	0.0494	1.63090	18.10	0.9505
6	27.18	0.8896	0.0486	1.59834	27.23	0.8892	0.0486	1.59670	27.28	0.8888	0.0485	1.59508	27.41	0.8877
8	36.76	0.8012	0.0474	1.54721	36.82	0.8005	0.0472	1.54550	36.89	0.7998	0.0471	1.54379	37.09	0.7977
10	46.89	0.6834	0.0453	1.47907	46.98	0.6823	0.0451	1.47723	47.07	0.6811	0.0449	1.47541	47.34	0.6777
12	57.95	0.5307	0.0418	1.39070	58.07	0.5288	0.0416	1.38866	58.20	0.5270	0.0414	1.38662	58.37	0.5251
14	70.75	0.3297	0.0360	1.27442	70.93	0.3267	0.0357	1.27193	71.12	0.3236	0.0355	1.26945	71.67	0.3145
16	88.33	0.0291	0.0231	1.10050	88.71	0.0224	0.0226	1.09629	89.10	0.0157	0.0221	1.09202	90.31	-0.0055
$x = 12.100$					$x = 12.150$					$x = 12.200$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0499	1.65760	0.00	1.0000	0.0497	1.65608	0.00	1.0000	0.0495	1.65457	0.00	1.0000
2	9.07	0.9878	0.0497	1.65057	9.09	0.9877	0.0495	1.64904	9.00	0.9877	0.0494	1.64751	9.04	0.9876
4	18.04	0.9508	0.0492	1.62933	18.07	0.9507	0.0490	1.62777	18.10	0.9505	0.0489	1.62622	18.19	0.9500
6	27.32	0.8884	0.0483	1.59346	27.37	0.8881	0.0481	1.59186	27.41	0.8877	0.0480	1.59027	27.55	0.8866
8	36.95	0.7991	0.0469	1.54210	37.02	0.7984	0.0467	1.54042	37.09	0.7977	0.0466	1.53875	37.28	0.7957
10	47.16	0.6800	0.0447	1.47359	47.25	0.6788	0.0445	1.47179	47.34	0.6777	0.0443	1.47000	47.61	0.6742
12	58.32	0.5252	0.0412	1.38459	58.45	0.5233	0.0410	1.38257	58.57	0.5215	0.0408	1.38056	58.94	0.5159
14	71.30	0.3206	0.0352	1.26697	71.49	0.3175	0.0350	1.26450	71.67	0.3145	0.0347	1.26203	72.23	0.3052
16	89.50	0.0088	0.0216	1.08769	89.90	0.0017	0.0211	1.08329	90.31	-0.0055	0.0205	1.07882	91.62	-0.0282
$x = 12.250$					$x = 12.300$					$x = 12.350$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0494	1.65306	0.00	1.0000	0.0492	1.65157	0.00	1.0000	0.0491	1.65008	0.00	1.0000
2	9.02	0.9876	0.0492	1.64600	9.03	0.9876	0.0491	1.64450	9.04	0.9876	0.0489	1.64301	9.09	0.9874
4	18.13	0.9503	0.0487	1.62469	18.16	0.9502	0.0486	1.62316	18.19	0.9500	0.0484	1.62164	18.26	0.9495
6	27.46	0.8873	0.0478	1.58868	27.51	0.8870	0.0477	1.58711	27.55	0.8866	0.0475	1.58554	27.69	0.8855
8	37.15	0.7971	0.0464	1.53709	37.22	0.7964	0.0462	1.53544	37.28	0.7957	0.0460	1.53380	37.48	0.7936
10	47.43	0.6765	0.0442	1.46821	47.52	0.6754	0.0440	1.46644	47.61	0.6742	0.0438	1.46467	47.87	0.6708
12	58.69	0.5196	0.0406	1.37856	58.82	0.5178	0.0404	1.37657	58.94	0.5159	0.0402	1.37458	59.31	0.5103
14	71.86	0.3114	0.0345	1.25957	72.04	0.3083	0.0342	1.25711	72.23	0.3052	0.0340	1.25465	72.80	0.2958
16	90.74	-0.0129	0.0200	1.07428	91.17	-0.0205	0.0195	1.06964	91.62	-0.0282	0.0189	1.06490	93.04	-0.0530
$x = 12.400$					$x = 12.450$					$x = 12.500$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0489	1.64861	0.00	1.0000	0.0488	1.64714	0.00	1.0000	0.0486	1.64569	0.00	1.0000
2	9.06	0.9875	0.0488	1.64152	9.07	0.9875	0.0486	1.64005	9.09	0.9874	0.0484	1.63858	9.09	0.9874
4	18.22	0.9499	0.0483	1.62013	18.25	0.9497	0.0481	1.61863	18.26	0.9495	0.0479	1.61714	18.26	0.9495
6	27.60	0.8862	0.0473	1.58399	27.64	0.8859	0.0472	1.58244	27.69	0.8855	0.0470	1.58091	27.69	0.8855
8	37.35	0.7950	0.0459	1.53217	37.41	0.7943	0.0457	1.53055	37.48	0.7936	0.0456	1.52894	37.48	0.7936
10	47.70	0.6731	0.0436	1.46292	47.79	0.6719	0.0434	1.46117	47.87	0.6708	0.0433	1.45943	47.87	0.6708
12	59.07	0.5141	0.0400	1.37261	59.19	0.5122	0.0398	1.37065	59.31	0.5103	0.0396	1.36869	59.31	0.5103
14	72.42	0.3021	0.0337	1.25221	72.61	0.2989	0.0335	1.24976	72.80	0.2958	0.0332	1.24732	72.80	0.2958
16	92.08	-0.0362	0.0183	1.06006	92.55	-0.0445	0.0177	1.05510	93.04	-0.0530	0.0171	1.05000	93.04	-0.0530

x = 12.550					x = 12.600					x = 12.650				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0485	1.64424	0.00	1.0000	0.0483	1.64280	0.00	1.0000	0.0482	1.64137		
2	9.10	0.9874	0.0483	1.63713	9.12	0.9874	0.0481	1.63568	9.13	0.9873	0.0480	1.63425		
4	18.39	0.9494	0.0478	1.61566	18.34	0.9492	0.0476	1.61419	18.37	0.9491	0.0475	1.61273		
6	27.73	0.8851	0.0469	1.57938	27.78	0.8847	0.0467	1.57786	27.83	0.8844	0.0466	1.57636		
8	37.54	0.7929	0.0454	1.52733	37.60	0.7922	0.0452	1.52574	37.67	0.7916	0.0451	1.52416		
10	47.96	0.6696	0.0431	1.45771	48.05	0.6684	0.0429	1.45599	48.14	0.6673	0.0428	1.45428		
12	59.44	0.5085	0.0394	1.36674	59.56	0.5066	0.0392	1.36480	59.69	0.5047	0.0390	1.36287		
14	72.98	0.2926	0.0330	1.24498	73.18	0.2894	0.0327	1.24245	73.37	0.2863	0.0325	1.24002		
16	93.55	-0.0619	0.0164	1.04476	94.07	-0.0710	0.0158	1.03934	94.62	-0.0806	0.0151	1.03372		

x = 12.700					x = 12.750					x = 12.800				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0480	1.63995	0.00	1.0000	0.0479	1.63854	0.00	1.0000	0.0477	1.63714		
2	9.14	0.9873	0.0478	1.63282	9.16	0.9873	0.0477	1.63140	9.17	0.9872	0.0476	1.62999		
4	18.39	0.9489	0.0473	1.61128	18.42	0.9487	0.0472	1.60984	18.45	0.9486	0.0470	1.60840		
6	27.87	0.8840	0.0464	1.57486	27.92	0.8836	0.0462	1.57337	27.96	0.8833	0.0461	1.57189		
8	37.73	0.7909	0.0449	1.52258	37.80	0.7902	0.0447	1.52102	37.86	0.7895	0.0446	1.51946		
10	48.23	0.6661	0.0426	1.45258	48.32	0.6650	0.0424	1.45089	48.41	0.6638	0.0422	1.44921		
12	59.61	0.5029	0.0389	1.36095	59.94	0.5010	0.0387	1.35903	60.06	0.4991	0.0385	1.35712		
14	73.56	0.2831	0.0322	1.23759	73.75	0.2798	0.0320	1.23517	73.94	0.2766	0.0317	1.23275		
16	95.20	-0.0906	0.0144	1.02787	95.81	-0.1012	0.0136	1.02174	96.45	-0.1124	0.0128	1.01530		

x = 12.850					x = 12.900					x = 12.950				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0476	1.63575	0.00	1.0000	0.0474	1.63437	0.00	1.0000	0.0473	1.63299		
2	9.19	0.9872	0.0474	1.62859	9.20	0.9871	0.0473	1.62720	9.21	0.9871	0.0471	1.62582		
4	18.43	0.9484	0.0469	1.60698	18.51	0.9483	0.0467	1.60556	18.54	0.9481	0.0466	1.60415		
6	28.01	0.8829	0.0459	1.57042	28.05	0.8825	0.0458	1.56895	28.10	0.8822	0.0456	1.56750		
8	37.93	0.7888	0.0444	1.51791	37.99	0.7881	0.0443	1.51637	38.05	0.7874	0.0441	1.51484		
10	48.50	0.6627	0.0421	1.44754	48.59	0.6615	0.0419	1.44587	48.67	0.6603	0.0417	1.44422		
12	60.18	0.4972	0.0383	1.35523	60.31	0.4953	0.0381	1.35333	60.43	0.4934	0.0379	1.35145		
14	74.14	0.2733	0.0315	1.23033	74.33	0.2701	0.0312	1.22791	74.53	0.2668	0.0310	1.22550		
16	97.14	-0.1243	0.0119	1.00845	97.89	-0.1372	0.0109	1.00110	98.71	-0.1514	0.0099	0.99308		

x = 13.000					x = 13.050					x = 13.100				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0471	1.63162	0.00	1.0000	0.0470	1.63026	0.00	1.0000	0.0469	1.62891		
2	9.23	0.9871	0.0470	1.62444	9.24	0.9870	0.0468	1.62308	9.26	0.9870	0.0467	1.62172		
4	18.57	0.9480	0.0465	1.60275	18.60	0.9478	0.0463	1.60136	18.62	0.9476	0.0462	1.59998		
6	28.14	0.8818	0.0455	1.56605	28.19	0.8814	0.0453	1.56462	28.23	0.8811	0.0452	1.56319		
8	38.12	0.7867	0.0440	1.51332	38.18	0.7860	0.0438	1.51181	38.25	0.7854	0.0437	1.51031		
10	48.76	0.6592	0.0416	1.44257	48.85	0.6580	0.0414	1.44093	48.94	0.6569	0.0413	1.43930		
12	60.56	0.4955	0.0377	1.34957	60.68	0.4896	0.0375	1.34771	60.81	0.4877	0.0374	1.34584		
14	74.72	0.2635	0.0308	1.22308	74.92	0.2602	0.0305	1.22067	75.12	0.2568	0.0303	1.21826		
16	99.63	-0.1673	0.0087	0.98414	100.71	-0.1858	0.0073	0.97378	102.06	-0.2090	0.0055	0.96086		

x = 13.150					x = 13.200					x = 13.250				
PSI	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S	θ	$\cos \theta$	G	S		
0	0.00	1.0000	0.0467	1.62757	0.00	1.0000	0.0466	1.62624	0.00	1.0000	0.0464	1.62491		
2	9.27	0.9869	0.0466	1.62037	9.28	0.9869	0.0464	1.61893	9.30	0.9869	0.0463	1.61769		
4	18.65	0.9475	0.0460	1.59860	18.68	0.9473	0.0459	1.59724	18.71	0.9472	0.0457	1.59588		
6	28.27	0.8807	0.0451	1.56177	28.32	0.8803	0.0449	1.56036	28.36	0.8799	0.0448	1.55895		
8	38.31	0.7847	0.0435	1.50881	38.37	0.7840	0.0434	1.50732	38.44	0.7833	0.0432	1.50584		
10	49.03	0.6557	0.0411	1.43768	49.12	0.6545	0.0409	1.43606	49.20	0.6534	0.0408	1.43446		
12	60.93	0.4858	0.0372	1.34399	61.06	0.4839	0.0370	1.34214	61.18	0.4820	0.0368	1.34030		
14	75.32	0.2535	0.0300	1.21585	75.52	0.2501	0.0298	1.21344	75.72	0.2467	0.0295	1.21104		
16	104.27	-0.2464	0.0024	0.94014										

$x = 13.300$					$x = 13.350$					$x = 13.400$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0463	1.62360	0.00	1.0000	0.0462	1.62229	0.00	1.0000	0.0460	1.62099	0.00	1.0000
2	9.31	0.9868	0.0461	1.61637	9.33	0.9868	0.0460	1.61505	9.34	0.9867	0.0459	1.61374	9.35	0.9866
4	18.74	0.9470	0.0456	1.59453	18.77	0.9468	0.0455	1.59319	18.79	0.9467	0.0453	1.59185	18.80	0.9466
6	28.41	0.8796	0.0446	1.55756	28.45	0.8792	0.0445	1.55617	28.50	0.8788	0.0443	1.55479	28.55	0.8784
8	38.50	0.7826	0.0431	1.50437	38.56	0.7819	0.0429	1.50291	38.63	0.7812	0.0428	1.50145	38.70	0.7805
10	49.29	0.6522	0.0406	1.43286	49.38	0.6510	0.0405	1.43127	49.47	0.6499	0.0403	1.42969	49.55	0.6487
12	61.31	0.4801	0.0366	1.33847	61.43	0.4782	0.0364	1.33665	61.56	0.4762	0.0363	1.33483	61.70	0.4735
14	75.92	0.2433	0.0293	1.20863	76.12	0.2399	0.0290	1.20622	76.32	0.2364	0.0288	1.20381	76.55	0.2325

$x = 13.450$					$x = 13.500$					$x = 13.550$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0459	1.61969	0.00	1.0000	0.0458	1.61841	0.00	1.0000	0.0456	1.61713	0.00	1.0000
2	9.35	0.9867	0.0457	1.61244	9.37	0.9867	0.0456	1.61115	9.38	0.9866	0.0455	1.60986	9.40	0.9865
4	18.82	0.9465	0.0452	1.59053	18.85	0.9464	0.0451	1.58921	18.88	0.9462	0.0449	1.58790	18.90	0.9461
6	28.54	0.8785	0.0442	1.55342	28.59	0.8781	0.0441	1.55205	28.63	0.8777	0.0439	1.55070	28.65	0.8775
8	38.69	0.7805	0.0426	1.50000	38.75	0.7798	0.0425	1.49857	38.82	0.7791	0.0423	1.49713	38.90	0.7782
10	49.56	0.6487	0.0401	1.42811	49.64	0.6475	0.0400	1.42654	49.73	0.6464	0.0398	1.42498	49.85	0.6445
12	61.69	0.4743	0.0361	1.33301	61.81	0.4724	0.0359	1.33121	61.94	0.4705	0.0357	1.32941	62.10	0.4675
14	76.53	0.2330	0.0285	1.20140	76.73	0.2295	0.0283	1.19900	76.94	0.2260	0.0281	1.19659	77.20	0.2215

$x = 13.600$					$x = 13.650$					$x = 13.700$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0455	1.61586	0.00	1.0000	0.0454	1.61459	0.00	1.0000	0.0452	1.61334	0.00	1.0000
2	9.39	0.9866	0.0453	1.60858	9.41	0.9865	0.0452	1.60731	9.42	0.9865	0.0451	1.60605	9.45	0.9864
4	18.91	0.9460	0.0448	1.58660	18.93	0.9459	0.0447	1.58530	18.96	0.9457	0.0445	1.58401	19.00	0.9455
6	28.67	0.8774	0.0438	1.54935	28.72	0.8770	0.0437	1.54801	28.76	0.8766	0.0435	1.54667	28.85	0.8755
8	38.88	0.7785	0.0422	1.49571	38.94	0.7778	0.0420	1.49429	39.01	0.7771	0.0419	1.49288	39.15	0.7755
10	49.82	0.6452	0.0397	1.42343	49.91	0.6440	0.0395	1.42189	50.00	0.6428	0.0394	1.42035	50.15	0.6411
12	62.06	0.4685	0.0356	1.32762	62.19	0.4666	0.0354	1.32583	62.31	0.4646	0.0352	1.32405	62.50	0.4615
14	77.15	0.2225	0.0278	1.19418	77.36	0.2189	0.0276	1.19176	77.56	0.2153	0.0273	1.18935	77.85	0.2115

$x = 13.750$					$x = 13.800$					$x = 13.850$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0451	1.61209	0.00	1.0000	0.0450	1.61085	0.00	1.0000	0.0449	1.60961	0.00	1.0000
2	9.44	0.9865	0.0449	1.60479	9.45	0.9864	0.0448	1.60354	9.46	0.9864	0.0447	1.60230	9.50	0.9863
4	18.99	0.9456	0.0444	1.58273	19.02	0.9454	0.0443	1.58146	19.05	0.9453	0.0441	1.58019	19.15	0.9448
6	28.81	0.8763	0.0434	1.54535	28.85	0.8759	0.0432	1.54403	28.89	0.8755	0.0431	1.54272	29.00	0.8744
8	39.07	0.7764	0.0418	1.49148	39.13	0.7757	0.0416	1.49009	39.19	0.7750	0.0415	1.48870	39.35	0.7729
10	50.08	0.6417	0.0392	1.41682	50.17	0.6405	0.0391	1.41729	50.26	0.6393	0.0389	1.41578	50.45	0.6368
12	62.44	0.4627	0.0350	1.32228	62.57	0.4607	0.0349	1.32051	62.69	0.4588	0.0347	1.31875	62.90	0.4558
14	77.78	0.2117	0.0271	1.18693	77.99	0.2081	0.0268	1.18451	78.20	0.2045	0.0266	1.18209	78.55	0.2005

$x = 13.900$					$x = 13.950$					$x = 14.000$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0447	1.60838	0.00	1.0000	0.0446	1.60716	0.00	1.0000	0.0445	1.60595	0.00	1.0000
2	9.48	0.9864	0.0446	1.60106	9.49	0.9863	0.0444	1.59994	9.50	0.9863	0.0443	1.59862	9.55	0.9862
4	19.07	0.9451	0.0440	1.57893	19.10	0.9449	0.0439	1.57768	19.13	0.9448	0.0437	1.57643	19.20	0.9444
6	28.94	0.8752	0.0430	1.54141	28.98	0.8748	0.0429	1.54012	29.02	0.8744	0.0427	1.53883	29.15	0.8729
8	39.26	0.7743	0.0413	1.48732	39.32	0.7736	0.0412	1.48595	39.38	0.7729	0.0411	1.48458	39.55	0.7705
10	50.35	0.6381	0.0388	1.41427	50.43	0.6370	0.0386	1.41277	50.52	0.6358	0.0385	1.41127	50.70	0.6335
12	62.82	0.4568	0.0345	1.31699	62.95	0.4548	0.0343	1.31524	63.07	0.4529	0.0342	1.31350	63.30	0.4505
14	78.42	0.2008	0.0263	1.17967	78.63	0.1971	0.0261	1.17724	78.85	0.1934	0.0258	1.17481	79.15	0.1895

$x = 14.050$					$x = 14.100$					$x = 14.150$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0444	1.60474	0.00	1.0000	0.0442	1.60355	0.00	1.0000	0.0441	1.60235	0.00	1.0000
2	9.52	0.9862	0.0442	1.59740	9.53	0.9862	0.0440	1.59619	9.54	0.9862	0.0439	1.59499	9.54	0.9862
4	19.16	0.9446	0.0436	1.57520	19.18	0.9445	0.0435	1.57397	19.21	0.9443	0.0434	1.57274	19.21	0.9443
6	29.07	0.8741	0.0426	1.53754	29.11	0.8737	0.0425	1.53627	29.15	0.8733	0.0423	1.53500	29.15	0.8733
8	39.44	0.7722	0.0409	1.48322	39.51	0.7716	0.0408	1.48187	39.57	0.7709	0.0407	1.48052	39.57	0.7709
10	50.61	0.6346	0.0383	1.40978	50.70	0.6334	0.0382	1.40830	50.78	0.6323	0.0380	1.40683	50.78	0.6323
12	63.20	0.4509	0.0340	1.31176	63.33	0.4489	0.0338	1.31003	63.45	0.4469	0.0337	1.30830	63.45	0.4469
14	79.07	0.1897	0.0256	1.17237	79.29	0.1859	0.0253	1.16993	79.51	0.1821	0.0251	1.16748	79.51	0.1821

$x = 14.200$					$x = 14.250$					$x = 14.300$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0440	1.60117	0.00	1.0000	0.0439	1.59999	0.00	1.0000	0.0437	1.59882	0.00	1.0000
2	9.56	0.9861	0.0438	1.59380	9.57	0.9861	0.0437	1.59261	9.58	0.9860	0.0436	1.59143	9.58	0.9860
4	19.24	0.9441	0.0432	1.57152	19.27	0.9440	0.0431	1.57031	19.29	0.9438	0.0430	1.56911	19.29	0.9438
6	29.20	0.8729	0.0422	1.53374	29.24	0.8726	0.0421	1.53248	29.28	0.8722	0.0419	1.53123	29.28	0.8722
8	39.63	0.7702	0.0405	1.47919	39.69	0.7695	0.0404	1.47785	39.75	0.7688	0.0403	1.47653	39.75	0.7688
10	50.87	0.6311	0.0379	1.40536	50.96	0.6299	0.0377	1.40390	51.05	0.6287	0.0376	1.40244	51.05	0.6287
12	63.58	0.4450	0.0335	1.30658	63.71	0.4430	0.0333	1.30486	63.83	0.4410	0.0332	1.30315	63.83	0.4410
14	79.73	0.1783	0.0248	1.16503	79.96	0.1744	0.0246	1.16257	80.18	0.1705	0.0243	1.16011	80.18	0.1705

$x = 14.350$					$x = 14.400$					$x = 14.450$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0436	1.59765	0.00	1.0000	0.0435	1.59649	0.00	1.0000	0.0434	1.59534	0.00	1.0000
2	9.60	0.9860	0.0434	1.59026	9.61	0.9860	0.0433	1.58909	9.62	0.9859	0.0432	1.58793	9.62	0.9859
4	19.32	0.9437	0.0429	1.56791	19.35	0.9435	0.0427	1.56672	19.38	0.9434	0.0426	1.56554	19.38	0.9434
6	29.33	0.8718	0.0418	1.52999	29.37	0.8715	0.0417	1.52875	29.41	0.8711	0.0416	1.52752	29.41	0.8711
8	39.82	0.7681	0.0401	1.47521	39.88	0.7674	0.0400	1.47390	39.94	0.7667	0.0399	1.47260	39.94	0.7667
10	51.13	0.6275	0.0375	1.40099	51.22	0.6263	0.0373	1.39955	51.31	0.6251	0.0372	1.39812	51.31	0.6251
12	63.96	0.4390	0.0330	1.30145	64.09	0.4370	0.0328	1.29975	64.22	0.4350	0.0327	1.29805	64.22	0.4350
14	80.41	0.1666	0.0241	1.15764	80.64	0.1626	0.0238	1.15517	80.87	0.1587	0.0236	1.15268	80.87	0.1587

$x = 14.500$					$x = 14.550$					$x = 14.600$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0433	1.59419	0.00	1.0000	0.0431	1.59305	0.00	1.0000	0.0430	1.59192	0.00	1.0000
2	9.64	0.9859	0.0431	1.58678	9.65	0.9858	0.0430	1.58563	9.66	0.9858	0.0428	1.58449	9.66	0.9858
4	19.40	0.9432	0.0425	1.56436	19.43	0.9430	0.0424	1.56319	19.46	0.9429	0.0423	1.56202	19.46	0.9429
6	29.46	0.8707	0.0415	1.52630	29.50	0.8704	0.0413	1.52508	29.54	0.8700	0.0412	1.52387	29.54	0.8700
8	40.00	0.7660	0.0398	1.47130	40.06	0.7653	0.0396	1.47001	40.13	0.7646	0.0395	1.46872	40.13	0.7646
10	51.39	0.6240	0.0370	1.39669	51.48	0.6228	0.0369	1.39526	51.57	0.6216	0.0368	1.39385	51.57	0.6216
12	64.35	0.4330	0.0325	1.29636	64.47	0.4309	0.0323	1.29468	64.60	0.4289	0.0322	1.29300	64.60	0.4289
14	81.10	0.1546	0.0233	1.15019	81.34	0.1506	0.0231	1.14769	81.58	0.1465	0.0228	1.14518	81.58	0.1465

$x = 14.650$					$x = 14.700$					$x = 14.750$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0429	1.59079	0.00	1.0000	0.0428	1.58967	0.00	1.0000	0.0427	1.58855	0.00	1.0000
2	9.68	0.9858	0.0427	1.58336	9.69	0.9857	0.0426	1.58223	9.70	0.9857	0.0425	1.58110	9.70	0.9857
4	19.49	0.9427	0.0421	1.56086	19.51	0.9426	0.0420	1.55971	19.54	0.9424	0.0419	1.55856	19.54	0.9424
6	29.58	0.8696	0.0411	1.52267	29.63	0.8693	0.0410	1.52147	29.67	0.8689	0.0408	1.52028	29.67	0.8689
8	40.19	0.7639	0.0394	1.46744	40.25	0.7632	0.0392	1.46617	40.31	0.7626	0.0391	1.46490	40.31	0.7626
10	51.66	0.6204	0.0366	1.39243	51.74	0.6192	0.0365	1.39103	51.83	0.6180	0.0364	1.38963	51.83	0.6180
12	64.73	0.4269	0.0320	1.29132	64.86	0.4249	0.0318	1.28965	64.99	0.4228	0.0317	1.28798	64.99	0.4228
14	81.81	0.1424	0.0226	1.14266	82.05	0.1382	0.0223	1.14013	82.30	0.1340	0.0220	1.13759	82.30	0.1340

$x^2 = 14.800$					$x^2 = 14.850$					$x^2 = 14.900$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0426	1.58744	0.00	1.0000	0.0424	1.58634	0.00	1.0000	0.0423	1.58524	0.00	1.0000
2	9.72	0.9857	0.0424	1.57999	9.73	0.9856	0.0423	1.57888	9.74	0.9856	0.0421	1.57777	9.75	0.9855
4	19.57	0.9423	0.0418	1.55742	19.59	0.9421	0.0417	1.55629	19.62	0.9419	0.0416	1.55516	19.65	0.9415
6	29.71	0.8685	0.0407	1.51910	29.75	0.8682	0.0406	1.51792	29.80	0.8678	0.0405	1.51674	29.85	0.8673
8	40.37	0.7619	0.0390	1.46364	40.43	0.7612	0.0389	1.46238	40.49	0.7605	0.0387	1.46114	40.55	0.7597
10	51.92	0.6168	0.0362	1.38824	52.00	0.6156	0.0361	1.38685	52.09	0.6144	0.0359	1.38547	52.18	0.6132
12	65.12	0.4208	0.0315	1.28632	65.25	0.4187	0.0314	1.28466	65.37	0.4167	0.0312	1.28301	65.50	0.4146
14	82.54	0.1298	0.0218	1.13504	82.79	0.1255	0.0215	1.13247	83.04	0.1212	0.0212	1.12990	83.29	0.1168

$x^2 = 14.950$					$x^2 = 15.000$					$x^2 = 15.050$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0422	1.58415	0.00	1.0000	0.0421	1.58306	0.00	1.0000	0.0420	1.58198	0.00	1.0000
2	9.76	0.9855	0.0420	1.57667	9.77	0.9855	0.0419	1.57558	9.78	0.9855	0.0418	1.57449	9.79	0.9854
4	19.65	0.9418	0.0414	1.55404	19.67	0.9416	0.0413	1.55292	19.70	0.9415	0.0412	1.55181	19.73	0.9413
6	29.84	0.8674	0.0404	1.51558	29.88	0.8671	0.0403	1.51442	29.92	0.8667	0.0401	1.51326	30.00	0.8656
8	40.56	0.7598	0.0386	1.45989	40.62	0.7591	0.0385	1.45866	40.68	0.7584	0.0384	1.45742	40.75	0.7574
10	52.18	0.6132	0.0358	1.38409	52.26	0.6120	0.0357	1.38272	52.35	0.6108	0.0355	1.38136	52.44	0.6096
12	65.50	0.4146	0.0310	1.28136	65.63	0.4126	0.0309	1.27972	65.76	0.4105	0.0307	1.27808	65.89	0.4084
14	83.29	0.1168	0.0210	1.12731	83.55	0.1124	0.0207	1.12470	83.80	0.1079	0.0204	1.12208	84.06	0.1034

$x^2 = 15.100$					$x^2 = 15.150$					$x^2 = 15.200$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0419	1.58091	0.00	1.0000	0.0418	1.57984	0.00	1.0000	0.0417	1.57878	0.00	1.0000
2	9.79	0.9854	0.0417	1.57341	9.81	0.9854	0.0416	1.57233	9.82	0.9853	0.0415	1.57126	9.83	0.9852
4	19.73	0.9413	0.0411	1.55070	19.75	0.9412	0.0410	1.54960	19.78	0.9410	0.0409	1.54851	19.81	0.9408
6	29.97	0.8663	0.0400	1.51211	30.01	0.8660	0.0399	1.51097	30.05	0.8656	0.0398	1.50983	30.09	0.8652
8	40.74	0.7577	0.0383	1.45620	40.80	0.7570	0.0381	1.45498	40.86	0.7563	0.0380	1.45377	40.92	0.7556
10	52.44	0.6096	0.0354	1.38000	52.52	0.6084	0.0353	1.37864	52.61	0.6072	0.0352	1.37730	52.70	0.6060
12	65.89	0.4084	0.0306	1.27644	66.02	0.4064	0.0304	1.27481	66.15	0.4043	0.0303	1.27318	66.28	0.4022
14	84.06	0.1034	0.0202	1.11945	84.33	0.0988	0.0199	1.11679	84.59	0.0942	0.0196	1.11412	84.86	0.0895

$x^2 = 15.250$					$x^2 = 15.300$					$x^2 = 15.350$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0416	1.57772	0.00	1.0000	0.0415	1.57667	0.00	1.0000	0.0413	1.57562	0.00	1.0000
2	9.83	0.9853	0.0414	1.57020	9.85	0.9853	0.0413	1.56914	9.86	0.9852	0.0412	1.56808	9.87	0.9851
4	19.81	0.9408	0.0408	1.54742	19.83	0.9407	0.0407	1.54634	19.86	0.9405	0.0406	1.54526	19.89	0.9402
6	30.09	0.8652	0.0397	1.50870	30.13	0.8649	0.0396	1.50757	30.18	0.8645	0.0395	1.50645	30.22	0.8641
8	40.92	0.7556	0.0379	1.45256	40.98	0.7549	0.0378	1.45135	41.04	0.7542	0.0377	1.45016	41.10	0.7535
10	52.70	0.6060	0.0350	1.37595	52.78	0.6048	0.0349	1.37462	52.87	0.6036	0.0348	1.37328	52.96	0.6024
12	66.28	0.4022	0.0301	1.27156	66.41	0.4001	0.0299	1.26994	66.55	0.3980	0.0298	1.26832	66.68	0.3959
14	84.86	0.0895	0.0193	1.11143	85.13	0.0848	0.0191	1.10872	85.41	0.0800	0.0188	1.10599	85.69	0.0752

$x^2 = 15.400$					$x^2 = 15.450$					$x^2 = 15.500$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0412	1.57458	0.00	1.0000	0.0411	1.57355	0.00	1.0000	0.0410	1.57252	0.00	1.0000
2	9.87	0.9852	0.0410	1.56704	9.88	0.9852	0.0409	1.56599	9.90	0.9851	0.0408	1.56496	9.91	0.9850
4	19.89	0.9404	0.0404	1.54419	19.91	0.9402	0.0403	1.54312	19.94	0.9400	0.0402	1.54206	19.97	0.9397
6	30.22	0.8641	0.0393	1.50533	30.26	0.8638	0.0392	1.50422	30.30	0.8634	0.0391	1.50312	30.33	0.8630
8	41.10	0.7535	0.0375	1.44897	41.16	0.7528	0.0374	1.44778	41.22	0.7521	0.0373	1.44660	41.27	0.7514
10	52.96	0.6024	0.0346	1.37196	53.04	0.6012	0.0345	1.37063	53.13	0.6000	0.0344	1.36932	53.22	0.5987
12	66.68	0.3959	0.0296	1.26671	66.81	0.3938	0.0295	1.26510	66.94	0.3917	0.0293	1.26350	67.07	0.3895
14	85.69	0.0752	0.0185	1.10324	85.97	0.0702	0.0182	1.10046	86.26	0.0652	0.0179	1.09766	86.55	0.0602

$x = 15.550$					$x = 15.600$					$x = 15.650$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0409	1.57149	0.00	1.0000	0.0408	1.57047	0.00	1.0000	0.0407	1.56946	0.00	1.56845
2	9.91	0.9851	0.0407	1.56392	9.92	0.9850	0.0406	1.56290	9.94	0.9850	0.0405	1.56188	10.01	1.56086
4	19.97	0.9399	0.0401	1.54101	19.99	0.9397	0.0400	1.53996	20.02	0.9396	0.0399	1.53891	20.10	1.53787
6	30.34	0.8630	0.0390	1.50202	30.38	0.8627	0.0389	1.50092	30.43	0.8623	0.0388	1.49983	30.55	1.49875
8	41.29	0.7514	0.0372	1.44542	41.35	0.7507	0.0371	1.44425	41.41	0.7500	0.0370	1.44309	41.59	1.44193
10	53.22	0.5988	0.0343	1.36801	53.30	0.5976	0.0341	1.36670	53.39	0.5964	0.0340	1.36540	53.65	1.36410
12	67.07	0.3896	0.0292	1.26190	67.20	0.3875	0.0290	1.26030	67.34	0.3853	0.0289	1.25870	68.13	1.25711
14	86.55	0.0602	0.0176	1.09482	86.85	0.0550	0.0173	1.09196	87.15	0.0498	0.0170	1.08907	88.07	1.08615

$x = 15.700$					$x = 15.750$					$x = 15.800$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0406	1.56845	0.00	1.0000	0.0405	1.56744	0.00	1.0000	0.0404	1.56645	0.00	1.56545
2	9.95	0.9850	0.0404	1.56086	9.96	0.9849	0.0403	1.55985	9.97	0.9848	0.0402	1.55884	10.01	1.55784
4	20.05	0.9394	0.0398	1.53787	20.07	0.9393	0.0397	1.53684	20.10	0.9391	0.0396	1.53581	20.18	1.53478
6	30.47	0.8619	0.0387	1.49875	30.51	0.8616	0.0386	1.49767	30.55	0.8612	0.0385	1.49660	30.67	1.49553
8	41.47	0.7493	0.0368	1.44193	41.53	0.7486	0.0367	1.44077	41.59	0.7479	0.0366	1.43963	41.77	1.43848
10	53.48	0.5952	0.0339	1.36410	53.56	0.5939	0.0338	1.36281	53.65	0.5927	0.0336	1.36153	54.17	1.35997
12	67.47	0.3832	0.0287	1.25711	67.60	0.3811	0.0286	1.25552	67.73	0.3789	0.0284	1.25394	68.54	1.25236
14	87.45	0.0445	0.0167	1.08615	87.76	0.0391	0.0164	1.08319	88.07	0.0336	0.0161	1.08019	89.06	1.07716

$x = 15.850$					$x = 15.900$					$x = 15.950$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0403	1.56545	0.00	1.0000	0.0402	1.56446	0.00	1.0000	0.0401	1.56348	0.00	1.56249
2	9.99	0.9848	0.0401	1.55784	10.00	0.9848	0.0400	1.55694	10.01	0.9848	0.0399	1.55585	10.05	1.55487
4	20.12	0.9390	0.0395	1.53478	20.15	0.9388	0.0394	1.53376	20.18	0.9386	0.0393	1.53275	20.25	1.53174
6	30.59	0.8608	0.0384	1.49553	30.63	0.8604	0.0383	1.49447	30.67	0.8601	0.0381	1.49341	30.80	1.49236
8	41.65	0.7473	0.0365	1.43848	41.71	0.7466	0.0364	1.43734	41.77	0.7459	0.0363	1.43621	41.95	1.43508
10	53.74	0.5915	0.0335	1.36025	53.82	0.5903	0.0334	1.35897	53.91	0.5891	0.0333	1.35770	54.17	1.35643
12	67.87	0.3768	0.0283	1.25236	68.00	0.3746	0.0281	1.25078	68.13	0.3724	0.0280	1.24920	68.54	1.24763
14	88.40	0.0280	0.0158	1.07716	88.72	0.0223	0.0154	1.07408	89.06	0.0165	0.0151	1.07095	89.74	1.06778

$x = 16.000$					$x = 16.050$					$x = 16.100$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0400	1.56250	0.00	1.0000	0.0399	1.56153	0.00	1.0000	0.0398	1.56056	0.00	1.55959
2	10.02	0.9847	0.0398	1.55487	10.04	0.9847	0.0397	1.55389	10.05	0.9847	0.0396	1.55291	10.09	1.55194
4	20.20	0.9385	0.0392	1.53174	20.23	0.9383	0.0391	1.53074	20.25	0.9382	0.0390	1.52974	20.33	1.52874
6	30.72	0.8597	0.0380	1.49236	30.76	0.8593	0.0379	1.49131	30.80	0.8590	0.0378	1.49027	30.92	1.48923
8	41.83	0.7452	0.0362	1.43508	41.89	0.7445	0.0361	1.43395	41.95	0.7438	0.0360	1.43284	42.13	1.43172
10	53.99	0.5879	0.0331	1.35643	54.08	0.5866	0.0330	1.35517	54.17	0.5854	0.0329	1.35391	54.43	1.35266
12	68.27	0.3703	0.0278	1.24763	68.40	0.3681	0.0277	1.24606	68.54	0.3659	0.0275	1.24449	68.81	1.24293
14	89.40	0.0106	0.0148	1.06778	89.74	0.0045	0.0144	1.06455	90.10	-0.0017	0.0141	1.06126	90.83	1.05791

$x = 16.150$					$x = 16.200$					$x = 16.250$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0397	1.55959	0.00	1.0000	0.0396	1.55863	0.00	1.0000	0.0395	1.55768	0.00	1.55673
2	10.06	0.9846	0.0395	1.55194	10.07	0.9846	0.0394	1.55097	10.09	0.9845	0.0393	1.55001	10.10	1.54906
4	20.28	0.9380	0.0389	1.52874	20.31	0.9379	0.0388	1.52775	20.33	0.9377	0.0387	1.52677	20.33	1.52579
6	30.84	0.8586	0.0377	1.48923	30.88	0.8582	0.0376	1.48819	30.92	0.8579	0.0375	1.48716	30.92	1.48613
8	42.01	0.7431	0.0359	1.43172	42.07	0.7424	0.0357	1.43061	42.13	0.7417	0.0356	1.42951	42.13	1.42848
10	54.25	0.5842	0.0328	1.35266	54.34	0.5830	0.0327	1.35141	54.43	0.5817	0.0325	1.35016	54.43	1.34913
12	68.67	0.3637	0.0274	1.24293	68.81	0.3615	0.0272	1.24137	68.94	0.3593	0.0271	1.23981	69.07	1.23825
14	90.46	-0.0081	0.0137	1.05791	90.83	-0.0146	0.0133	1.05449	91.22	-0.0213	0.0130	1.05099	91.61	1.04750

$x^2 = 16.300$					$x^2 = 16.350$					$x^2 = 16.400$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0394	1.55673	0.00	1.0000	0.0393	1.55578	0.00	1.0000	0.0392	1.55484	0.00	1.0000
2	10.10	0.9845	0.0392	1.54905	10.11	0.9845	0.0391	1.54810	10.12	0.9844	0.0390	1.54715	10.12	0.9844
4	20.36	0.9375	0.0396	1.52579	20.38	0.9374	0.0385	1.52481	20.41	0.9372	0.0384	1.52384	20.41	0.9372
6	30.96	0.8575	0.0374	1.48614	31.00	0.8571	0.0373	1.48512	31.04	0.8568	0.0372	1.48411	31.04	0.8568
8	42.19	0.7410	0.0355	1.42841	42.25	0.7403	0.0354	1.42731	42.31	0.7396	0.0353	1.42622	42.31	0.7396
10	54.51	0.5905	0.0324	1.34892	54.60	0.5793	0.0323	1.34769	54.69	0.5781	0.0322	1.34646	54.69	0.5781
12	69.08	0.3571	0.0269	1.23825	69.21	0.3549	0.0268	1.23670	69.35	0.3527	0.0266	1.23514	69.35	0.3527
14	91.61	-0.0281	0.0126	1.04741	92.02	-0.0352	0.0122	1.04374	92.44	-0.0425	0.0118	1.03997	92.44	-0.0425

$x^2 = 16.450$					$x^2 = 16.500$					$x^2 = 16.550$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0391	1.55390	0.00	1.0000	0.0390	1.55297	0.00	1.0000	0.0389	1.55204	0.00	1.0000
2	10.14	0.9844	0.0389	1.54621	10.15	0.9844	0.0388	1.54527	10.16	0.9843	0.0387	1.54433	10.16	0.9843
4	20.43	0.9371	0.0383	1.52287	20.46	0.9369	0.0382	1.52191	20.49	0.9368	0.0381	1.52095	20.49	0.9368
6	31.08	0.8564	0.0371	1.48310	31.13	0.8560	0.0370	1.48209	31.17	0.8557	0.0369	1.48109	31.17	0.8557
8	42.37	0.7389	0.0352	1.42513	42.42	0.7382	0.0351	1.42405	42.48	0.7375	0.0350	1.42297	42.48	0.7375
10	54.77	0.5768	0.0321	1.34523	54.86	0.5756	0.0320	1.34401	54.95	0.5744	0.0318	1.34279	54.95	0.5744
12	69.49	0.3504	0.0265	1.23359	69.62	0.3482	0.0263	1.23205	69.76	0.3460	0.0262	1.23050	69.76	0.3460
14	92.87	-0.0501	0.0113	1.03608	93.32	-0.0580	0.0109	1.03206	93.79	-0.0662	0.0104	1.02789	93.79	-0.0662

$x^2 = 16.600$					$x^2 = 16.650$					$x^2 = 16.700$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0388	1.55112	0.00	1.0000	0.0387	1.55020	0.00	1.0000	0.0387	1.54929	0.00	1.0000
2	10.17	0.9842	0.0386	1.54340	10.19	0.9842	0.0385	1.54248	10.20	0.9842	0.0384	1.54156	10.20	0.9842
4	20.51	0.9366	0.0380	1.52000	20.54	0.9364	0.0379	1.51905	20.56	0.9363	0.0378	1.51811	20.56	0.9363
6	31.21	0.8553	0.0368	1.48009	31.25	0.8549	0.0367	1.47910	31.29	0.8546	0.0366	1.47811	31.29	0.8546
8	42.54	0.7366	0.0349	1.42190	42.60	0.7361	0.0348	1.42084	42.66	0.7354	0.0347	1.41977	42.66	0.7354
10	55.03	0.5731	0.0317	1.34158	55.12	0.5719	0.0316	1.34037	55.20	0.5707	0.0315	1.33916	55.20	0.5707
12	69.90	0.3437	0.0261	1.22896	70.03	0.3414	0.0259	1.22742	70.17	0.3392	0.0258	1.22588	70.17	0.3392
14	94.29	-0.0747	0.0099	1.02355	94.60	-0.0838	0.0094	1.01901	95.35	-0.0933	0.0089	1.01424	95.35	-0.0933

$x^2 = 16.750$					$x^2 = 16.800$					$x^2 = 16.850$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0385	1.54838	0.00	1.0000	0.0385	1.54747	0.00	1.0000	0.0384	1.54657	0.00	1.0000
2	10.21	0.9842	0.0384	1.54064	10.22	0.9841	0.0383	1.53973	10.24	0.9841	0.0382	1.53882	10.24	0.9841
4	20.59	0.9361	0.0377	1.51717	20.61	0.9360	0.0376	1.51623	20.64	0.9358	0.0375	1.51530	20.64	0.9358
6	31.33	0.8542	0.0365	1.47713	31.37	0.8538	0.0364	1.47615	31.41	0.8535	0.0363	1.47518	31.41	0.8535
8	42.72	0.7347	0.0346	1.41871	42.78	0.7340	0.0345	1.41766	42.84	0.7333	0.0344	1.41661	42.84	0.7333
10	55.29	0.5694	0.0314	1.33796	55.38	0.5682	0.0313	1.33676	55.46	0.5669	0.0312	1.33557	55.46	0.5669
12	70.31	0.3369	0.0256	1.22434	70.45	0.3346	0.0255	1.22281	70.59	0.3323	0.0253	1.22127	70.59	0.3323
14	95.93	-0.1734	0.0099	1.00918	96.56	-0.1143	0.0077	1.00376	97.25	-0.1261	0.0070	0.99790	97.25	-0.1261

$x^2 = 16.900$					$x^2 = 16.950$					$x^2 = 17.000$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0383	1.54568	0.00	1.0000	0.0382	1.54478	0.00	1.0000	0.0381	1.54389	0.00	1.0000
2	10.25	0.9840	0.0381	1.53791	10.26	0.9840	0.0380	1.53701	10.27	0.9840	0.0379	1.53612	10.27	0.9840
4	20.66	0.9357	0.0374	1.51438	20.69	0.9355	0.0373	1.51345	20.72	0.9354	0.0372	1.51254	20.72	0.9354
6	31.45	0.8531	0.0362	1.47421	31.49	0.8527	0.0361	1.47324	31.53	0.8524	0.0361	1.47228	31.53	0.8524
8	42.90	0.7326	0.0343	1.41556	42.96	0.7318	0.0342	1.41452	43.02	0.7311	0.0341	1.41348	43.02	0.7311
10	55.55	0.5657	0.0311	1.33438	55.64	0.5644	0.0309	1.33320	55.72	0.5632	0.0308	1.33201	55.72	0.5632
12	70.73	0.3300	0.0252	1.21974	70.87	0.3277	0.0250	1.21821	71.01	0.3254	0.0249	1.21668	71.01	0.3254
14	98.01	-0.1393	0.0062	0.99142	98.87	-0.1543	0.0054	0.98405	99.92	-0.1723	0.0043	0.97523	99.92	-0.1723

2 x = 17.050					2 x = 17.100					2 x = 17.150				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.0380	1.54301	0.00	1.0000	0.0379	1.54213	0.00	1.0000	0.0378	1.54125	0.00	1.0000
2	10.29	0.9839	0.0378	1.53523	10.30	0.9839	0.0377	1.53434	10.31	0.9839	0.0376	1.53346	10.31	0.9839
4	20.74	0.9352	0.0372	1.51162	20.77	0.9350	0.0371	1.51071	20.79	0.9349	0.0370	1.50981	20.79	0.9349
6	31.57	0.8520	0.0360	1.47133	31.61	0.8516	0.0359	1.47037	31.65	0.8513	0.0358	1.46942	31.65	0.8513
8	43.08	0.7304	0.0340	1.41245	43.14	0.7297	0.0339	1.41142	43.19	0.7290	0.0338	1.41039	43.19	0.7290
10	55.81	0.5620	0.0307	1.33094	55.90	0.5607	0.0306	1.32966	55.98	0.5595	0.0305	1.32849	55.98	0.5595
12	71.15	0.3231	0.0248	1.21515	71.29	0.3208	0.0246	1.21363	71.43	0.3184	0.0245	1.21210	71.43	0.3184
14	101.36	-0.1969	0.0028	0.96328										

2 x = 17.200					2 x = 17.250					2 x = 17.300				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.0377	1.54038	0.00	1.0000	0.0377	1.53951	0.00	1.0000	0.0376	1.53865	0.00	1.0000
2	10.32	0.9838	0.0375	1.53258	10.33	0.9838	0.0374	1.53170	10.35	0.9837	0.0374	1.53083	10.35	0.9837
4	20.82	0.9347	0.0369	1.50890	20.84	0.9346	0.0368	1.50801	20.87	0.9344	0.0367	1.50711	20.87	0.9344
6	31.69	0.8509	0.0357	1.46848	31.73	0.8505	0.0356	1.46754	31.77	0.8502	0.0355	1.46660	31.77	0.8502
8	43.25	0.7283	0.0337	1.40937	43.31	0.7276	0.0336	1.40836	43.37	0.7269	0.0335	1.40734	43.37	0.7269
10	56.07	0.5582	0.0304	1.32733	56.15	0.5569	0.0303	1.32617	56.24	0.5557	0.0302	1.32501	56.24	0.5557
12	71.57	0.3161	0.0243	1.21058	71.71	0.3138	0.0242	1.20906	71.86	0.3114	0.0240	1.20754	71.86	0.3114

2 x = 17.350					2 x = 17.400					2 x = 17.450				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.0375	1.53779	0.00	1.0000	0.0374	1.53693	0.00	1.0000	0.0373	1.53608	0.00	1.0000
2	10.36	0.9837	0.0373	1.52996	10.37	0.9837	0.0372	1.52910	10.38	0.9836	0.0371	1.52824	10.38	0.9836
4	20.89	0.9343	0.0366	1.50622	20.92	0.9341	0.0365	1.50534	20.94	0.9339	0.0364	1.50446	20.94	0.9339
6	31.81	0.8498	0.0354	1.46567	31.85	0.8494	0.0353	1.46474	31.89	0.8491	0.0352	1.46382	31.89	0.8491
8	43.43	0.7262	0.0334	1.40633	43.49	0.7255	0.0333	1.40533	43.55	0.7248	0.0332	1.40433	43.55	0.7248
10	56.33	0.5544	0.0301	1.32385	56.41	0.5532	0.0300	1.32270	56.50	0.5519	0.0298	1.32156	56.50	0.5519
12	72.00	0.3090	0.0239	1.20602	72.14	0.3066	0.0238	1.20450	72.29	0.3043	0.0236	1.20298	72.29	0.3043

2 x = 17.500					2 x = 17.550					2 x = 17.600				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.0372	1.53523	0.00	1.0000	0.0371	1.53439	0.00	1.0000	0.0371	1.53355	0.00	1.0000
2	10.39	0.9836	0.0370	1.52739	10.41	0.9835	0.0369	1.52554	10.42	0.9835	0.0368	1.52469	10.42	0.9835
4	20.97	0.9338	0.0364	1.50358	20.99	0.9336	0.0363	1.50271	21.02	0.9335	0.0362	1.50184	21.02	0.9335
6	31.93	0.8487	0.0351	1.46290	31.97	0.8483	0.0350	1.46198	32.01	0.8480	0.0349	1.46107	32.01	0.8480
8	43.61	0.7241	0.0331	1.40333	43.66	0.7234	0.0330	1.40234	43.72	0.7227	0.0329	1.40135	43.72	0.7227
10	56.59	0.5507	0.0297	1.32041	56.67	0.5494	0.0296	1.31927	56.76	0.5481	0.0295	1.31813	56.76	0.5481
12	72.43	0.3019	0.0235	1.20146	72.57	0.2995	0.0233	1.19994	72.72	0.2970	0.0232	1.19843	72.72	0.2970

2 x = 17.650					2 x = 17.700					2 x = 17.750				
PSI	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$	Q	S	θ	$\cos \theta$
0	0.00	1.0000	0.0370	1.53271	0.00	1.0000	0.0369	1.53188	0.00	1.0000	0.0368	1.53105	0.00	1.0000
2	10.43	0.9835	0.0368	1.52485	10.44	0.9834	0.0367	1.52401	10.46	0.9834	0.0366	1.52317	10.46	0.9834
4	21.04	0.9333	0.0361	1.50097	21.07	0.9332	0.0360	1.50011	21.09	0.9330	0.0359	1.49925	21.09	0.9330
6	32.05	0.8476	0.0349	1.46016	32.09	0.8472	0.0348	1.45925	32.13	0.8469	0.0347	1.45835	32.13	0.8469
8	43.78	0.7220	0.0328	1.40036	43.84	0.7213	0.0327	1.39938	43.90	0.7206	0.0326	1.39840	43.90	0.7206
10	56.85	0.5469	0.0294	1.31700	56.93	0.5456	0.0293	1.31587	57.02	0.5443	0.0292	1.31475	57.02	0.5443
12	72.87	0.2946	0.0230	1.19691	73.01	0.2922	0.0229	1.19540	73.16	0.2897	0.0228	1.19388	73.16	0.2897

$x = 17.800$					$x = 17.850$					$x = 17.900$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0367	1.53023	0.00	1.0000	0.0366	1.52940	0.00	1.0000	0.0365	1.52859		
2	10.47	0.9834	0.0365	1.52234	10.48	0.9833	0.0364	1.52151	10.49	0.9833	0.0363	1.52068		
4	21.12	0.9329	0.0358	1.49840	21.14	0.9327	0.0357	1.49754	21.17	0.9325	0.0357	1.49670		
6	32.17	0.8465	0.0346	1.45745	32.21	0.8461	0.0345	1.45656	32.25	0.8458	0.0344	1.45567		
8	43.96	0.7199	0.0325	1.39743	44.01	0.7192	0.0324	1.39646	44.07	0.7185	0.0324	1.39549		
10	57.11	0.5431	0.0291	1.31362	57.19	0.5418	0.0290	1.31250	57.28	0.5405	0.0289	1.31139		
12	73.30	0.2873	0.0226	1.19237	73.45	0.2848	0.0225	1.19086	73.60	0.2824	0.0223	1.18934		

$x = 17.950$					$x = 18.000$					$x = 18.050$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0365	1.52777	0.00	1.0000	0.0364	1.52696	0.00	1.0000	0.0363	1.52615		
2	10.50	0.9832	0.0363	1.51986	10.51	0.9832	0.0362	1.51904	10.53	0.9832	0.0361	1.51823		
4	21.19	0.9324	0.0356	1.49585	21.21	0.9322	0.0355	1.49501	21.24	0.9321	0.0354	1.49418		
6	32.29	0.8454	0.0343	1.45478	32.33	0.8450	0.0342	1.45390	32.37	0.8447	0.0342	1.45302		
8	44.13	0.7177	0.0323	1.39453	44.19	0.7170	0.0322	1.39357	44.25	0.7163	0.0321	1.39261		
10	57.37	0.5393	0.0288	1.31027	57.45	0.5380	0.0287	1.30916	57.54	0.5367	0.0286	1.30806		
12	73.75	0.2799	0.0222	1.18783	73.90	0.2774	0.0221	1.18631	74.05	0.2749	0.0219	1.18480		

$x = 18.100$					$x = 18.150$					$x = 18.200$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0362	1.52535	0.00	1.0000	0.0361	1.52455	0.00	1.0000	0.0361	1.52375		
2	10.54	0.9831	0.0360	1.51742	10.55	0.9831	0.0359	1.51661	10.56	0.9831	0.0358	1.51581		
4	21.26	0.9319	0.0353	1.49334	21.29	0.9318	0.0352	1.49252	21.31	0.9316	0.0352	1.49169		
6	32.40	0.8443	0.0341	1.45215	32.44	0.8439	0.0340	1.45128	32.48	0.8435	0.0339	1.45041		
8	44.31	0.7156	0.0320	1.39166	44.36	0.7149	0.0319	1.39071	44.42	0.7142	0.0318	1.38977		
10	57.63	0.5354	0.0285	1.30696	57.71	0.5342	0.0284	1.30586	57.80	0.5329	0.0283	1.30476		
12	74.20	0.2724	0.0218	1.18329	74.35	0.2698	0.0216	1.18177	74.50	0.2673	0.0215	1.18026		

$x = 18.250$					$x = 18.300$					$x = 18.350$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0360	1.52296	0.00	1.0000	0.0359	1.52217	0.00	1.0000	0.0358	1.52138		
2	10.57	0.9830	0.0358	1.51501	10.59	0.9830	0.0357	1.51421	10.60	0.9829	0.0356	1.51342		
4	21.34	0.9315	0.0351	1.49087	21.36	0.9313	0.0350	1.49005	21.39	0.9311	0.0349	1.48923		
6	32.52	0.8432	0.0338	1.44954	32.56	0.8428	0.0337	1.44868	32.60	0.8424	0.0337	1.44782		
8	44.48	0.7135	0.0317	1.38883	44.54	0.7128	0.0316	1.38789	44.60	0.7121	0.0315	1.38695		
10	57.89	0.5316	0.0282	1.30367	57.97	0.5303	0.0281	1.30258	58.06	0.5290	0.0280	1.30149		
12	74.65	0.2648	0.0214	1.17874	74.80	0.2622	0.0212	1.17723	74.95	0.2596	0.0211	1.17571		

$x = 18.400$					$x = 18.450$					$x = 18.500$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2		
0	0.00	1.0000	0.0357	1.52060	0.00	1.0000	0.0357	1.51982	0.00	1.0000	0.0356	1.51904		
2	10.61	0.9829	0.0355	1.51263	10.62	0.9829	0.0354	1.51184	10.63	0.9828	0.0354	1.51106		
4	21.41	0.9310	0.0348	1.48842	21.44	0.9308	0.0348	1.48761	21.46	0.9307	0.0347	1.48681		
6	32.64	0.8421	0.0336	1.44697	32.68	0.8417	0.0335	1.44612	32.72	0.8413	0.0334	1.44527		
8	44.65	0.7114	0.0315	1.38602	44.71	0.7106	0.0314	1.38509	44.77	0.7099	0.0313	1.38417		
10	58.15	0.5277	0.0279	1.30040	58.23	0.5264	0.0278	1.29932	58.32	0.5252	0.0277	1.29824		
12	75.11	0.2570	0.0209	1.17419	75.26	0.2544	0.0208	1.17267	75.41	0.2518	0.0207	1.17116		

$x = 18.550$					$x = 18.600$					$x = 18.650$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0355	1.51827	0.00	1.0000	0.0354	1.51750	0.00	1.0000	0.0354	1.51674	0.00	1.51674
2	10.64	0.9828	0.0353	1.51028	10.66	0.9828	0.0352	1.50950	10.67	0.9827	0.0351	1.50873	10.67	1.50873
4	21.48	0.9305	0.0346	1.48601	21.51	0.9304	0.0345	1.48521	21.53	0.9302	0.0344	1.48441	21.53	1.48441
6	32.76	0.8410	0.0333	1.44443	32.80	0.8406	0.0332	1.44359	32.83	0.8402	0.0332	1.44275	32.83	1.44275
8	44.83	0.7092	0.0312	1.38325	44.89	0.7085	0.0311	1.38233	44.94	0.7078	0.0310	1.38141	44.94	1.38141
10	58.41	0.5239	0.0276	1.29717	58.50	0.5226	0.0275	1.29610	58.58	0.5213	0.0274	1.29503	58.58	1.29503
12	75.57	0.2492	0.0205	1.16964	75.72	0.2466	0.0204	1.16811	75.88	0.2439	0.0202	1.16659	75.88	1.16659

$x = 18.700$					$x = 18.750$					$x = 18.800$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0353	1.51597	0.00	1.0000	0.0352	1.51521	0.00	1.0000	0.0351	1.51446	0.00	1.51446
2	10.68	0.9827	0.0351	1.50796	10.69	0.9826	0.0350	1.50720	10.70	0.9826	0.0349	1.50643	10.70	1.50643
4	21.56	0.9301	0.0344	1.48362	21.58	0.9299	0.0343	1.48283	21.61	0.9297	0.0342	1.48205	21.61	1.48205
6	32.87	0.8399	0.0331	1.44192	32.91	0.8395	0.0330	1.44108	32.95	0.8391	0.0329	1.44026	32.95	1.44026
8	45.00	0.7071	0.0309	1.38050	45.06	0.7064	0.0309	1.37960	45.12	0.7057	0.0308	1.37869	45.12	1.37869
10	58.67	0.5200	0.0273	1.29396	58.76	0.5187	0.0272	1.29290	58.84	0.5174	0.0271	1.29194	58.84	1.29194
12	76.04	0.2413	0.0201	1.16507	76.20	0.2386	0.0200	1.16354	76.35	0.2359	0.0198	1.16202	76.35	1.16202

$x = 18.850$					$x = 18.900$					$x = 18.950$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0350	1.51370	0.00	1.0000	0.0350	1.51295	0.00	1.0000	0.0349	1.51221	0.00	1.51221
2	10.72	0.9826	0.0348	1.50567	10.73	0.9825	0.0348	1.50491	10.74	0.9825	0.0347	1.50416	10.74	1.50416
4	21.63	0.9296	0.0341	1.48127	21.65	0.9294	0.0341	1.48049	21.68	0.9293	0.0340	1.47971	21.68	1.47971
6	32.99	0.8388	0.0328	1.43943	33.03	0.8384	0.0328	1.43861	33.07	0.8380	0.0327	1.43779	33.07	1.43779
8	45.17	0.7050	0.0307	1.37779	45.23	0.7042	0.0306	1.37689	45.29	0.7035	0.0305	1.37600	45.29	1.37600
10	58.93	0.5161	0.0270	1.29078	59.02	0.5148	0.0269	1.28972	59.11	0.5135	0.0268	1.28867	59.11	1.28867
12	76.51	0.2332	0.0197	1.16049	76.67	0.2305	0.0195	1.15896	76.83	0.2278	0.0194	1.15742	76.83	1.15742

$x = 19.000$					$x = 19.050$					$x = 19.100$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0348	1.51146	0.00	1.0000	0.0347	1.51072	0.00	1.0000	0.0347	1.50998	0.00	1.50998
2	10.75	0.9825	0.0346	1.50341	10.76	0.9824	0.0345	1.50266	10.77	0.9824	0.0345	1.50192	10.77	1.50192
4	21.70	0.9291	0.0339	1.47894	21.73	0.9290	0.0338	1.47817	21.75	0.9288	0.0338	1.47741	21.75	1.47741
6	33.11	0.8377	0.0326	1.43698	33.14	0.8373	0.0325	1.43617	33.18	0.8369	0.0324	1.43536	33.18	1.43536
8	45.35	0.7028	0.0304	1.37510	45.40	0.7021	0.0303	1.37421	45.46	0.7014	0.0303	1.37333	45.46	1.37333
10	59.19	0.5121	0.0267	1.28762	59.28	0.5108	0.0266	1.28657	59.37	0.5095	0.0265	1.28553	59.37	1.28553
12	76.99	0.2250	0.0192	1.15589	77.16	0.2223	0.0191	1.15435	77.32	0.2195	0.0190	1.15281	77.32	1.15281

$x = 19.150$					$x = 19.200$					$x = 19.250$				
PSI	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	$\cos \theta$	Q	S^2	θ	S^2
0	0.00	1.0000	0.0346	1.50925	0.00	1.0000	0.0345	1.50852	0.00	1.0000	0.0345	1.50779	0.00	1.50779
2	10.78	0.9823	0.0344	1.50118	10.80	0.9823	0.0343	1.50044	10.81	0.9823	0.0342	1.49970	10.81	1.49970
4	21.77	0.9287	0.0337	1.47664	21.80	0.9285	0.0336	1.47588	21.82	0.9283	0.0335	1.47513	21.82	1.47513
6	33.22	0.8366	0.0324	1.43455	33.26	0.8362	0.0323	1.43375	33.30	0.8358	0.0322	1.43295	33.30	1.43295
8	45.52	0.7007	0.0302	1.37245	45.58	0.7000	0.0301	1.37157	45.63	0.6992	0.0300	1.37069	45.63	1.37069
10	59.46	0.5082	0.0264	1.28449	59.54	0.5069	0.0263	1.28345	59.63	0.5056	0.0262	1.28241	59.63	1.28241
12	77.48	0.2167	0.0188	1.15127	77.65	0.2139	0.0187	1.14973	77.81	0.2111	0.0185	1.14818	77.81	1.14818

$x = 19.300$					$x = 19.350$					$x = 19.400$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0344	1.50706	0.00	1.0000	0.0343	1.50634	0.00	1.0000	0.0342	1.50562	0.00	1.0000
2	10.82	0.9822	0.0342	1.49897	10.83	0.9822	0.0341	1.49824	10.84	0.9821	0.0340	1.49752	10.85	0.9820
4	21.85	0.9282	0.0335	1.47437	21.87	0.9280	0.0334	1.47362	21.89	0.9279	0.0333	1.47287	21.90	0.9278
6	33.34	0.8355	0.0321	1.43216	33.37	0.8351	0.0321	1.43136	33.41	0.8347	0.0320	1.43057	33.45	0.8343
8	45.69	0.6985	0.0299	1.36982	45.75	0.6978	0.0299	1.36894	45.81	0.6971	0.0298	1.36808	45.87	0.6963
10	59.72	0.5043	0.0261	1.28138	59.81	0.5029	0.0261	1.28035	59.89	0.5016	0.0260	1.27932	59.97	0.5003
12	77.98	0.2083	0.0184	1.14663	78.15	0.2054	0.0183	1.14508	78.31	0.2026	0.0181	1.14352	78.47	0.2000

$x = 19.450$					$x = 19.500$					$x = 19.550$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0342	1.50491	0.00	1.0000	0.0341	1.50419	0.00	1.0000	0.0340	1.50348	0.00	1.0000
2	10.85	0.9821	0.0339	1.49679	10.87	0.9821	0.0339	1.49607	10.88	0.9820	0.0338	1.49536	10.89	0.9820
4	21.92	0.9277	0.0332	1.47213	21.94	0.9276	0.0332	1.47139	21.96	0.9274	0.0331	1.47065	21.97	0.9273
6	33.45	0.8344	0.0319	1.42979	33.49	0.8340	0.0318	1.42900	33.53	0.8336	0.0318	1.42822	33.57	0.8332
8	45.86	0.6964	0.0297	1.36721	45.92	0.6957	0.0296	1.36635	45.98	0.6949	0.0295	1.36549	46.05	0.6940
10	59.98	0.5003	0.0259	1.27829	60.07	0.4990	0.0258	1.27727	60.16	0.4976	0.0257	1.27625	60.25	0.4963
12	78.48	0.1997	0.0180	1.14196	78.65	0.1968	0.0178	1.14040	78.82	0.1939	0.0177	1.13884	78.99	0.1900

$x = 19.600$					$x = 19.650$					$x = 19.700$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0340	1.50277	0.00	1.0000	0.0339	1.50207	0.00	1.0000	0.0338	1.50137	0.00	1.0000
2	10.89	0.9820	0.0337	1.49464	10.93	0.9820	0.0337	1.49393	10.91	0.9819	0.0336	1.49322	10.95	0.9818
4	21.99	0.9273	0.0330	1.46991	22.01	0.9271	0.0329	1.46918	22.04	0.9269	0.0329	1.46845	22.07	0.9267
6	33.57	0.8333	0.0317	1.42744	33.60	0.8329	0.0316	1.42667	33.64	0.8325	0.0315	1.42590	33.67	0.8322
8	46.04	0.6942	0.0294	1.36464	46.09	0.6935	0.0294	1.36378	46.15	0.6928	0.0293	1.36293	46.21	0.6920
10	60.24	0.4963	0.0256	1.27523	60.33	0.4950	0.0255	1.27421	60.42	0.4936	0.0254	1.27320	60.51	0.4923
12	78.99	0.1909	0.0175	1.13727	79.17	0.1880	0.0174	1.13569	79.34	0.1850	0.0172	1.13411	79.52	0.1800

$x = 19.750$					$x = 19.800$					$x = 19.850$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0337	1.50067	0.00	1.0000	0.0337	1.49997	0.00	1.0000	0.0336	1.49928	0.00	1.0000
2	10.92	0.9819	0.0335	1.49252	10.93	0.9818	0.0334	1.49181	10.95	0.9818	0.0334	1.49111	10.97	0.9817
4	22.06	0.9268	0.0328	1.46772	22.08	0.9266	0.0327	1.46700	22.11	0.9265	0.0327	1.46628	22.13	0.9264
6	33.68	0.8321	0.0315	1.42513	33.72	0.8318	0.0314	1.42436	33.76	0.8314	0.0313	1.42360	33.79	0.8311
8	46.21	0.6921	0.0292	1.36208	46.26	0.6913	0.0291	1.36124	46.32	0.6906	0.0291	1.36040	46.37	0.6898
10	60.51	0.4923	0.0253	1.27219	60.60	0.4910	0.0252	1.27118	60.68	0.4896	0.0251	1.27017	60.77	0.4883
12	79.52	0.1820	0.0171	1.13253	79.69	0.1790	0.0170	1.13094	79.87	0.1759	0.0168	1.12935	80.05	0.1700

$x = 19.900$					$x = 19.950$					$x = 20.000$				
PSI	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$	G	S^2	θ	$\cos \theta$
0	0.00	1.0000	0.0335	1.49859	0.00	1.0000	0.0335	1.49790	0.00	1.0000	0.0334	1.49721	0.00	1.0000
2	10.96	0.9818	0.0333	1.49041	10.97	0.9817	0.0332	1.48972	10.98	0.9817	0.0332	1.48903	10.99	0.9816
4	22.13	0.9263	0.0326	1.46556	22.15	0.9262	0.0325	1.46484	22.18	0.9260	0.0324	1.46413	22.21	0.9258
6	33.79	0.8310	0.0312	1.42284	33.83	0.8307	0.0312	1.42208	33.87	0.8303	0.0311	1.42132	33.91	0.8300
8	46.38	0.6899	0.0290	1.35956	46.43	0.6892	0.0289	1.35872	46.49	0.6885	0.0288	1.35789	46.55	0.6877
10	60.77	0.4883	0.0250	1.26917	60.86	0.4869	0.0249	1.26817	60.95	0.4856	0.0249	1.26717	61.05	0.4843
12	80.05	0.1729	0.0167	1.12775	80.22	0.1698	0.0165	1.12615	80.41	0.1667	0.0164	1.12454	80.60	0.1600

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