

Machine Learning Predictions of Simulated Self-Diffusion Coefficients for Bulk and Confined Pure Liquids

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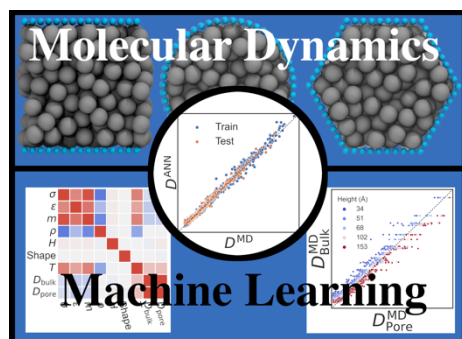
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Abstract

Diffusion properties of bulk fluids have been predicted using empirical expressions and machine learning (ML) models, suggesting that predictions of diffusion also should be possible for fluids in confined environments. The ability to quickly and accurately predict diffusion in porous materials would enable new discoveries and spur development in relevant technologies such as separations, catalysis, batteries, and subsurface applications. In this work, we apply artificial neural network (ANN) models to predict the simulated self-diffusion coefficients of real liquids in both bulk and pore environments. The training data sets were generated from molecular dynamics (MD) simulations of Lennard-Jones particles representing a diverse set of 14 molecules ranging from ammonia to dodecane over a range of liquid pressures and temperatures. Planar, cylindrical, and hexagonal pore models consisted of walls composed of carbon atoms. Our simple model for these liquids was primarily used to generate ANN training data, but the simulated self-diffusion coefficients of bulk liquids show excellent agreement with experimental diffusion coefficients. ANN models based on simple descriptors accurately reproduced the MD

diffusion data for both bulk and confined liquids, including the trend of increased mobility in large pores relative to the corresponding bulk liquid.

Introduction

The effect of confinement on fluid properties is difficult to predict even using well established models of fluids and state-of-the-art molecular simulations.¹⁻¹⁰ The presence of boundaries, wall-fluid interactions, and confinement disrupt the local structure of the fluid, which in turn affects fluid properties. Of particular interest is the ability to predict fluid transport properties in porous environments, for applications ranging from separation,¹¹⁻¹² catalysis,¹³⁻¹⁵ battery development,¹⁶⁻¹⁷ and subsurface sequestration and energy extraction.^{4-5, 18-19}

Our goal is to develop predictive models of fluid diffusion in porous environments using machine learning (ML) methods. The resulting insight into factors controlling pore diffusion properties will then drive the discovery of new materials and fluid compositions. Obtaining extensive training data for ML models of liquid diffusion in pores based on experimental data has yet to be demonstrated. Even molecular dynamics (MD) simulation methods are computationally expensive to thoroughly explore the full range of liquid and pore properties and their effect on liquid diffusion. This effort builds on our previous work developing ML models for self-diffusion in bulk and pore fluids, based on experimental or simulated data.²⁰⁻²⁵ Importantly, we showed that artificial neural networks (ANNs) can accurately predict MD results for pure LJ fluid diffusion in pores of various geometries (planar, cylindrical, hexagonal) over a range of fluid-wall interactions.²³

The development of analytical expressions to predict self-diffusion coefficients (D) of pure fluids based on fluid properties and additional fitting parameters has been applied to ideal fluids²⁶⁻³² and real fluids.³³⁻⁴⁰ Analytical expressions have been derived to predict D for pure liquids using either hard sphere, square well (SW), or Lennard-Jones (LJ) models for particle-particle interactions.^{35-37, 41-44} In this work, we focus on the analytical expression and LJ fitting parameters using a two-parameter model derived from 40 real liquids, which gave reasonable agreement with experiment for polar and nonpolar liquids.³⁵ A four parameter model resulted in even better agreement and was applicable to hydrogen-bonded liquids.³⁶ More recently, an artificial neural network (ANN) model based on an entropy scaling relationship has been used to predict pure liquid D values.³⁸

Empirical predictions of D for ideal LJ and SW fluids in confinement has been based on either the packing fraction or the excess entropy of the confined fluid.^{42, 45} Predictive models of simulated fluid diffusion in nanopores have been developed using a kinetic Monte Carlo method,⁴ as well as a two-dimensional equation of state formalism for adsorbed fluids and the thermodynamic factor.⁵ Recently, transport properties from MD simulations of hard sphere fluids in slit pores were well fit by an empirical expression provided that the pore height is at least five times larger than the particle diameter.⁹

ML is increasingly being used in materials discovery,⁴⁶ particularly to predict transport properties. Gaussian process and probabilistic generative models have been used to predict the density and self-diffusion coefficients of liquid alkanes.⁴⁷ Recently, ANNs were developed to predict hydrocarbon adsorption and diffusion properties in a zeolitic imidazolate framework based on both simulation and nuclear magnetic resonance (NMR) data.⁴⁸ Transfer learning has been used to predict diffusion coefficients in binary and ternary water mixtures.⁴⁹ We seek to build on these efforts by developing a generalized predictive model which can be applicable to a wide range of liquids, pore sizes, and pore interactions.

In this work, we generate ML training sets based on MD simulations of pure LJ liquids in bulk and porous environments. Our methodology is similar to previous work^{23, 50} using idealized LJ particles where pore walls were constructed using identically sized LJ particles. Here, we use a range of fluid-fluid interaction parameters corresponding to a diverse set of fourteen molecules. The LJ parameters for these molecules were taken from the fitting parameters of an analytical expression for the liquid D values.³⁵ Despite such a simple approximation to represent a range of molecular sizes and interactions, our simulated D values for bulk liquids show good agreement with experiment. After first demonstrating that a ML model can accurately predict the simulated D for bulk LJ-based fluids, we then generate a second ML training set by performing MD simulations of these liquids in mesopore models (3.4 – 15.4 nm pore dimensions) with slit, cylindrical, and hexagonal geometries. Our resulting ANN models show excellent predictions.

Methods

ANN Predictions of MD Calculated Diffusion Coefficients. Here we describe the structure of the inputs and outputs for our ANN models, thus providing the details for how ANN models were developed to predict MD calculated diffusion coefficients (D^{MD}). The MD methodology, specific ANN architecture, and software used for the ANN models is described below. The target of our ANN models was D^{MD} which was calculated used the Einstein relation⁵¹ from the ensemble average mean square displacement (MSD) for movement for bulk fluids. That is

$$\sum_{i=1}^{F_d} (\Delta r_i(t))^2 = (2F_d)N D t \quad (1)$$

where Δr_i is the change in atomic coordinate for the i th direction, N is the number of molecules, D is the diffusion coefficient, and F_d is the number of translation degrees of freedom. Because the main purpose of the MD simulations is to provide training data for the ML models, finite size corrections were not applied to the MD simulations when calculating D^{MD} . Based on a previous study of finite size effects on diffusion properties of confined LJ fluids,⁵² the ratio of pore height to lateral dimension (H/L) for our models (0.7 – 3.0) corresponds to an insignificant correction. Moreover, it is expected that the ML performance would be similar when using either finite size corrected or uncorrected diffusion values.

The structural inputs to our model (*i.e.*, features or descriptors) need to balance predictability and feasibility (*i.e.*, “easy” to obtain). In our previous attempts to predict diffusion of simple LJ particles in the same porous systems considered here we tested several liquid structure descriptors (*e.g.*, the location and value of the first peak and valley in the liquid RDF). Using a forward feature selection, the most predictive features of the diffusion coefficient in the pore were identified as those that are “user-defined” by the system (*i.e.*, pore height, pore shape, temperature, etc.).²³ Based on this result we used similar features in this work and they are listed in Table 1.

Table 1. Abbreviations and descriptions of the features used to train the ANN models.

Abbr.	Feature Description
<i>H</i>	Pore size

ε	LJ well depth
Shape	Pore shape
σ	LJ distance (potential energy = 0)
T	Temperature
ρ	Liquid density
m	Molar mass
D_{bulk}	Bulk liquid diffusion coefficient

MD Model Systems and Simulation Methodology. All MD simulations were performed using the LAMMPS code⁵³ using similar methods as our previous work with ideal LJ fluids and walls.²³ Because the LJ fluids in this work correspond to real molecules, all simulations were performed using real units rather than dimensionless LJ units. Liquid molecules were treated as spherical LJ particles whose mass corresponds to the total mass of the molecule. With the exception of ammonia (parameters from ref. 36), interaction parameters for these molecules (Figure 1, Supporting Information) were taken from the two-parameter LJ model used to fit the experimental self-diffusion coefficients for bulk LJ fluids (D_{bulk}) values.³⁵ Here ε is the depth of the potential well, which occurs at an interparticle distance of $2^{1/6}\sigma$, and σ is the distance at which the potential energy is zero. Since the purpose of this study is to broadly determine the liquid and pore structural properties that are most predictive of simulated diffusion coefficients, this oversimplified approximation is justified. However, in an effort to focus on molecules where this approximation is valid, we only selected molecules in which the LJ-calculated bulk diffusion coefficients had an absolute average deviation (AAD) from the experimental diffusion coefficient of less than 4%. Molecules were selected from the set of 40 used to fit experimental D_{bulk} values of bulk liquids and gases.³⁵ From that set, we selected 250 fluids from 14 molecules at temperature and density conditions corresponding to the liquid state. The temperature and density conditions vary for each molecule considered but can be observed in the full dataset included in the Supporting Information. A maximum of 20 fluid states were selected for each molecule for computational efficiency, although the experimental data set contained fewer than 20 fluid states values for some of the molecules. Our MD approach is consistent with a recent study in which a modified LJ plus point quadrupole pair potential applied to small hydrocarbons and SF₆ gave good agreement with experiment.⁵⁴ Only two of those molecules (ethane and carbon disulfide) are included in our set. Pore walls were composed of carbon atoms, although the wall structures do not correspond to any specific carbon material. LJ parameters for wall carbon atoms ($\sigma_{\text{C}} = 3.4$ Å, $\varepsilon_{\text{C}} = 43.28$ K) were taken from the Generalized Amber Force Field (GAFF) and correspond to the carbon-carbon particle interaction potential⁵⁵ with σ_{C} used as a reference length scale for the simulation models. LJ parameters for wall-fluid interactions were obtained using arithmetic mixing rules. The LAMMPS input scripts included in the Supporting Information explicitly indicate the mixing rules. During the MD simulations all LJ interactions were evaluated every 1.0 fs with a short-range cutoff of 15.0 Å.

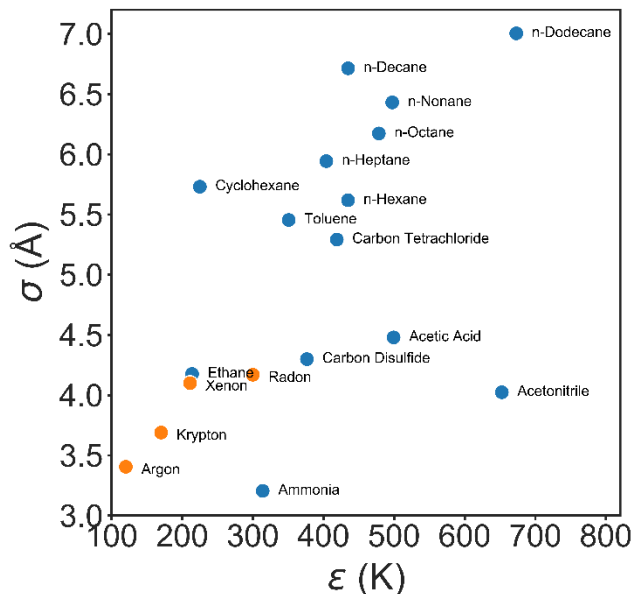


Figure 1. Comparison of LJ self-interaction parameters for molecules used in this study. Parameters for noble gas atoms (orange symbols)⁵⁶⁻⁵⁷ are included for reference.

Two sets of MD simulations were performed for each of the 250 fluids: 1) bulk fluids at a specified density ρ and temperature T corresponding to the liquid state;³⁵ and 2) each fluid confined within three different pore geometries (*i.e.*, slit, cylindrical, and hexagonal). For bulk fluid simulations, particles were randomly inserted in a cubic box of length $15\sigma_c$ (51 Å) and simulated using 3D periodic boundary conditions (PBCs) in the NVT ensemble (number of particles N , volume V). Temperature was controlled using a Nosé-Hoover thermostat⁵¹ with a relaxation time of 100 fs. Prior to the 10 ns production simulation, the fluid was initially simulated at 500 K for 0.1 ns, brought to the target temperature over 0.1 ns, and equilibrated at the target temperature for 1 ns.

Simulation models for the pore fluids in the three geometries were constructed in the same manner as our previous work,²³ except in this work the pore walls were composed of carbon atoms rather than ideal LJ atoms. Rather than modeling specific carbon-based materials, wall atoms were placed on a simple cubic grid with a spacing of $1\sigma_c$ (3.4 Å) as in our previous work.²³ In the slit pore geometry, each wall consisted of a 15×15 grid of carbon atoms. The lateral dimension L of each pore model was therefore $15\sigma_c$ (51 Å). Example LAMMPS input scripts for each geometry are provided in the Supporting Information. Five pore heights (H) were modeled: $10\sigma_c$ (34 Å), $15\sigma_c$ (51 Å), $20\sigma_c$ (68 Å), $30\sigma_c$ (102 Å), and $45\sigma_c$ (153 Å), for a total of 3750 pore systems. As summarized in Figure 2, H is the distance between wall atoms that is accessible to the fluid. For cylindrical pore models, H corresponds to the diameter of the cylinder in a similar manner, while in the hexagonal pores H is the straight-line distance between the midpoints of two opposite walls in the hexagon. Geometrically, this means a cylindrical pore of the same H is *inscribed* within the hexagonal pore. Fluid atoms were randomly inserted into the pore space based on the bulk fluid density and accessible volume. NVT simulations were then performed in the slit and cylindrical pore models using the same methodology used for the bulk fluid simulations, except that two-dimensional PBCs were used. In our previous work we observed high energy states with the initial randomly created fluid geometries for the hexagonal

pore model.²³ To address that challenge, a 0.1 fs timestep was used in the temperature equilibration period but the total simulation time was kept the same by increasing the number of MD steps by a factor of 10. The timestep was returned to 1 fs for the production simulations.

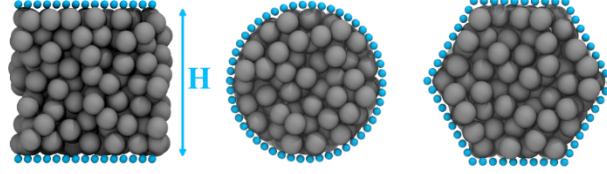


Figure 2. Schematic of the slit, cylindrical, and hexagonal pore models used in the MD simulations with pore height (H) indicated. The LJ particles correspond to *n*-dodecane.

ANN Models. The ANN models were developed similar to our previous work^{23, 58} using Python (3.7.6) with Keras (2.3.1) and Tensorflow (1.13.2) modules. Initially, a testing set containing 15% of the data was randomly separated from the dataset. The remaining 85% of the dataset (*i.e.*, the training set) was used for ANN model development and optimization. The training set was fit to either the minmax scaler or log scaler:

$$z_i = \frac{x_i - \min(x)}{\max(x) - \min(x)} \quad (2)$$

$$z_i = \log_{10}(x_i)$$

where x is the set of values for a feature or label (*i.e.*, target variable), x_i is the i^{th} value of that feature, z_i is the i^{th} value of that feature after scaling. The minmax scaler was used for all features and the label during the predictions of MD pore diffusion coefficients ($D_{\text{pore}}^{\text{MD}}$), while the log scaler was used for the label when predicting bulk diffusion ($D_{\text{bulk}}^{\text{MD}}$). The training set was split into multiple validation folds during the optimization of model hyperparameters which included number of hidden layers, number of nodes per hidden layer, learning rate, and L1 regularization. ANN training was conducted with early stopping where the model fitting was terminated after 500 consecutive epochs of no reduction in validation error to reduce the likelihood of overfitting.

Once the model hyperparameters were finalized, the ANN was trained on the entire training set and the model was tested on the previously hidden testing set. The final hyperparameters for all ANN models included a batch size of 64 and a learning rate of 0.002. The ANN trained to predict $D_{\text{bulk}}^{\text{MD}}$ used an L1 regularization of 10^{-9} and had 3 hidden layers containing 64, 64, and 32 nodes, respectively. Both ANNs trained to predict pore diffusion coefficients used an L1 regularization of 10^{-8} with two hidden layers. The ANN model using “easy” descriptors (discussed below) containing 24 and 12 nodes in the two-layer structure, while the ANN model using all descriptors contained 32 and 16 nodes for the two layers.

ANN Performance Metrics. The ANN-predicted D values were inverse transformed back to unscaled values prior to calculating any metrics. The mean-squared error (MSE) was used both as the loss function during ANN training and as a metric to compare the performance of the ANN models.

$$\text{MSE} = \frac{1}{n} \sum_{i=1}^n (D_i^{\text{MD}} - D_i^{\text{ANN}})^2 \quad (3)$$

Here, n is the number of diffusion predictions, D_i^{MD} is the i^{th} MD simulated diffusion coefficient, and D_i^{ANN} is the i^{th} ANN predicted diffusion coefficient. The coefficient of determination (R^2)

and the average absolute deviation percentage (AAD) were also used to compare model performance.

$$R^2 = 1 - \frac{\sum_i (D_i^{\text{MD}} - D_i^{\text{ANN}})^2}{\sum_i (D_i^{\text{MD}} - \bar{D}^{\text{MD}})^2} \quad (4)$$

$$\text{AAD} = \frac{100}{n} \sum_{i=1}^n \frac{|D_i^{\text{MD}} - D_i^{\text{ANN}}|}{D_i^{\text{MD}}}$$

where $\bar{D}^{\text{MD}}$ is the average MD-simulated diffusion coefficient. The correlation between features was measured using the Pearson correlation coefficient (r) and the variance inflation factor (VIF):

$$r = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2 \sum_i (y_i - \bar{y})^2}} \quad (5)$$

$$\text{VIF}_i = \frac{1}{1 - R_i^2} \quad (6)$$

where x_i and y_i are the i^{th} values and $\bar{x}$ and $\bar{y}$ are the mean values of two features being compared. VIF_i is the VIF value for feature i and R_i^2 is the coefficient of determination when fitting a linear regression model with feature i as the target and all additional features in the dataset as inputs. The VIF metric gives a measure of multicollinearity where a VIF value greater than 10 indicate that a feature may be largely redundant.

Results

Bulk fluids. The local structure of fluid atoms provides valuable insight into the observed trends in D_{bulk} and serves to identify fluids exhibiting structured behavior. Simulation trajectories were analyzed to obtain average radial distribution functions (RDFs) of fluid atoms. We used RDFs and MSD values to identify fluids that are solid or solid-like at the T and ρ conditions of interest. The total MSD at the end of each bulk fluid simulation (Figure S1) shows a natural break between systems that display fluid-like behavior ($> 2600 \text{ \AA}^2$) and those with reduced mobility ($< 2600 \text{ \AA}^2$). We note that this benchmark MSD value was calculated from the square of the cell parameter (51 $\text{\AA}$) for the bulk fluid models. In other words, fluid particles in reduced mobility systems typically did not diffuse more than one box length during the 10 ns production simulations. A comparison of RDFs for n -heptane systems (Figure S2) clearly show that systems with total MSD $< 2600 \text{ \AA}^2$ (Figure S2 C,D) have a more ordered structure (*i.e.*, larger values of local maxima, smaller values of local minima, and increased number of extrema) than fluids with high mobility.

The following criteria were used to identify bulk fluids that display structured behavior: 1) minimum value of the first RDF minimum is less than 0.4; 2) total MSD at the end of the simulation is less than $2600 \text{ \AA}^2$; and 3) abnormally large number of RDF maxima/minima within the cutoff distance. Application of these criteria resulted in the removal of 39 of the 250 fluid simulations (Table 1), the majority of these removed fluids (27) were the longer chain hydrocarbons ($\text{C}_6 - \text{C}_{12}$). It is not surprising that self-diffusion coefficients calculated from MD simulations using a single site LJ model would fail to match experimental self-diffusion coefficients (D_{exp}) for such molecules. Yet, as seen in Figure 3, all bulk fluids that pass our criteria tests—including the longer chain hydrocarbons—show excellent correlation between D^{MD} and D^{exp} .

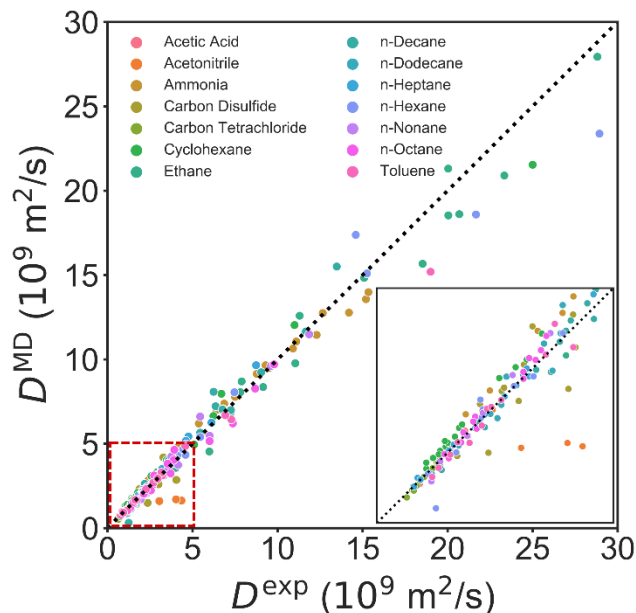


Figure 3. Correlation plot of bulk diffusion coefficients from MD simulation (D^{MD}) and experiment (D^{exp}). Symbol colors correspond to each molecule. The dash line represents 1:1 correlation.

We tested our ANN approach by attempting to predict the bulk fluid diffusion coefficients. Here we scale the D^{MD} values using the log scaler, as opposed to the minmax scaler, to produce a more even distribution of labels (Figure S3). Moreover, during hyperparameter optimization, using the log scaler produced models with lower AAD with only a slight increase in MSE. This is because the log scaler rebalanced the labels prioritizing the lower D^{MD} values, where the majority of the labels are located, at the expense of the sparse, larger D^{MD} values. Figure 4 shows the predicted bulk fluid diffusion coefficients from the ANN (D^{ANN}) versus those obtained from the MD simulations. The model is trained on the highly mobile bulk fluids and used three layers containing 64, 64 and 32 nodes. The predicted diffusion coefficients are in excellent agreement with D^{MD} . The final metrics obtained on the testing set for this ANN model were an MSE of 0.277, R^2 of 0.976, and AAD of 10.4%. Given these results on bulk fluids we turn our focus to the pore fluids.

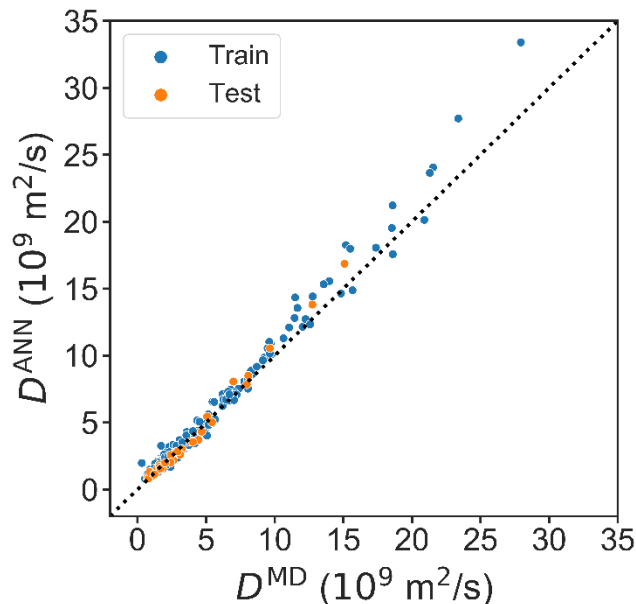


Figure 4. Parity plot showing ANN results for bulk fluid diffusion coefficients after removal of structured fluids from the MD data set. The dashed line represents a 1:1 correlation.

Pore fluids. A comparison of $D_{\text{pore}}^{\text{MD}}$ and $D_{\text{bulk}}^{\text{MD}}$ values (Figure S4) reveals that a significant number of highly mobile bulk fluids are much less mobile in slit pores. Most of these structured pore fluids likely resulted from overly attractive interactions between LJ particles and wall carbon atoms. Fluid-wall interaction parameters were not developed specifically for these systems. Instead, classical arithmetic mixing rules were used to generate these parameters. Therefore, as with the bulk fluid data set, RDF and MSD criteria were used to identify structured, less mobile pore fluids. Pore fluids were removed from the data set based on the following modified criteria: 1) minimum in the first RDF minimum less than 0.45; and 2) total MSD calculated parallel to the pore walls (MSD_{||}) at the end of the simulation is $< 2600 \text{ \AA}^2$. This resulted in removal of every pore fluid corresponding to a bulk fluid that was previously identified as structured (585 fluids as each of the 39 bulk fluids was simulated in 3 pore shapes and 5 pore sizes), as well as an additional 1050 fluids that showed liquid-like behavior in the bulk but solid-like behavior in pores. This corresponds to a total of 1635/3750 pore fluids removed. For some molecules, greater than half of the rejected systems were included: *n*-dodecane (270/300), carbon tetrachloride (264/300), acetic acid (63/75), acetonitrile (63/75), *n*-nonane (171/300), toluene (171/300), and cyclohexane (165/300). For other molecules (ethane and ammonia) not a single run appeared structured. This fluid removal procedure highlights that while this LJ real fluid approximation can reproduce bulk fluid transport very accurately, within pores the LJ approximation often breaks down and shows solid-like behavior for certain molecules. Table S1 shows the number of rejected fluids per molecule.

Looking first at the parity plot for $D_{\text{pore}}^{\text{MD}}$ and $D_{\text{bulk}}^{\text{MD}}$ for mobile fluids (Figure 5), the strong correlation between pore size and fluid diffusion is evident. Fluids in smaller pores (34 – 68 Å) tend to diffuse more slowly than the corresponding bulk fluid (*i.e.*, $D_{\text{pore}}^{\text{MD}} < D_{\text{bulk}}^{\text{MD}}$) at the same temperature and density. Most of the fluids for which $D_{\text{pore}}^{\text{MD}} > D_{\text{bulk}}^{\text{MD}}$ are found in larger pores ($> 100 \text{ \AA}$), which could indicate a finite system size effect when the pore width is significantly greater than the periodic dimensions parallel to the pore walls.⁵² We tested the finite size effect

for a small collection of fluids by running a new simulation with twice the periodic (lateral) dimension for the largest pore size (153 Å). A comparison of $D_{\text{pore}}^{\text{MD}}$ with $D_{\text{bulk}}^{\text{MD}}$ is shown for both lateral dimension sizes in Figure S5. In most cases, a small finite size effect was observed and $D_{\text{pore}}^{\text{MD}}$ decreased with increasing lateral dimension size. The increase in $D_{\text{pore}}^{\text{MD}}$ for pore fluids compared to the bulk fluid has also been seen in MD simulations of liquid octane in silica slit pores, and attributed to layering of fluid molecules in the asymmetric pore.⁵⁹ Faster transport of liquid in the pore centers also occurs when the fluid is strongly adsorbed to the pore walls (increased density at the interface), resulting in reduced fluid density (and faster diffusion) in the center of the pore,^{4, 60} and due to thermal fluctuations of the fluid center of mass under nanoconfinement.⁶¹

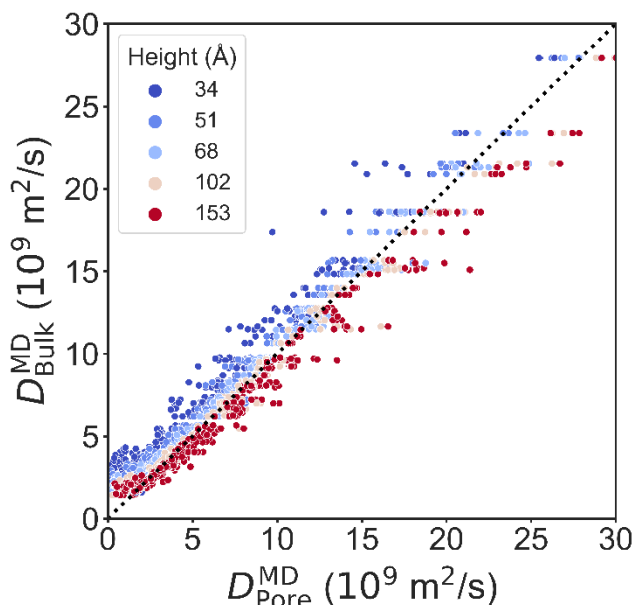


Figure 5 Comparison of diffusion coefficients from MD simulations for bulk and pore fluids (all geometries). Symbol colors correspond to pore heights. The dash line represents 1:1 correlation.

The first step in ANN model development for pore fluid diffusion is a detailed analysis of feature importance. Figure 6A shows the Pearson Correlation matrix heat map for all features considered here. Strong correlations exist within the fluid descriptors (σ , ε , m), however they are weakly correlated with both $D_{\text{pore}}^{\text{MD}}$ and $D_{\text{bulk}}^{\text{MD}}$. As expected, pore and bulk diffusion values are strongly correlated with T . While some of the features do not correlate strongly with $D_{\text{pore}}^{\text{MD}}$ and $D_{\text{bulk}}^{\text{MD}}$, we have found that they can still produce significant improvements in ANN performance. In order to probe feature utility further, we calculated the VIF for each feature (Figure 6B). VIF identifies multicollinearity among features, or essentially how well a given feature can be replaced with a combination of the remaining features, with larger values implying higher redundancy for a given feature in the dataset. Here we see that certain features like H and Shape show low correlation with $D_{\text{pore}}^{\text{MD}}$ in the correlation matrix, yet they also have low VIF values. Therefore, while these features do not contain a large amount of information about $D_{\text{pore}}^{\text{MD}}$, the information they do contain is not obtainable from any of the other features in the dataset, potentially making these important features for the ML model.

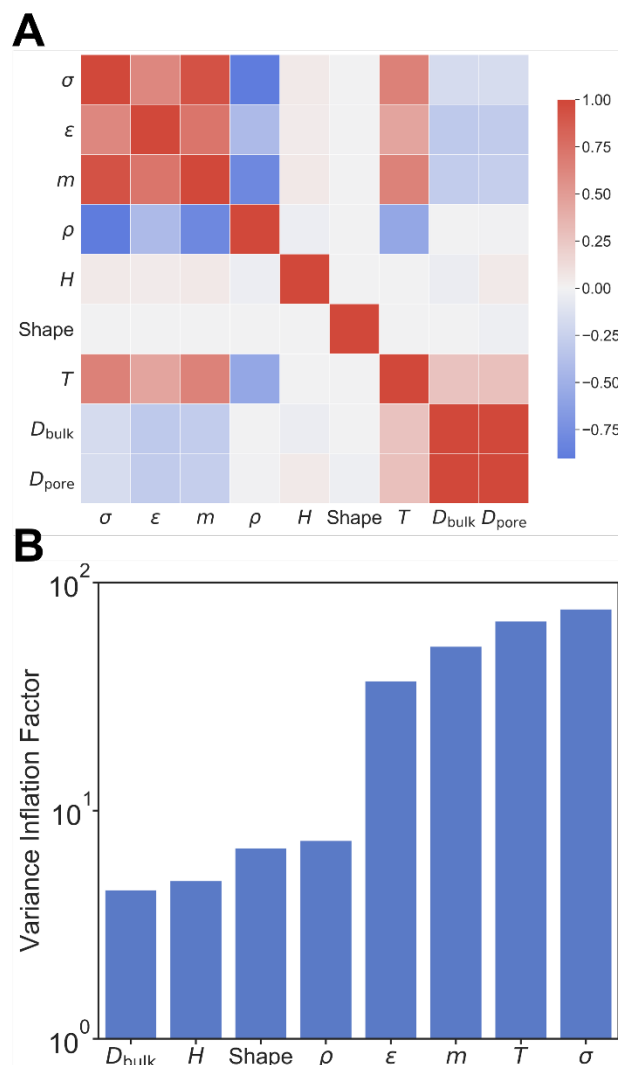


Figure 6. Feature importance for ANN development for pore fluids: A) correlation matrix; and B) variance inflation factor.

Armed with this information, two collections of descriptors were chosen for ANN model development 1) the inclusion of *all* descriptors and 2) all descriptors *except* $D_{\text{bulk}}^{\text{MD}}$. We refer to the latter set as “easy”, meaning they are specified by the user as a model input, whereas the former requires an additional simulation (bulk liquid MD). The predictive performance of each model is shown in Figure 7 where the predicted diffusion ($D_{\text{pore}}^{\text{ANN}}$) is plotted versus the MD calculated diffusion ($D_{\text{pore}}^{\text{MD}}$). The performance of the “easy” set of features (A) and all feature ANNs are comparable. Additionally, the R^2 and AAD are 0.993 and 17.47% for the “easy” model and 0.994 and 18.38% for the all-descriptor model, respectively.

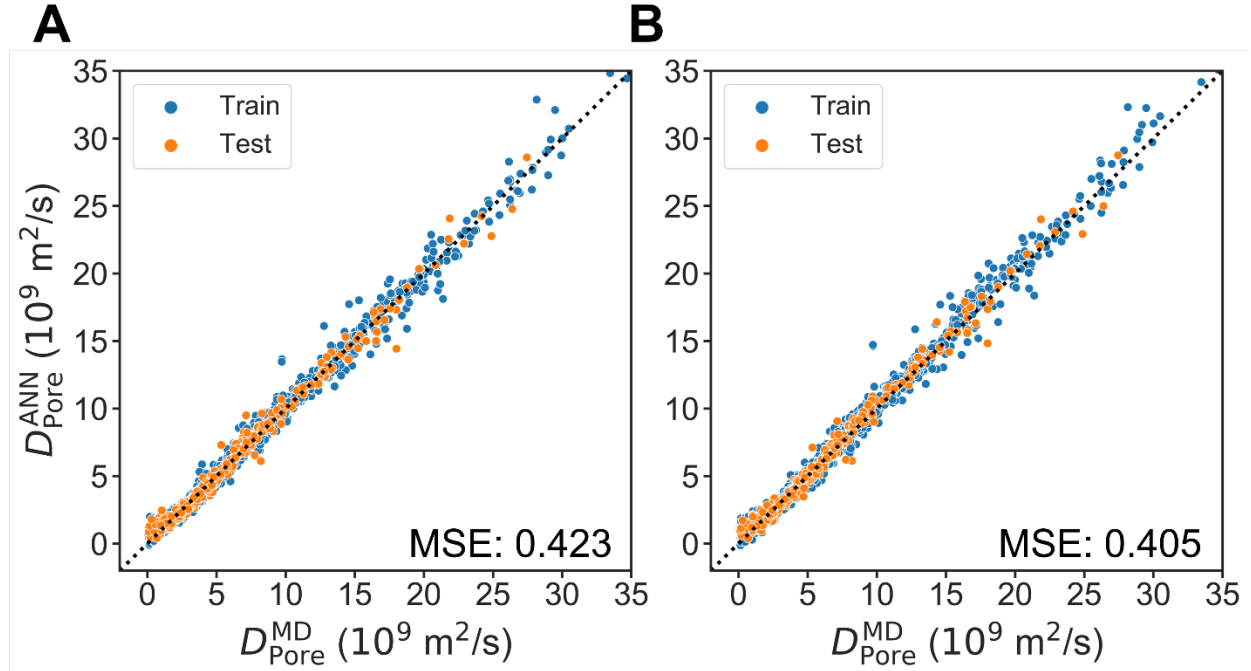


Figure 7. Parity plot showing ANN results for pore fluids using A) “easy” descriptors and B) all descriptors (includes $D_{\text{bulk}}^{\text{MD}}$).

One would expect the inclusion of $D_{\text{bulk}}^{\text{MD}}$ to significantly improve the predictive performance given it has the highest correlation to the target; however, previous work by Allers *et al.*²⁰ showed that the bulk diffusion coefficient of LJ fluids can be predicted with high accuracy from just the features T and ρ . While our dataset contains T and ρ as features, it is likely that $D_{\text{bulk}}^{\text{MD}}$ is a non-linear function of these two features. Several non-linear empirical relationships for LJ diffusion exist including those generated using symbolic regression.^{25, 30} To test this effect here in real fluid LJ simulations, as well as provide a base model for which to compare our ANN, we developed an ordinary least squares linear regression model using both sets of descriptors. The descriptors and label were scaled using the same minmax scaler used during the ANN training. The results are shown in Figure 8 for all descriptors (8A) and easy descriptors (8B). Here we see that using a linear regression approach provides poor predictions of $D_{\text{pore}}^{\text{MD}}$ when $D_{\text{bulk}}^{\text{MD}}$ is not included, confirming that $D_{\text{bulk}}^{\text{MD}}$ is a non-linear function of T and ρ . This relationship is captured in our ANN via the activation functions between nodes. The utility of the ANN is highlighted here given the ANN MSE is roughly a factor of 2 better (0.423 vs 0.814) than the linear regression approach using just the easy descriptor set. The linear regression model must incorporate $D_{\text{bulk}}^{\text{MD}}$ as a descriptor to provide usable predictions.

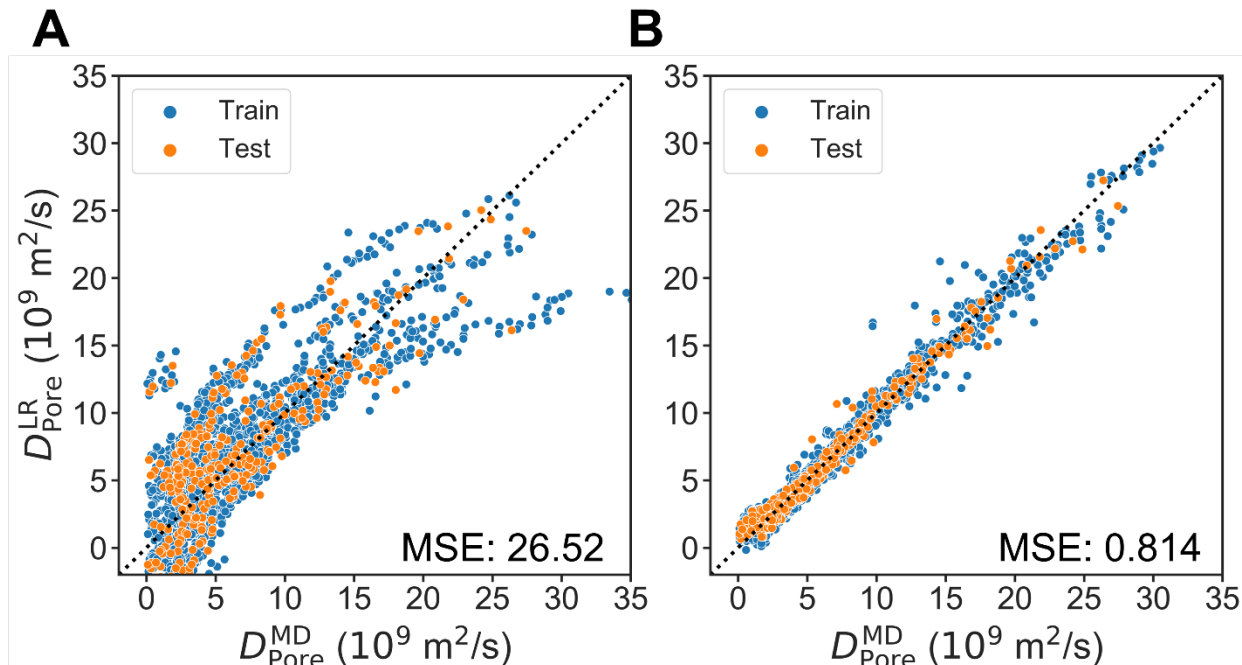


Figure 8. Comparison of predicted pore diffusion, using ordinary least squares regression (LR), versus the MD-simulated values using A) “easy” descriptors and B) all descriptors (includes $D_{\text{bulk}}^{\text{MD}}$). The MSE, R^2 , and AAD for this model were 26.52, 0.575, and 135.52% using “easy” descriptors and 0.814, 0.987, 24.05% using all descriptors.

While prediction of fluid diffusion coefficient in pores is the primary goal of this work, it is also helpful to look at the diffusion ratio ($D_{\text{pore}}^{\text{MD}}/D_{\text{bulk}}^{\text{MD}}$) as this allows us to isolate the effect of nanoconfinement on diffusion. Comparison plots between bulk and pore fluids (Figure S6) show diffusion ratios ranging from ~ 0 to ~ 1.5 with much of the data near unity. The diffusion ratios show a clear trend with pore height, where smaller pores lead to lower diffusion ratios. As such, small molecules like ethane with larger $D_{\text{bulk}}^{\text{MD}}$ values show a smaller range in diffusion ratio compared with the much larger n -alkanes. Otherwise, many of the molecules seem to show similar diffusion ratios, a somewhat surprising result due to the large range of σ and ε values sampled. Despite the likely presence of finite size effects for the large pores (Figure 5 and Figure S5), we are confident that the ANN model would successfully predict corrected $D_{\text{pore}}^{\text{MD}}$ values as well.

Conclusions

Herein we have extended our recent work developing machine learned predictions of LJ fluid diffusion in pores to real fluids approximated by simple LJ particles. Diffusion coefficients of these LJ-approximated molecules were calculated for bulk and nanoconfined fluids using molecular dynamics (MD) simulations. Collectively we performed 250 bulk simulations and 3750 pore simulations which provided a rich dataset on which to develop machine learned predictions. Structured liquids formed in the bulk and in pores at certain temperatures, pressures, pore shapes, and pore sizes. We developed a robust protocol for removing these datapoints from our datasets based on total displacement (MSD) and liquid structure (*i.e.*, RDF). Feed forward

ANNs were developed to predict both bulk liquid and pore diffusion coefficients which provided very good agreement with the MD calculated diffusion coefficients in both scenarios. The ANN created from “easy” descriptors consisting of only user input performed nearly as well as the ANN created from the full descriptor set (including bulk diffusion coefficient). We showed that certain descriptors such as molecular diameter may not correlate well with the simulated diffusion coefficients, however they still provide useful information to the ANN that is not captured by other descriptors.

Our ML approach is highly effective and predicts fluid diffusion in pores with great accuracy. It should be noted that for bulk fluids, the LJ approximation of real fluids developed previously³⁵⁻³⁶ showed excellent agreement with experiment; however, no experimental comparisons exist for these fluids in ideal pores of well-defined sizes. Therefore, the validity of this approximation for pore diffusion still needs to be assessed. The novelty of the present work is that an ANN model with only “easy” feature inputs was able to predict the simulated diffusion coefficients accurately, showing that ML can be an effective tool for rapidly predicting pore transport properties. A detailed feature analysis based on the variance inflation factor revealed that the “easy” features describe a range of physical and chemical properties, even though not all features show a strong correlation with fluid diffusion. Additionally, our results show that simpler predictive methods based on linear regression perform much worse than ANNs which inherently include nonlinear relationships. Although our efforts have focused on simple diffusion of fluids in pores, similar ML methods could be explored for multiscale prediction of fluid transport based on Maxwell-Stefan, Knudsen, and surface diffusion. As nanoporous materials have become increasingly ubiquitous within several application spaces, a strong need exists for rapid property prediction of fluids confined within those materials. The work herein definitively shows that simple models can be developed to provide this type of rapid prediction and is a crucial step forward for the high-throughput screening of nanoporous materials.

Supporting Information

- MD data set containing the features, simulated values, and experimental comparison for all 250 bulk fluid simulations (.xlsx)
- MD data set containing the features and simulated values for all 3750 pore fluid simulations (.xlsx)
- Sample LAMMPS input files
- Additional figures and tables (.pdf)
 - Final MSD values for bulk liquids.
 - Example radial distribution plots for n-heptane.
 - Comparison of simulated bulk fluid diffusion coefficients with different scalers.
 - Parity plots between simulated bulk and pore fluid diffusion, after removal of solid-like fluids.
 - Comparison of system size on simulated pore fluid diffusion coefficients.
 - Parity plots between simulated bulk and pore fluid diffusion, sorted by molecule.
 - Summary of rejected systems in bulk and pore simulations.
 - Descriptions of columns in the MD data set.

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References

1. Krishna, R., Diffusion in Porous Crystalline Materials. *Chem. Soc. Rev.* **2012**, *41*, 3099-3118.
2. Karger, J.; Ruthven, D. M., Diffusion in Nanoporous Materials: Fundamental Principles, Insights and Challenges. *New Journal of Chemistry* **2016**, *40*, 4027-4048.
3. Thompson, W. H., Perspective: Dynamics of Confined Liquids. *J Chem Phys* **2018**, *149*, 170901.
4. Apostolopoulou, M.; Santos, M. S.; Hamza, M.; Bui, T.; Economou, I. G.; Stamatakis, M.; Striolo, A., Quantifying Pore Width Effects on Diffusivity Via a Novel 3d Stochastic Approach with Input from Atomistic Molecular Dynamics Simulations. *J. Chem. Theory Comput.* **2019**, *15*, 6907-6922.
5. Babaei, M.; Seng, M. C. Y., Integrating Adsorption and Diffusion in Nanopores Using Thermodynamics and Equations of State. *Ind. Eng. Chem. Res.* **2019**, *58*, 16945-16962.
6. Gao, M.; Li, H.; Ye, M.; Liu, Z., An Approach for Predicting Intracrystalline Diffusivities and Adsorption Entropies in Nanoporous Crystalline Materials. *AIChE J.* **2020**, *66*, e16991.
7. Nazari, M.; Davoodabadi, A.; Huang, D. Z.; Luo, T. F.; Ghasemi, H., Transport Phenomena in Nano/Molecular Confinements. *ACS Nano* **2020**, *14*, 16348-16391.
8. Bukowski, B. C.; Keil, F. J.; Ravikovitch, P. I.; Sastre, G.; Snurr, R. Q.; Coppens, M. O., Connecting Theory and Simulation with Experiment for the Study of Diffusion in Nanoporous Solids. *Adsorption* **2021**, *27*, 683-760.
9. Corral-Casas, C.; Gibelli, L.; Borg, M. K.; Li, J.; Al-Afnan, S. F. K.; Zhang, Y. H., Self-Diffusivity of Dense Confined Fluids. *Phys. Fluids* **2021**, *33*, 082009.
10. Braten, V.; Zhang, D. T.; Hammer, M.; Aasen, A.; Schnell, S. K.; Wilhelmsen, O., Equation of State for Confined Fluids. *J. Chem. Phys.* **2022**, *156*, 16.
11. Wang, Z.; Wu, A.; Colombi Ciacchi, L.; Wei, G., Recent Advances in Nanoporous Membranes for Water Purification. *Nanomaterials* **2018**, *8*, 65.

12. Wu, H.; Schwartz, D. K., Nanoparticle Tracking to Probe Transport in Porous Media. *Acc. Chem. Res.* **2020**, *53*, 2130-2139.
13. DeLuca, M.; Kravchenko, P.; Hoffman, A.; Hibbitts, D., Mechanism and Kinetics of Methylating C₆–C₁₂ Methylbenzenes with Methanol and Dimethyl Ether in H-Mfi Zeolites. *ACS Catal.* **2019**, *9*, 6444-6460.
14. DeLuca, M.; Hibbitts, D., Predicting Diffusion Barriers and Diffusivities of C₆–C₁₂ Methylbenzenes in Mfi Zeolites. *Micropor. Mesopor. Mater.* **2022**, *333*, 111705.
15. Hwang, A.; Bhan, A., Deactivation of Zeolites and Zeotypes in Methanol-to-Hydrocarbons Catalysis: Mechanisms and Circumvention. *Acc. Chem. Res.* **2019**, *52*, 2647-2656.
16. Leung, P.; Li, X. H.; de Leon, C. P.; Berlouis, L.; Low, C. T. J.; Walsh, F. C., Progress in Redox Flow Batteries, Remaining Challenges and Their Applications in Energy Storage. *RSC Adv.* **2012**, *2*, 10125-10156.
17. Li, Y., et al., Fluid-Enhanced Surface Diffusion Controls Intraparticle Phase Transformations. *Nat. Mater.* **2018**, *17*, 915-922.
18. Falk, K.; Coasne, B.; Pellenq, R.; Ulm, F. J.; Bocquet, L., Subcontinuum Mass Transport of Condensed Hydrocarbons in Nanoporous Media. *Nat. Commun.* **2015**, *6*, 6949.
19. Phan, A.; Cole, D. R.; Weiss, R. G.; Dzubiella, J.; Striolo, A., Confined Water Determines Transport Properties of Guest Molecules in Narrow Pores. *Acs Nano* **2016**, *10*, 7646-7656.
20. Allers, J. P.; Harvey, J. A.; Garzon, F. H.; Alam, T. M., Machine Learning Prediction of Self-Diffusion in Lennard-Jones Fluids. *J. Chem. Phys.* **2020**, *153*, 034102.
21. Allers, J. P.; Garzon, F. H.; Alam, T. M., Artificial Neural Network Prediction of Self-Diffusion in Pure Compounds over Multiple Phase Regimes. *Phys. Chem. Chem. Phys.* **2021**, *23*, 4615-4623.
22. Allers, J. P.; Priest, C. W.; Greathouse, J. A.; Alam, T. M., Using Computationally-Determined Properties for Machine Learning Prediction of Self-Diffusion Coefficients in Pure Liquids. *J. Phys. Chem. B* **2021**, *125*, 12990-13002.
23. Leverant, C. J.; Harvey, J. A.; Alam, T. M.; Greathouse, J. A., Machine Learning Self-Diffusion Prediction for Lennard-Jones Fluids in Pores. *J. Phys. Chem. C* **2021**, *125*, 25898-25906.
24. Allers, J. P.; Keth, J.; Alam, T. M., Prediction of Self-Diffusion in Binary Fluid Mixtures Using Artificial Neural Networks. *J. Phys. Chem. B* **2022**, *126*, 4555-4564.
25. Alam, T. M.; Allers, J. P.; Leverant, C. J.; Harvey, J. A., Symbolic Regression Development of Empirical Equations for Diffusion in Lennard-Jones Fluids. *J. Chem. Phys.* **2022**, *157*, 014503.
26. Speedy, R. J., Diffusion in the Hard Sphere Fluid. *Mol. Phys.* **1987**, *62*, 509-515.
27. Speedy, R. J.; Prielmeier, F. X.; Vardag, T.; Lang, E. W.; Lüdemann, H. D., Diffusion in Simple Fluids. *Mol. Phys.* **1989**, *66*, 577-590.
28. Erpenbeck, J. J.; Wood, W. W., Self-Diffusion Coefficient for the Hard-Sphere Fluid. *Phys. Rev. A* **1991**, *43*, 4254-4261.
29. Rowley, R. L.; Painter, M. M., Diffusion and Viscosity Equations of State for a Lennard-Jones Fluid Obtained from Molecular Dynamics Simulations. *Int. J. Thermophys.* **1997**, *18*, 1109-1121.
30. Zhu, Y.; Lu, X.; Zhou, J.; Wang, Y.; Shi, J., Prediction of Diffusion Coefficients for Gas, Liquid and Supercritical Fluid: Application to Pure Real Fluids and Infinite Dilute Binary

Solutions Based on the Simulation of Lennard–Jones Fluid. *Fluid Phase Equil.* **2002**, *194*-197, 1141-1159.

31. Heyes, D. M.; Cass, M. J.; Powles, J. G.; Evans, W. A. B., Self-Diffusion Coefficient of the Hard-Sphere Fluid: System Size Dependence and Empirical Correlations. *J. Phys. Chem. B* **2007**, *111*, 1455-1464.
32. Papastamatiou, K.; Sofos, F.; Karakasidis, T. E. In *Calculating Material Properties with Purely Data-Driven Methods from Clusters to Symbolic Expressions*, SETN 2022 – 12th Conference on Artificial Intelligence, Corfu, Greece, Association for Computing Machinery: Corfu, Greece, 2022.
33. Salim, P. H.; Trebble, M. A., Modified Interacting-Sphere Model for Self-Diffusion and Infinite-Dilution Mutual-Diffusivity of N-Alkanes. *J. Chem. Soc., Faraday Trans.* **1995**, *91*, 245-250.
34. Lee, H.; Thodos, G., Self-Diffusivity: A Generalized Correlation over the Complete Fluid Region Including the Compressed Liquid State. *Ind. Eng. Chem. Res.* **1988**, *27*, 992-997.
35. Liu, H. Q.; Silva, C. M.; Macedo, E. A., Unified Approach to the Self-Diffusion Coefficients of Dense Fluids over Wide Ranges of Temperature and Pressure - Hard-Sphere, Square-Well, Lennard-Jones and Real Substances. *Chem. Eng. Sci.* **1998**, *53*, 2403-2422.
36. Silva, C. M.; Liu, H. Q.; Macedo, E. A., Models for Self-Diffusion Coefficients of Dense Fluids, Including Hydrogen-Bonding Substances. *Chem. Eng. Sci.* **1998**, *53*, 2423-2429.
37. Suárez-Iglesias, O.; Medina, I.; Pizarro, C.; Bueno, J. L., On Predicting Self-Diffusion Coefficients from Viscosity in Gases and Liquids. *Chem. Eng. Sci.* **2007**, *62*, 6499-6515.
38. Vaz, R. V.; Magalhaes, A. L.; Fernandes, D. L. A.; Silva, C. M., Universal Correlation of Self-Diffusion Coefficients of Model and Real Fluids Based on Residual Entropy Scaling Law. *Chem. Eng. Sci.* **2012**, *79*, 153-162.
39. Zhong, Q.; Yang, L. P.; Tao, Y.; Luo, C. Y.; Xu, Z. J.; Xi, T. G., Prediction of Self-Diffusion Coefficients of Fluids Based on Friction and Free Volume Theories. *Int. J. Thermophys.* **2015**, *36*, 1405-1415.
40. Hopp, M.; Mele, J.; Gross, J., Self-Diffusion Coefficients from Entropy Scaling Using the Pcp-Saft Equation of State. *Ind. Eng. Chem. Res.* **2018**, *57*, 12942-12950.
41. Silva, C. M.; Liu, H. Q.; Macedo, E. A., Comparison between Different Explicit Expressions of the Effective Hard Sphere Diameter of Lennard-Jones Fluid: Application to Self-Diffusion Coefficients. *Ind. Eng. Chem. Res.* **1998**, *37*, 221-227.
42. Mittal, J.; Errington, J. R.; Truskett, T. M., Relationships between Self-Diffusivity, Packing Fraction, and Excess Entropy in Simple Bulk and Confined Fluids. *J. Phys. Chem. B* **2007**, *111*, 10054-10063.
43. Srivastava, R.; Khanna, K. N., Self-Diffusion Coefficients of Dense Fluid for a Square-Well Fluid. *J. Mol. Liq.* **2007**, *136*, 156-160.
44. Gerek, Z. N.; Elliott, J. R., Self-Diffusivity Estimation by Molecular Dynamics. *Ind. Eng. Chem. Res.* **2010**, *49*, 3411-3423.
45. Goel, G.; Krekelberg, W. P.; Pond, M. J.; Mittal, J.; Shen, V. K.; Errington, J. R.; Truskett, T. M., Available States and Available Space: Static Properties That Predict Self-Diffusivity of Confined Fluids. *J. Stat. Mech.* **2009**, *2009*, P04006.
46. Lo Dico, G.; Nunez, A. P.; Carcelen, V.; Haranczyk, M., Machine-Learning-Accelerated Multimodal Characterization and Multiobjective Design Optimization of Natural Porous Materials. *Chemical Science* **2021**, *12*, 9309-9317.

47. Freitas, R. S. M.; Lima, Á. P. F.; Chen, C.; Rochinha, F. A.; Mira, D.; Jiang, X., Towards Predicting Liquid Fuel Physicochemical Properties Using Molecular Dynamics Guided Machine Learning Models. *Fuel* **2022**, 329, 125415.
48. Gkourras, A.; Gergidis, L. N., Molecular and Artificial Neural Networks Modeling of Sorption and Diffusion of Small Alkanes, Alkenes and Their Ternary Mixtures in Zif-8 at Different Temperatures. *J. Phys. Chem. B* **2022**, 126, 5582-5594.
49. Zhao, X.; Luo, T.; Jin, H., Predicting Diffusion Coefficients of Binary and Ternary Supercritical Water Mixtures Via Machine and Transfer Learning with Deep Neural Network. *Ind. Eng. Chem. Res.* **2022**, 61, 8542-8550.
50. Sofos, F.; Karakasidis, T. E., Machine Learning Techniques for Fluid Flows at the Nanoscale. *Fluids* **2021**, 6.
51. Frenkel, D.; Smit, B., *Understanding Molecular Simulation: From Algorithms to Applications*, 2nd ed.; Academic Press: San Diego, 2002, p 638.
52. Simonnin, P.; Noetinger, B.; Nieto-Draghi, C.; Marry, V.; Rotenberg, B., Diffusion under Confinement: Hydrodynamic Finite-Size Effects in Simulation. *J. Chem. Theory Comput.* **2017**, 13, 2881-2889.
53. Thompson, A. P., et al., Lammmps - a Flexible Simulation Tool for Particle-Based Materials Modeling at the Atomic, Meso, and Continuum Scales. *Comput. Phys. Commun.* **2022**, 271.
54. Fernandez, G.; Vrabec, J.; Hasse, H., Self-Diffusion and Binary Maxwell-Stefan Diffusion Coefficients of Quadrupolar Real Fluids from Molecular Simulation. *Int. J. Thermophys.* **2005**, 26, 1389-1407.
55. Wang, J. M.; Wolf, R. M.; Caldwell, J. W.; Kollman, P. A.; Case, D. A., Development and Testing of a General Amber Force Field. *J. Comput. Chem.* **2004**, 25, 1157-1174.
56. Pellenq, R. J. M.; Levitz, P. E., Capillary Condensation in a Disordered Mesoporous Medium: A Grand Canonical Monte Carlo Study. *Mol. Phys.* **2002**, 100, 2059-2077.
57. van LOEF, J. J., On the Thermo-Physical Properties of Liquid Rn-222. *Physica B & C* **1981**, 103, 362-364.
58. Leverant, C. J.; Harvey, J. A.; Alam, T. M., Machine Learning-Based Upscaling of Finite-Size Molecular Dynamics Diffusion Simulations for Binary Fluids. *J. Phys. Chem. Lett.* **2020**, 11, 10375-10381.
59. Wang, S.; Javadpour, F.; Feng, Q., Molecular Dynamics Simulations of Oil Transport through Inorganic Nanopores in Shale. *Fuel* **2016**, 171, 74-86.
60. Schoen, M.; Cushman, J. H.; Diestler, D. J.; Rhykerd, C. L., Fluids in Micropores .2. Self-Diffusion in a Simple Classical Fluid in a Slit Pore. *J. Chem. Phys.* **1988**, 88, 1394-1406.
61. Detchervey, F.; Bocquet, L., Thermal Fluctuations of Hydrodynamic Flows in Nanochannels. *Phys. Rev. E* **2013**, 88, 012106.

Machine Learning Prediction of Simulated Self-Diffusion Coefficients for Bulk and Confined Pure Liquids

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Supporting Information

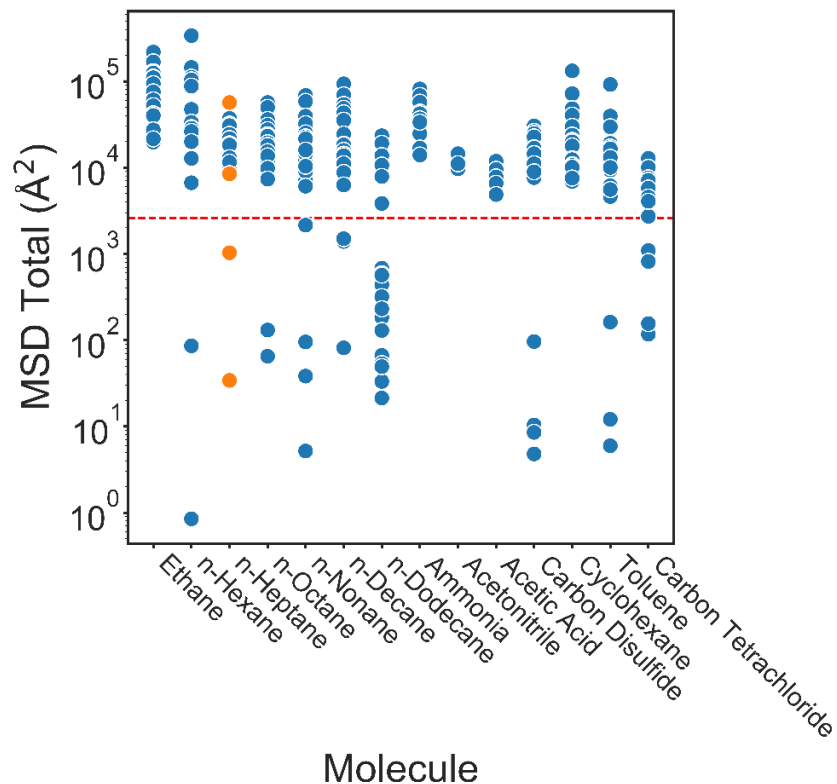


Figure S1. Final mean square displacement (MSD) value from each simulation of bulk liquids (different density and temperatures), grouped by molecule. The dashed line corresponds to the boundary between fluid-like behavior and reduced mobility, solid-like. square displacement (MSD) value from each simulation of bulk liquids, grouped by molecule. The orange points indicate those systems that were chosen for further analysis of the liquid structure. See main text for more discussion.

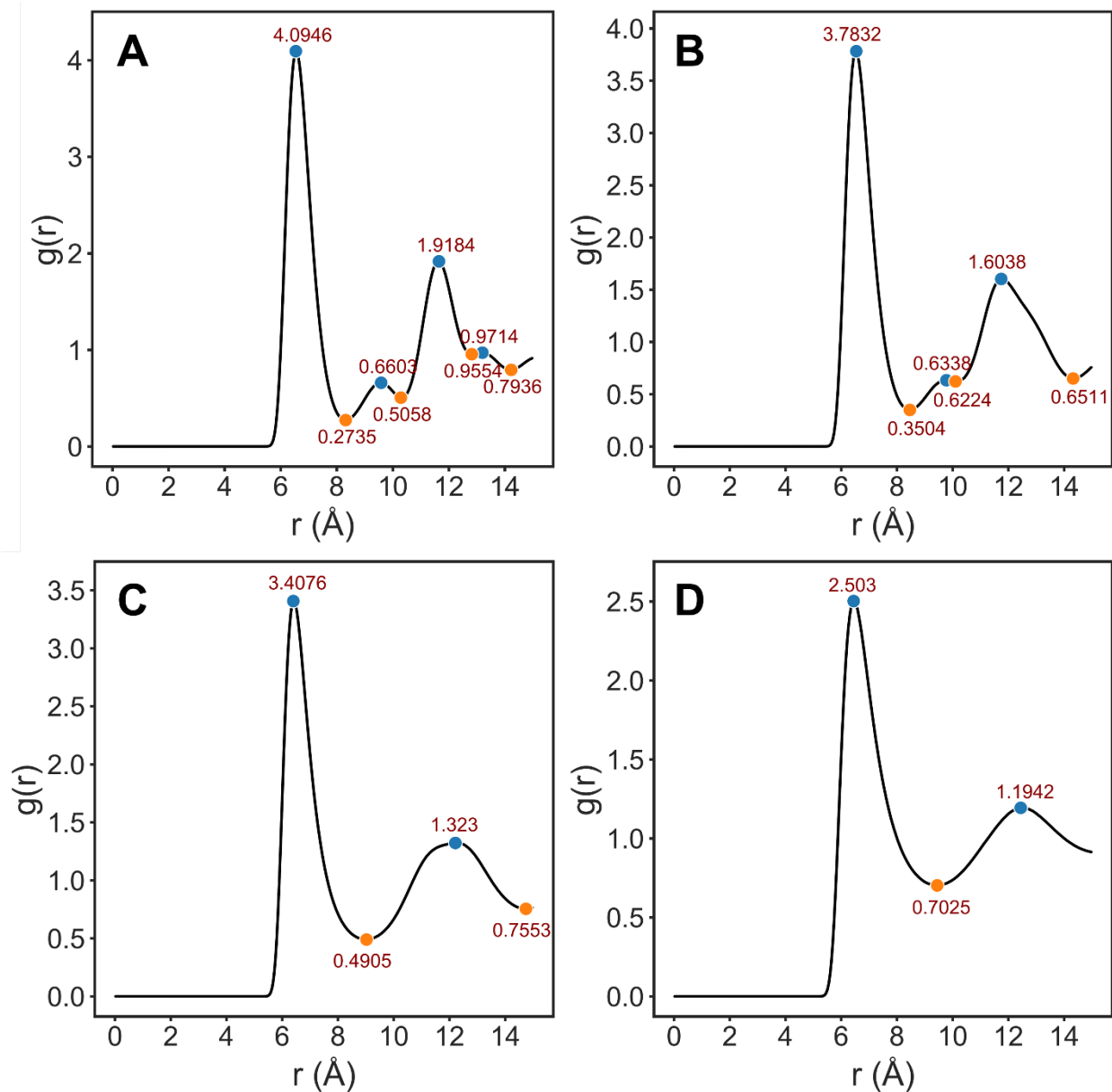


Figure S2. Radial distribution functions, $g(r)$, from n -heptane corresponding to the orange symbols in Fig. S1: A) $\rho = 0.004522$ atom/Å³, $T = 210$ K, MSD = 35 Å². B) $\rho = 0.004444$ atom/Å³, $T = 226$ K, MSD = 10³ Å². C) $\rho = 0.004481$ atom/Å³, $T = 293$ K, MSD = 10⁴ Å². D) $\rho = 0.003518$ atom/Å³, $T = 401$ K, MSD = 5 × 10⁴ Å². The $g(r)$ values at local maxima and minima are given.

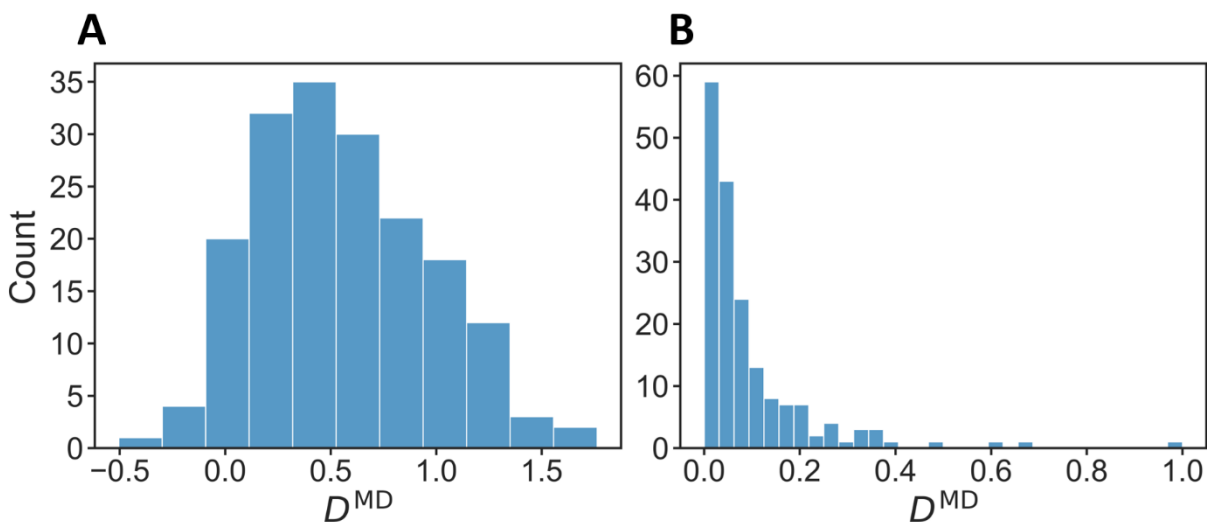


Figure S3. Bulk fluids training data set scaled diffusion coefficients using either the (A) log scaler or (B) minmax scaler.

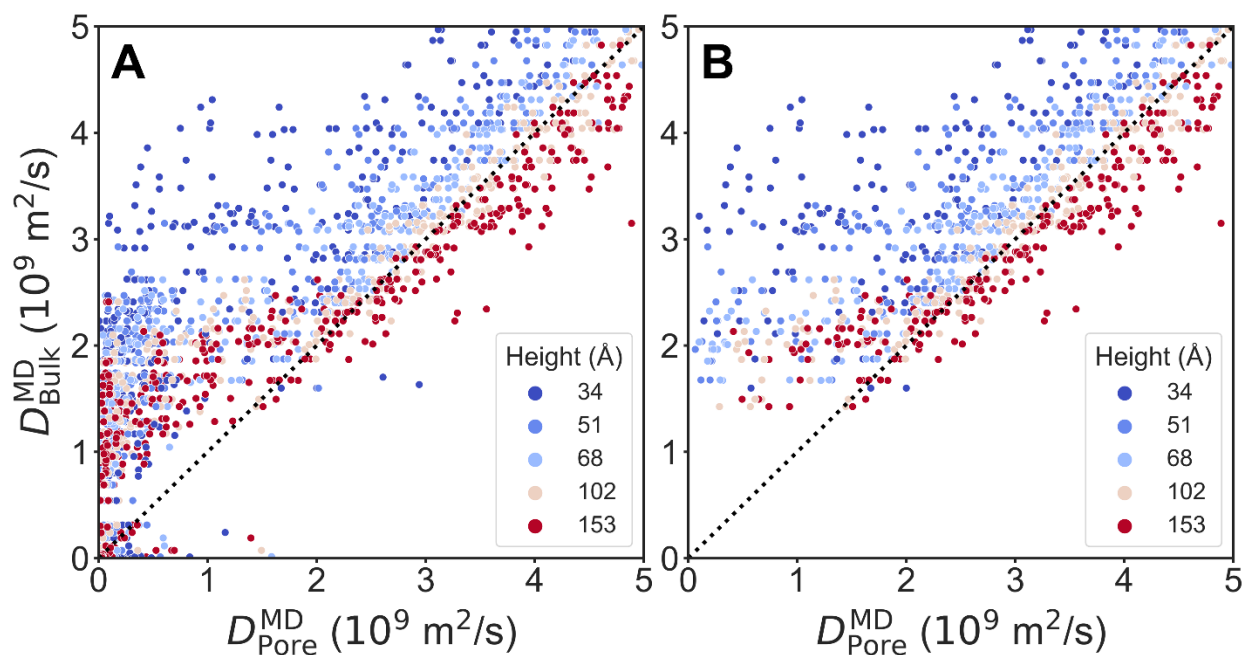


Figure S4. Diffusion coefficients from MD simulations of bulk and pore fluids (A) before and (B) after removal of pore fluids that were identified as solid-like.

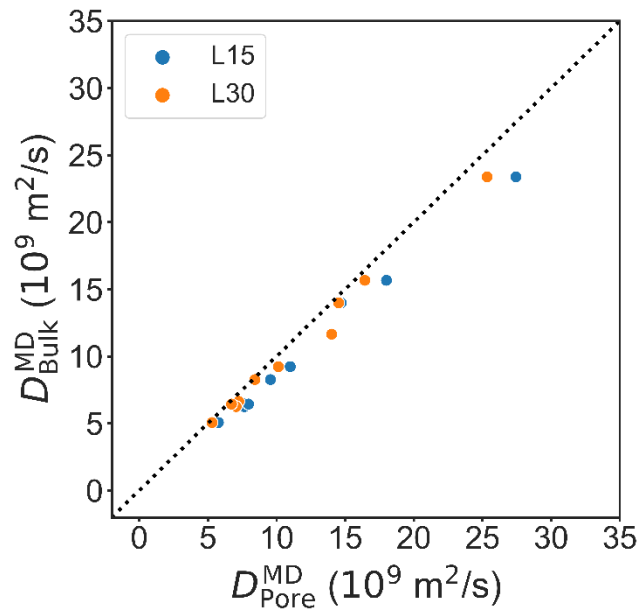


Figure S5. Parity plots between bulk and pore diffusion for a collection of 10 fluids with periodic lateral dimensions (L) of $15\sigma_{\text{C}}$ (51 Å) and $30\sigma_{\text{C}}$ (102 Å), where σ_{C} is the Lennard-Jones diameter of the wall carbon atoms.

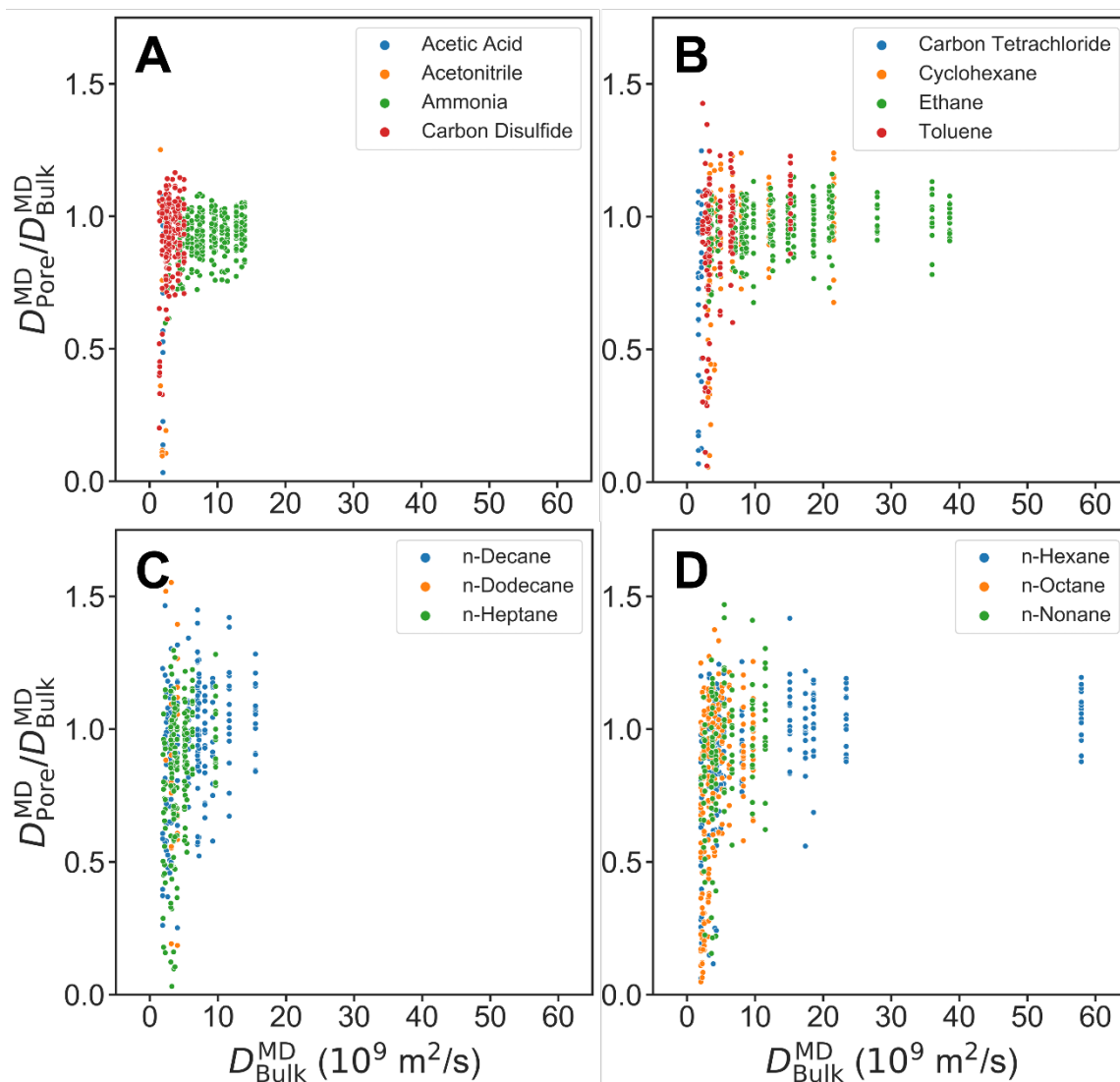


Figure S6. Parity plots of parallel diffusion ratio versus bulk diffusion between bulk and pore fluids in the validation set, sorted by molecule. The figure is separated into 4 parts (A, B, C, and D) for visual clarity of all (14) molecules included in this study. Ratio above 1 correspond to enhanced parallel diffusion in the pore.

Table S1. Number of simulations rejected for bulk and pore simulations.

Molecule	Number of Bulk Simulations	Number of Rejected Bulk Simulations	Number of Pore Simulations	Number of Rejected Pore Simulations
Acetic Acid	5	0	75	63
Acetonitrile	5	0	75	63
Ammonia	20	0	300	0
Carbon Disulfide	20	4	300	93
Carbon Tetrachloride	20	4	300	264
Cyclohexane	20	0	300	165
Ethane	20	0	300	0
<i>n</i> -Decane	20	2	300	105
<i>n</i> -Dodecane	20	14	300	270
<i>n</i> -Heptane	20	2	300	108
<i>n</i> -Hexane	20	2	300	69
<i>n</i> -Nonane	20	4	300	171
<i>n</i> -Octane	20	3	300	93
Toluene	20	4	300	171
Total	250	39	3750	1635

Table S2. Description of the columns in the bulk fluid excel file.

Column Name	Column Description
Molecule	Molecule name
Sigma (Å)	Molecule Lennard-Jones σ parameter value in angstroms
Epsilon (kcal/mol)	Molecule Lennard-Jones ϵ parameter value in kilocalories per mole
Mass (g/mol)	Molecule molecular mass in grams per mole
Rho (atom/Å ³)	Simulation fluid density in atoms per cubic angstrom
<i>T</i> (K)	Simulation input temperature in Kelvin
<i>D</i> (Å ² /fs)	Simulated diffusion coefficient in angstrom squared per femtosecond
<i>T</i> _{avg} (K)	Averaged recorded simulation temperature in Kelvin
<i>T</i> _{stddev}	Standard deviation of temperature during simulation
Exp_ <i>D</i> x10 ⁹ (m ² /s)	Experimental diffusion coefficient at equivalent temperature and density in *10 ⁹ meters squared per second
MD_ <i>D</i> x10 ⁹ (m ² /s)	Simulated diffusion coefficient in *10 ⁹ meters squared per second
MD Error %	Percent error in simulation compared with experimental diffusion coefficient
Include	1 if the simulation was chosen to be included in the data set, 0 if it was rejected

MSD ($\text{\AA}^2$)	Mean square displacement in units of square angstrom during simulation
------------------------	--

Table S3. Description of the columns in the pore fluid excel file

Column Name	Column Description
Molecule	Molecule name
Sigma ($\text{\AA}$)	Molecule Lennard-Jones σ parameter value in angstroms
Epsilon (kcal/mol)	Molecule Lennard-Jones ϵ parameter value in kilocalories per mole
Mass (g/mol)	Molecule molecular mass in grams per mole
Rho (atom/ $\text{\AA}^3$)	Simulation fluid density in atoms per cubic angstroms
T (K)	Simulation input temperature in Kelvin
H ($\text{\AA}$)	Pore height in angstroms
Shape	Pore shape with 1 for planar, 2 for cylindrical, and 3 for hexagonal
MSDpar ($\text{\AA}^2$)	Mean square displacement during simulation parallel to the pore walls in square angstroms
MSDper ($\text{\AA}^2$)	Mean square displacement during simulation perpendicular to the pore walls in square angstroms
D_{par} ($\text{\AA}^2/\text{fs}$)	Simulated pore diffusion coefficient parallel to pore walls in angstroms squared per femtosecond
$D_{\text{pore}} \times 10^9$ (m^2/s)	Simulated pore diffusion coefficient parallel to pore walls in $\times 10^9$ meters squared per second
T_{avg} (K)	Averaged recorded simulation temperature in Kelvin
T_{stddev}	Standard deviation of temperature during simulation
Bulk_Include	1 if bulk simulation at equivalent temperature and density was chosen to be included in the data set, 0 if it was rejected
$\text{Exp_}D \times 10^9$ (m^2/s)	Experimental diffusion coefficient of bulk fluid at equivalent temperature and density in $\times 10^9$ meters squared per second
Bulk_MD_ $D \times 10^9$ (m^2/s)	Diffusion coefficient of bulk fluid at equivalent temperature and density in $\times 10^9$ meters squared per second
Bulk_MSD ($\text{\AA}^2$)	Mean square displacement of bulk fluid at equivalent temperature and density in units of square angstrom during simulation
Pore_MSD_Test	1 if the simulation passed the pore MSD test, 0 if it was rejected
Max_Values	Values of radial distribution function maximums for planar pore simulation
Max_Locations	Locations of radial distribution function maximums for planar pore simulation
Min_Values	Values of radial distribution function minimums for planar pore simulation
Min_Locations	Locations of radial distribution function minimums for planar pore simulation
rdfMin1	Value of the first radial distribution function minimum for planar pore simulation
Num_Max	Number of maximums in radial distribution function for planar pore simulation
Num_Min	Number of minimums in radial distribution function for planar pore simulation

Pore_Include	1 if the pore simulation was chosen to be included in the data set, 0 if it was rejected
--------------	--

LAMMPS Input Files

Below are lammps input scripts for Hexane with $\rho = 0.001739$ atom/ $\text{\AA}^3$ and $T = 508.61$ K for the bulk, slit pore, cylindrical pore, and hexagonal pore systems. For the bulk and slit pore systems no structural file was included; the system is created entirely via the LAMMPS create_atoms command. For the cylindrical and hexagonal system, a separate structural file was included which defines the pore wall. This file was created separately using an in-house python script.

Bulk liquid LAMMPS script:

```
log          log.insert

# ----- ADJUSTABLE VARIABLES -----

variable     LOWTEMP equal 508.61
variable     HIGHTEMP equal 500.0
variable     RHO equal 0.001739      # fluid density N/Ang^3
variable     SIGMAW equal 3.4        # wall LJ sigma in Ang
variable     SIGMAF equal 5.61841    # fluid LJ sigma in Ang
variable     LENGTH equal 15.0*${SIGMAW} # Cell xy parameter in Ang
variable     EPSF equal 0.863956123  # fluid-fluid LJ epsilon in kcal/mol
variable     MASSF equal 86.18       # fluid atom mass in g/mol
variable     RC equal 15.0           # real-space cutoff, 12.0 Ang

# ----- DEPENDENT VARIABLES -----

variable     VOIDVOL equal ${LENGTH}*${LENGTH}*${LENGTH} # void volume for fluid
variable     NUM equal round(${RHO}*${VOIDVOL})           # number of fluid atoms

# ----- GENERAL PARAMETERS -----

units        real                # sigma_C=3.4 Ang, eps_C=43.277 K
atom_style   full

# ----- CREATE BOX -----

region       simbox block 0 ${LENGTH} 0 ${LENGTH} 0 ${LENGTH}
create_box   1 simbox

# ----- FILL VOID REGION AND FILL WITH FLUID ATOM TYPE 2 -----

mass         1 ${MASSF}
pair_style    lj/cut ${RC}
pair_modify   shift yes         # shifted and truncated potential, subtracts E_LJ at r=RC
pair_coeff    1 1 ${EPSF} ${SIGMAF}

create_atoms  1 random ${NUM} 668334 simbox units box
group         fluid type 1

write_data    fluid_init.data

# ----- MINIMIZE FLUID -----

minimize      1.0e-4 1.0e-4 1000 1000
restart       0
write_data    fluid.data
write_restart fluid.restart

# ----- fluid equilibration -----

log           log.equil
timestep      1.0
thermo        1000
compute       ftemp fluid temp      # temperature of fluid atoms
thermo_style  custom step etotal pe ke c_f temp press cellb cellc
reset_timestep 0

velocity      fluid create ${HIGHTEMP} 4928459 dist gaussian

fix           1 fluid nvt temp ${HIGHTEMP} ${HIGHTEMP} 100
run           100000
unfix         1

fix           2 fluid nvt temp ${HIGHTEMP} ${LOWTEMP} 100
run           100000
unfix         2

fix           3 fluid nvt temp ${LOWTEMP} ${LOWTEMP} 100
run           1000000

log           log.prod

# ----- nvt production 1x10M steps to calculate MSD -----
# ----- fitslopepy gives D_parallel in LJ units (sigma^2/t*) ---
# ----- fitslopetot gives D_total in LJ units (sigma^2/t*) -----

reset_timestep 0
fix           com fluid momentum 500 linear 1 1 1 rescale

dump          4 all atom 10000000 dump.nve

compute       liqrdf all rdf 320 1 1      # RDF for liquid atoms
fix           8 all ave/time 100 100000 10000000 c_liqrdf[*] file rdf.txt mode vector
```

```

compute      molmsd fluid msd com yes          # COM of fluid is subtracted out
variable     xymmsd equal c_molmsd[1]+c_molmsd[2]  # sum of msd_x and msd_y
fix          9 all vector 1 v_xymmsd
variable     fitslopexy equal slope(f_9)/(4*(dt))
fix          10 all vector 1 c_molmsd[4]         # sum of msd_x, msd_y, msd_z
variable     fitslopetot equal slope(f_10)/(6*(dt))
thermo_style custom elaplong c_molmsd[1] c_molmsd[2] c_molmsd[3] c_molmsd[4] c_ftemp v_fitslopexy v_fitslopetot
run          10000000

uncompute    liqrdf
uncompute    molmsd
unfix        8
unfix        9
unfix        10
undump       4
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
write_restart nvt_final.restart
write_data    nvt_final.data

```

Slit pore LAMMPS script:

```

log          log.insert

# ----- ADJUSTABLE VARIABLES -----

variable     LOWTEMP equal 508.61
variable     HIGHTEMP equal 500.0
variable     RHO equal 0.001739             # fluid density N/Ang^3
variable     SIGMAW equal 3.4               # wall LJ sigma in Ang
variable     SIGMAF equal 5.61841          # fluid LJ sigma in Ang
variable     LENGTH equal 15.0*${SIGMAW}    # Cell xy parameter in Ang
variable     HEIGHT equal 45*${SIGMAW}      # Pore height H in Ang
variable     EPSW equal 0.086000159         # wall-wall LJ epsilon in kcal/mol
variable     EPSF equal 0.863956123        # fluid-fluid LJ epsilon in kcal/mol
variable     MASSW equal 12.0              # wall atom mass in g/mol
variable     MASSF equal 86.18             # fluid atom mass in g/mol
variable     RC equal 15.0                 # real-space cutoff, 12.0 Ang

# ----- DEPENDENT VARIABLES -----

variable     SIGMAFW equal (${SIGMAW}+${SIGMAF})/2 # fluid-wall LJ sigma in Ang
variable     EPSFW equal sqrt(${EPSF}*${EPSW})    # fluid-wall LJ epsilon in kcal/mol
variable     ZHI equal ${HEIGHT}+2*${SIGMAW}      # cell length in z
variable     ZTOP equal ${HEIGHT}+${SIGMAW}       # location of upper wall
variable     VOIDVOL equal ${LENGTH}*${LENGTH}*${HEIGHT} # void volume for fluid
variable     NUM equal round(${RHO}*${VOIDVOL})    # number of fluid atoms
#variable    LJLOW equal 1*${SIGMAW}+1.0         # insert fluid atoms 1.0 above lower wall
variable     LJHIGH equal ${ZTOP}-1.0            # insert fluid atoms 1.0 below upper wall
variable     LJLOW equal 1*${SIGMAW}/2           # insert fluid atoms 1.0 above lower wall
variable     LJHIGH equal ${ZTOP}-${SIGMAW}/2     # insert fluid atoms 1.0 below upper wall

# ----- GENERAL PARAMETERS -----

units        real                          # sigma_C=3.4 Ang, eps_C=43.277 K
atom_style   full

# ----- BUILD LJ WALLS, ATOM TYPE 1 -----

region       simbox block 0 ${LENGTH} 0 ${LENGTH} 0 ${ZHI}
boundary     p p f
create_box   2 simbox
lattice      sc 3.4
region       wall-bottom block EDGE EDGE EDGE EDGE 0.0 0.5 units box
create_atoms 1 region wall-bottom # bottom wall
region       wall-top block EDGE EDGE EDGE EDGE ${LJHIGH} ${ZTOP} units box
create_atoms 1 region wall-top # top wall

# ----- FILL VOID REGION AND FILL WITH FLUID ATOM TYPE 2 -----

mass         1 ${MASSW}
mass         2 ${MASSF}
pair_style    lj/cut ${RC}
pair_modify   shift yes # shifted and truncated potential, subtracts E_LJ at r=RC
pair_coeff    * * 0 1
pair_coeff    1 2 ${EPSFW} ${SIGMAFW}
pair_coeff    2 2 ${EPSF} ${SIGMAF}

region       lvoid block EDGE EDGE EDGE EDGE ${LJLOW} ${LJHIGH} units box
create_atoms 2 random ${NUM} 668334 lvoid units box
group        wall type 1
group        fluid type 2

write_data    wall_fluid_init.data

# ----- MINIMIZE FLUID -----

fix          freeze wall setforce 0.0 0.0 0.0
minimize     1.0e-4 1.0e-4 1000 1000
unfix        freeze
restart      0
write_data    wall_fluid.data
write_restart wall_fluid.restart

# ----- fluid equilibration-----

log          log.equil
timestep     1.0
thermo       1000
compute      ftemp fluid temp # temperature of fluid atoms
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
reset_timestep 0

velocity      fluid create ${HIGHTEMP} 4928459 dist gaussian

fix          1 fluid nvt temp ${HIGHTEMP} ${HIGHTEMP} 100
run          100000
unfix        1

```

```

fix      2 fluid nvt temp ${HIGHTEMP} ${LOWTEMP} 100
run      100000
unfix    2

fix      3 fluid nvt temp ${LOWTEMP} ${LOWTEMP} 100
run      1000000

log      log.prod

# -----nvt production 1x10M steps to calculate MSD -----
# ----- fitslopxy gives D_parallel in LJ units (sigma^2/t*) ---
# ----- fitslopetot gives D_total in LJ units (sigma^2/t*) -----

reset_timestep 0
fix      com fluid momentum 500 linear 1 1 1 rescale

fix      5 fluid ave/atom 100 100000 10000000 x y z      # average xyz coords for each atom
dump     5 fluid custom 10000000 dump.xyz id type f_${*}
dump     4 all atom 10000000 dump.nve

compute  layers all chunk/atom bin/1d z center 0.01 region ljvoid units box # bins for 1D profiles
fix      6 all ave/chunk 100 100000 10000000 layers density/number file density_fluid.txt # 1D density profile
fix      7 all ave/chunk 100 100000 10000000 layers vx file velx_fluid.txt # Velocity_x profile

compute  liqrdf all rdf 320 2 2      # RDF for liquid atoms
fix      8 all ave/time 100 100000 10000000 c_liqrdf[*] file rdf.txt mode vector

compute  molmsd fluid msd com yes      # COM of fluid is subtracted out
variable xymmsd equal c_molmsd[1]+c_molmsd[2]      # sum of msd_x and msd_y
fix      9 all vector 1 v_xymmsd
variable fitslopxy equal slope(f_9)/(4*(dt))
fix      10 all vector 1 c_molmsd[4]      # sum of msd_x, msd_y, msd_z
variable fitslopetot equal slope(f_10)/(6*(dt))
thermo_style custom elaplong c_molmsd[1] c_molmsd[2] c_molmsd[3] c_molmsd[4] c_ftemp v_fitslopxy v_fitslopetot
run      10000000

uncompute layers
uncompute liqrdf
uncompute molmsd
unfix      5
unfix      6
unfix      7
unfix      8
unfix      9
unfix      10
undump     4
undump     5
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
write_restart nvt_final.restart
write_data    nvt_final.data

```

Cylindrical pore LAMMPS script:

```

log      log.insert

# ----- ADJUSTABLE VARIABLES -----

variable LOWTEMP equal 508.61
variable HIGHTEMP equal 500.0
variable RHO equal 0.001739      # fluid density sigma^3
variable SIGMAW equal 3.4      # wall LJ sigma in Ang
variable SIGMAF equal 5.61841      # fluid LJ sigma in Ang
variable LENGTH equal 15.0*${SIGMAW}      # Cell xy parameter in Ang
variable HEIGHT equal 45*${SIGMAW}      # Pore height H in Ang
variable EPSW equal 0.086000159      # wall-wall LJ epsilon in kcal/mol
variable EPSF equal 0.863956      # fluid-fluid LJ epsilon in kcal/mol
variable MASSW equal 12.0      # wall atom mass in g/mol
variable MASSF equal 86.18      # fluid atom mass in g/mol
variable RC equal 15.0      # real-space cutoff, 12.0 Ang

variable PI equal 3.14159265359      # pi, yum

# ----- DEPENDENT VARIABLES -----

variable SIGMAFW equal (${SIGMAW})+${SIGMAF})/2      # fluid-wall LJ sigma in Ang
variable EPSFW equal sqrt(${EPSF}*${EPSW})      # fluid-wall LJ epsilon in kcal/mol
variable XHI equal ${HEIGHT}+2.0      # cell length in x
variable YHI equal ${HEIGHT}+2.0      # cell length in y

variable ZHI equal ${LENGTH}      # cell length in z
variable XMID equal (${HEIGHT})+${(SIGMAW)})/2      # mid point in x
variable YMID equal (${HEIGHT})+${(SIGMAW)})/2      # mid point in y
variable RAD equal (${HEIGHT})-${(SIGMAW)})/2      # effective radius of pore
variable NBIN equal ${RAD}/.01      # number of bins for 1D density profile

variable VOIDVOL equal ${PI}*${LENGTH}*${HEIGHT})*${HEIGHT}/4.0 # void volume for fluid (pi*h*r^2)
variable NUM equal round(${RHO}*${VOIDVOL})      # number of fluid atoms

# ----- GENERAL PARAMETERS -----

units      real
atom_style full

# ----- CREATE AND READ DATA FILE -----

boundary f f p
read_data lammps.data extra/atom/types 1

# ----- FILL VOID REGION AND FILL WITH FLUID ATOM TYPE 2 -----

mass      1 ${MASSW}
mass      2 ${MASSF}
pair_style lj/cut ${RC}
pair_modify shift yes      # shifted and truncated potential, subtracts E_LJ at r=RC
pair_coeff * * 0 1
pair_coeff 1 2 ${EPSFW} ${SIGMAFW}

```

```

pair_coeff 2 2 ${EPSF} ${SIGMAF}

region lvoid cylinder z ${X MID} ${Y MID} ${RAD} EDGE EDGE
create_atoms 2 random ${NUM} 668334 lvoid units box
group wall type 1
group fluid type 2

write_data wall_fluid_init.data

# ----- MINIMIZE FLUID -----

fix freeze wall setforce 0.0 0.0 0.0
minimize 1.0e-4 1.0e-4 1000 1000
unfix freeze
restart 0
write_data wall_fluid.data
write_restart wall_fluid.restart

# ----- fluid equilibration-----

log log.equil
timestep 1.0
thermo 1000
compute ftemp fluid temp # temperature of fluid atoms
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
reset_timestep 0

velocity fluid create ${HIGHTEMP} 4928459 dist gaussian

fix 1 fluid nvt temp ${HIGHTEMP} ${HIGHTEMP} 100
run 100000
unfix 1

fix 2 fluid nvt temp ${HIGHTEMP} ${LOWTEMP} 100
run 100000
unfix 2

fix 3 fluid nvt temp ${LOWTEMP} ${LOWTEMP} 100
run 100000

log log.prod

# -----nve production to calculate msds -----
# ----- fitslopesy gives D_parallel in LJ units (sigma^2/t*) ---
# ----- fitslopetot gives D_total in LJ units (sigma^2/t*) -----

reset_timestep 0
fix 5 fluid ave/atom 100 100000 10000000 x y z # average xyz coords for each atom
dump 5 fluid custom 10000000 dump.xyz id type f_5[*]
dump 4 all atom 1000000 dump.nve

compute layers all chunk/atom bin/cylinder z lower ${LENGTH} ${X MID} ${Y MID} 0.0 ${RAD} ${NBIN} region lvoid units box # bins for 1D profiles
fix 6 all ave/chunk 100 100000 10000000 layers density/number file density_fluid.txt # 1D density profile
fix 7 all ave/chunk 100 100000 10000000 layers vx file velx_fluid.txt # Velocity_x profile

compute liqrdf all rdf 320 2 2 # RDF for liquid atoms
fix 8 all ave/time 100 100000 10000000 c_liqrdf[*] file rdf.nvt mode vector

compute molmsd fluid msd com yes # COM of fluid is subtracted out
fix 9 all vector 1 c_molmsd[3]
variable fitslopesy equal slope(f_9)/(2*(dt))
fix 10 all vector 1 c_molmsd[4] # sum of msd_x, msd_y, msd_z
variable fitslopetot equal slope(f_10)/(6*(dt))
thermo_style custom elaplong c_molmsd[1] c_molmsd[2] c_molmsd[3] c_molmsd[4] c_ftemp v_fitslopesy v_fitslopetot
run 1000000

uncompute layers
uncompute liqrdf
uncompute molmsd
unfix 5
unfix 6
unfix 7
unfix 8
unfix 9
unfix 10
undump 4
undump 5
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
write_restart nvt_final.restart
write_data nvt_final.data

```

Cylindrical pore LAMMPS data file:

LAMMPS data file

2160 atoms

1 atom types

```

0.0000000000 159.8000000000 xlo xhi
0.0000000000 159.8000000000 ylo yhi
0.0000000000 51.0000000000 zlo zhi

```

Atoms

```

1 1 1 0.00000 156.40000 78.20000 0.00000
2 2 1 0.00000 156.40000 78.20000 3.40000
3 3 1 0.00000 156.40000 78.20000 6.80000
4 4 1 0.00000 156.40000 78.20000 10.20000
5 5 1 0.00000 156.40000 78.20000 13.60000
6 6 1 0.00000 156.40000 78.20000 17.00000
7 7 1 0.00000 156.40000 78.20000 20.40000
8 8 1 0.00000 156.40000 78.20000 23.80000
9 9 1 0.00000 156.40000 78.20000 27.20000
10 10 1 0.00000 156.40000 78.20000 30.60000
11 11 1 0.00000 156.40000 78.20000 34.00000
12 12 1 0.00000 156.40000 78.20000 37.40000
13 13 1 0.00000 156.40000 78.20000 40.80000

```

14	14	1	0.00000	156.40000	78.20000	44.20000
15	15	1	0.00000	156.40000	78.20000	47.60000
16	16	1	0.00000	156.32557	81.61104	0.00000
17	17	1	0.00000	156.32557	81.61104	3.40000
18	18	1	0.00000	156.32557	81.61104	6.80000
19	19	1	0.00000	156.32557	81.61104	10.20000
20	20	1	0.00000	156.32557	81.61104	13.60000
21	21	1	0.00000	156.32557	81.61104	17.00000
22	22	1	0.00000	156.32557	81.61104	20.40000
23	23	1	0.00000	156.32557	81.61104	23.80000
24	24	1	0.00000	156.32557	81.61104	27.20000
25	25	1	0.00000	156.32557	81.61104	30.60000
26	26	1	0.00000	156.32557	81.61104	34.00000
27	27	1	0.00000	156.32557	81.61104	37.40000
28	28	1	0.00000	156.32557	81.61104	40.80000
29	29	1	0.00000	156.32557	81.61104	44.20000
30	30	1	0.00000	156.32557	81.61104	47.60000
31	31	1	0.00000	156.10243	85.01558	0.00000
32	32	1	0.00000	156.10243	85.01558	3.40000
33	33	1	0.00000	156.10243	85.01558	6.80000
34	34	1	0.00000	156.10243	85.01558	10.20000
35	35	1	0.00000	156.10243	85.01558	13.60000
36	36	1	0.00000	156.10243	85.01558	17.00000
37	37	1	0.00000	156.10243	85.01558	20.40000
38	38	1	0.00000	156.10243	85.01558	23.80000
39	39	1	0.00000	156.10243	85.01558	27.20000
40	40	1	0.00000	156.10243	85.01558	30.60000
41	41	1	0.00000	156.10243	85.01558	34.00000
42	42	1	0.00000	156.10243	85.01558	37.40000
43	43	1	0.00000	156.10243	85.01558	40.80000
44	44	1	0.00000	156.10243	85.01558	44.20000
45	45	1	0.00000	156.10243	85.01558	47.60000
46	46	1	0.00000	155.73099	88.40715	0.00000
47	47	1	0.00000	155.73099	88.40715	3.40000
48	48	1	0.00000	155.73099	88.40715	6.80000
49	49	1	0.00000	155.73099	88.40715	10.20000
50	50	1	0.00000	155.73099	88.40715	13.60000
51	51	1	0.00000	155.73099	88.40715	17.00000
52	52	1	0.00000	155.73099	88.40715	20.40000
53	53	1	0.00000	155.73099	88.40715	23.80000
54	54	1	0.00000	155.73099	88.40715	27.20000
55	55	1	0.00000	155.73099	88.40715	30.60000
56	56	1	0.00000	155.73099	88.40715	34.00000
57	57	1	0.00000	155.73099	88.40715	37.40000
58	58	1	0.00000	155.73099	88.40715	40.80000
59	59	1	0.00000	155.73099	88.40715	44.20000
60	60	1	0.00000	155.73099	88.40715	47.60000
61	61	1	0.00000	155.21197	91.77929	0.00000
62	62	1	0.00000	155.21197	91.77929	3.40000
63	63	1	0.00000	155.21197	91.77929	6.80000
64	64	1	0.00000	155.21197	91.77929	10.20000
65	65	1	0.00000	155.21197	91.77929	13.60000
66	66	1	0.00000	155.21197	91.77929	17.00000
67	67	1	0.00000	155.21197	91.77929	20.40000
68	68	1	0.00000	155.21197	91.77929	23.80000
69	69	1	0.00000	155.21197	91.77929	27.20000
70	70	1	0.00000	155.21197	91.77929	30.60000
71	71	1	0.00000	155.21197	91.77929	34.00000
72	72	1	0.00000	155.21197	91.77929	37.40000
73	73	1	0.00000	155.21197	91.77929	40.80000
74	74	1	0.00000	155.21197	91.77929	44.20000
75	75	1	0.00000	155.21197	91.77929	47.60000
76	76	1	0.00000	154.54635	95.12558	0.00000
77	77	1	0.00000	154.54635	95.12558	3.40000
78	78	1	0.00000	154.54635	95.12558	6.80000
79	79	1	0.00000	154.54635	95.12558	10.20000
80	80	1	0.00000	154.54635	95.12558	13.60000
81	81	1	0.00000	154.54635	95.12558	17.00000
82	82	1	0.00000	154.54635	95.12558	20.40000
83	83	1	0.00000	154.54635	95.12558	23.80000
84	84	1	0.00000	154.54635	95.12558	27.20000
85	85	1	0.00000	154.54635	95.12558	30.60000
86	86	1	0.00000	154.54635	95.12558	34.00000
87	87	1	0.00000	154.54635	95.12558	37.40000
88	88	1	0.00000	154.54635	95.12558	40.80000
89	89	1	0.00000	154.54635	95.12558	44.20000
90	90	1	0.00000	154.54635	95.12558	47.60000
91	91	1	0.00000	153.73540	98.43965	0.00000
92	92	1	0.00000	153.73540	98.43965	3.40000
93	93	1	0.00000	153.73540	98.43965	6.80000
94	94	1	0.00000	153.73540	98.43965	10.20000
95	95	1	0.00000	153.73540	98.43965	13.60000
96	96	1	0.00000	153.73540	98.43965	17.00000
97	97	1	0.00000	153.73540	98.43965	20.40000
98	98	1	0.00000	153.73540	98.43965	23.80000
99	99	1	0.00000	153.73540	98.43965	27.20000
100	100	1	0.00000	153.73540	98.43965	30.60000
101	101	1	0.00000	153.73540	98.43965	34.00000
102	102	1	0.00000	153.73540	98.43965	37.40000
103	103	1	0.00000	153.73540	98.43965	40.80000
104	104	1	0.00000	153.73540	98.43965	44.20000
105	105	1	0.00000	153.73540	98.43965	47.60000
106	106	1	0.00000	152.78067	101.71519	0.00000
107	107	1	0.00000	152.78067	101.71519	3.40000
108	108	1	0.00000	152.78067	101.71519	6.80000
109	109	1	0.00000	152.78067	101.71519	10.20000
110	110	1	0.00000	152.78067	101.71519	13.60000
111	111	1	0.00000	152.78067	101.71519	17.00000
112	112	1	0.00000	152.78067	101.71519	20.40000
113	113	1	0.00000	152.78067	101.71519	23.80000
114	114	1	0.00000	152.78067	101.71519	27.20000
115	115	1	0.00000	152.78067	101.71519	30.60000
116	116	1	0.00000	152.78067	101.71519	34.00000
117	117	1	0.00000	152.78067	101.71519	37.40000
118	118	1	0.00000	152.78067	101.71519	40.80000
119	119	1	0.00000	152.78067	101.71519	44.20000
120	120	1	0.00000	152.78067	101.71519	47.60000
121	121	1	0.00000	151.68396	104.94598	0.00000
122	122	1	0.00000	151.68396	104.94598	3.40000
123	123	1	0.00000	151.68396	104.94598	6.80000
124	124	1	0.00000	151.68396	104.94598	10.20000
125	125	1	0.00000	151.68396	104.94598	13.60000

126	126	1	0.00000	151.68396	104.94598	17.00000
127	127	1	0.00000	151.68396	104.94598	20.40000
128	128	1	0.00000	151.68396	104.94598	23.80000
129	129	1	0.00000	151.68396	104.94598	27.20000
130	130	1	0.00000	151.68396	104.94598	30.60000
131	131	1	0.00000	151.68396	104.94598	34.00000
132	132	1	0.00000	151.68396	104.94598	37.40000
133	133	1	0.00000	151.68396	104.94598	40.80000
134	134	1	0.00000	151.68396	104.94598	44.20000
135	135	1	0.00000	151.68396	104.94598	47.60000
136	136	1	0.00000	150.44738	108.12584	0.00000
137	137	1	0.00000	150.44738	108.12584	3.40000
138	138	1	0.00000	150.44738	108.12584	6.80000
139	139	1	0.00000	150.44738	108.12584	10.20000
140	140	1	0.00000	150.44738	108.12584	13.60000
141	141	1	0.00000	150.44738	108.12584	17.00000
142	142	1	0.00000	150.44738	108.12584	20.40000
143	143	1	0.00000	150.44738	108.12584	23.80000
144	144	1	0.00000	150.44738	108.12584	27.20000
145	145	1	0.00000	150.44738	108.12584	30.60000
146	146	1	0.00000	150.44738	108.12584	34.00000
147	147	1	0.00000	150.44738	108.12584	37.40000
148	148	1	0.00000	150.44738	108.12584	40.80000
149	149	1	0.00000	150.44738	108.12584	44.20000
150	150	1	0.00000	150.44738	108.12584	47.60000
151	151	1	0.00000	149.07327	111.24875	0.00000
152	152	1	0.00000	149.07327	111.24875	3.40000
153	153	1	0.00000	149.07327	111.24875	6.80000
154	154	1	0.00000	149.07327	111.24875	10.20000
155	155	1	0.00000	149.07327	111.24875	13.60000
156	156	1	0.00000	149.07327	111.24875	17.00000
157	157	1	0.00000	149.07327	111.24875	20.40000
158	158	1	0.00000	149.07327	111.24875	23.80000
159	159	1	0.00000	149.07327	111.24875	27.20000
160	160	1	0.00000	149.07327	111.24875	30.60000
161	161	1	0.00000	149.07327	111.24875	34.00000
162	162	1	0.00000	149.07327	111.24875	37.40000
163	163	1	0.00000	149.07327	111.24875	40.80000
164	164	1	0.00000	149.07327	111.24875	44.20000
165	165	1	0.00000	149.07327	111.24875	47.60000
166	166	1	0.00000	147.56425	114.30874	0.00000
167	167	1	0.00000	147.56425	114.30874	3.40000
168	168	1	0.00000	147.56425	114.30874	6.80000
169	169	1	0.00000	147.56425	114.30874	10.20000
170	170	1	0.00000	147.56425	114.30874	13.60000
171	171	1	0.00000	147.56425	114.30874	17.00000
172	172	1	0.00000	147.56425	114.30874	20.40000
173	173	1	0.00000	147.56425	114.30874	23.80000
174	174	1	0.00000	147.56425	114.30874	27.20000
175	175	1	0.00000	147.56425	114.30874	30.60000
176	176	1	0.00000	147.56425	114.30874	34.00000
177	177	1	0.00000	147.56425	114.30874	37.40000
178	178	1	0.00000	147.56425	114.30874	40.80000
179	179	1	0.00000	147.56425	114.30874	44.20000
180	180	1	0.00000	147.56425	114.30874	47.60000
181	181	1	0.00000	145.92319	117.30000	0.00000
182	182	1	0.00000	145.92319	117.30000	3.40000
183	183	1	0.00000	145.92319	117.30000	6.80000
184	184	1	0.00000	145.92319	117.30000	10.20000
185	185	1	0.00000	145.92319	117.30000	13.60000
186	186	1	0.00000	145.92319	117.30000	17.00000
187	187	1	0.00000	145.92319	117.30000	20.40000
188	188	1	0.00000	145.92319	117.30000	23.80000
189	189	1	0.00000	145.92319	117.30000	27.20000
190	190	1	0.00000	145.92319	117.30000	30.60000
191	191	1	0.00000	145.92319	117.30000	34.00000
192	192	1	0.00000	145.92319	117.30000	37.40000
193	193	1	0.00000	145.92319	117.30000	40.80000
194	194	1	0.00000	145.92319	117.30000	44.20000
195	195	1	0.00000	145.92319	117.30000	47.60000
196	196	1	0.00000	144.15321	120.21683	0.00000
197	197	1	0.00000	144.15321	120.21683	3.40000
198	198	1	0.00000	144.15321	120.21683	6.80000
199	199	1	0.00000	144.15321	120.21683	10.20000
200	200	1	0.00000	144.15321	120.21683	13.60000
201	201	1	0.00000	144.15321	120.21683	17.00000
202	202	1	0.00000	144.15321	120.21683	20.40000
203	203	1	0.00000	144.15321	120.21683	23.80000
204	204	1	0.00000	144.15321	120.21683	27.20000
205	205	1	0.00000	144.15321	120.21683	30.60000
206	206	1	0.00000	144.15321	120.21683	34.00000
207	207	1	0.00000	144.15321	120.21683	37.40000
208	208	1	0.00000	144.15321	120.21683	40.80000
209	209	1	0.00000	144.15321	120.21683	44.20000
210	210	1	0.00000	144.15321	120.21683	47.60000
211	211	1	0.00000	142.25769	123.05368	0.00000
212	212	1	0.00000	142.25769	123.05368	3.40000
213	213	1	0.00000	142.25769	123.05368	6.80000
214	214	1	0.00000	142.25769	123.05368	10.20000
215	215	1	0.00000	142.25769	123.05368	13.60000
216	216	1	0.00000	142.25769	123.05368	17.00000
217	217	1	0.00000	142.25769	123.05368	20.40000
218	218	1	0.00000	142.25769	123.05368	23.80000
219	219	1	0.00000	142.25769	123.05368	27.20000
220	220	1	0.00000	142.25769	123.05368	30.60000
221	221	1	0.00000	142.25769	123.05368	34.00000
222	222	1	0.00000	142.25769	123.05368	37.40000
223	223	1	0.00000	142.25769	123.05368	40.80000
224	224	1	0.00000	142.25769	123.05368	44.20000
225	225	1	0.00000	142.25769	123.05368	47.60000
226	226	1	0.00000	140.24023	125.80514	0.00000
227	227	1	0.00000	140.24023	125.80514	3.40000
228	228	1	0.00000	140.24023	125.80514	6.80000
229	229	1	0.00000	140.24023	125.80514	10.20000
230	230	1	0.00000	140.24023	125.80514	13.60000
231	231	1	0.00000	140.24023	125.80514	17.00000
232	232	1	0.00000	140.24023	125.80514	20.40000
233	233	1	0.00000	140.24023	125.80514	23.80000
234	234	1	0.00000	140.24023	125.80514	27.20000
235	235	1	0.00000	140.24023	125.80514	30.60000
236	236	1	0.00000	140.24023	125.80514	34.00000
237	237	1	0.00000	140.24023	125.80514	37.40000

238	238	1	0.00000	140.24023	125.80514	40.80000
239	239	1	0.00000	140.24023	125.80514	44.20000
240	240	1	0.00000	140.24023	125.80514	47.60000
241	241	1	0.00000	138.10468	128.46599	0.00000
242	242	1	0.00000	138.10468	128.46599	3.40000
243	243	1	0.00000	138.10468	128.46599	6.80000
244	244	1	0.00000	138.10468	128.46599	10.20000
245	245	1	0.00000	138.10468	128.46599	13.60000
246	246	1	0.00000	138.10468	128.46599	17.00000
247	247	1	0.00000	138.10468	128.46599	20.40000
248	248	1	0.00000	138.10468	128.46599	23.80000
249	249	1	0.00000	138.10468	128.46599	27.20000
250	250	1	0.00000	138.10468	128.46599	30.60000
251	251	1	0.00000	138.10468	128.46599	34.00000
252	252	1	0.00000	138.10468	128.46599	37.40000
253	253	1	0.00000	138.10468	128.46599	40.80000
254	254	1	0.00000	138.10468	128.46599	44.20000
255	255	1	0.00000	138.10468	128.46599	47.60000
256	256	1	0.00000	135.85509	131.03115	0.00000
257	257	1	0.00000	135.85509	131.03115	3.40000
258	258	1	0.00000	135.85509	131.03115	6.80000
259	259	1	0.00000	135.85509	131.03115	10.20000
260	260	1	0.00000	135.85509	131.03115	13.60000
261	261	1	0.00000	135.85509	131.03115	17.00000
262	262	1	0.00000	135.85509	131.03115	20.40000
263	263	1	0.00000	135.85509	131.03115	23.80000
264	264	1	0.00000	135.85509	131.03115	27.20000
265	265	1	0.00000	135.85509	131.03115	30.60000
266	266	1	0.00000	135.85509	131.03115	34.00000
267	267	1	0.00000	135.85509	131.03115	37.40000
268	268	1	0.00000	135.85509	131.03115	40.80000
269	269	1	0.00000	135.85509	131.03115	44.20000
270	270	1	0.00000	135.85509	131.03115	47.60000
271	271	1	0.00000	133.49575	133.49575	0.00000
272	272	1	0.00000	133.49575	133.49575	3.40000
273	273	1	0.00000	133.49575	133.49575	6.80000
274	274	1	0.00000	133.49575	133.49575	10.20000
275	275	1	0.00000	133.49575	133.49575	13.60000
276	276	1	0.00000	133.49575	133.49575	17.00000
277	277	1	0.00000	133.49575	133.49575	20.40000
278	278	1	0.00000	133.49575	133.49575	23.80000
279	279	1	0.00000	133.49575	133.49575	27.20000
280	280	1	0.00000	133.49575	133.49575	30.60000
281	281	1	0.00000	133.49575	133.49575	34.00000
282	282	1	0.00000	133.49575	133.49575	37.40000
283	283	1	0.00000	133.49575	133.49575	40.80000
284	284	1	0.00000	133.49575	133.49575	44.20000
285	285	1	0.00000	133.49575	133.49575	47.60000
286	286	1	0.00000	131.03115	135.85509	0.00000
287	287	1	0.00000	131.03115	135.85509	3.40000
288	288	1	0.00000	131.03115	135.85509	6.80000
289	289	1	0.00000	131.03115	135.85509	10.20000
290	290	1	0.00000	131.03115	135.85509	13.60000
291	291	1	0.00000	131.03115	135.85509	17.00000
292	292	1	0.00000	131.03115	135.85509	20.40000
293	293	1	0.00000	131.03115	135.85509	23.80000
294	294	1	0.00000	131.03115	135.85509	27.20000
295	295	1	0.00000	131.03115	135.85509	30.60000
296	296	1	0.00000	131.03115	135.85509	34.00000
297	297	1	0.00000	131.03115	135.85509	37.40000
298	298	1	0.00000	131.03115	135.85509	40.80000
299	299	1	0.00000	131.03115	135.85509	44.20000
300	300	1	0.00000	131.03115	135.85509	47.60000
301	301	1	0.00000	128.46599	138.10468	0.00000
302	302	1	0.00000	128.46599	138.10468	3.40000
303	303	1	0.00000	128.46599	138.10468	6.80000
304	304	1	0.00000	128.46599	138.10468	10.20000
305	305	1	0.00000	128.46599	138.10468	13.60000
306	306	1	0.00000	128.46599	138.10468	17.00000
307	307	1	0.00000	128.46599	138.10468	20.40000
308	308	1	0.00000	128.46599	138.10468	23.80000
309	309	1	0.00000	128.46599	138.10468	27.20000
310	310	1	0.00000	128.46599	138.10468	30.60000
311	311	1	0.00000	128.46599	138.10468	34.00000
312	312	1	0.00000	128.46599	138.10468	37.40000
313	313	1	0.00000	128.46599	138.10468	40.80000
314	314	1	0.00000	128.46599	138.10468	44.20000
315	315	1	0.00000	128.46599	138.10468	47.60000
316	316	1	0.00000	125.80514	140.24023	0.00000
317	317	1	0.00000	125.80514	140.24023	3.40000
318	318	1	0.00000	125.80514	140.24023	6.80000
319	319	1	0.00000	125.80514	140.24023	10.20000
320	320	1	0.00000	125.80514	140.24023	13.60000
321	321	1	0.00000	125.80514	140.24023	17.00000
322	322	1	0.00000	125.80514	140.24023	20.40000
323	323	1	0.00000	125.80514	140.24023	23.80000
324	324	1	0.00000	125.80514	140.24023	27.20000
325	325	1	0.00000	125.80514	140.24023	30.60000
326	326	1	0.00000	125.80514	140.24023	34.00000
327	327	1	0.00000	125.80514	140.24023	37.40000
328	328	1	0.00000	125.80514	140.24023	40.80000
329	329	1	0.00000	125.80514	140.24023	44.20000
330	330	1	0.00000	125.80514	140.24023	47.60000
331	331	1	0.00000	123.05368	142.25769	0.00000
332	332	1	0.00000	123.05368	142.25769	3.40000
333	333	1	0.00000	123.05368	142.25769	6.80000
334	334	1	0.00000	123.05368	142.25769	10.20000
335	335	1	0.00000	123.05368	142.25769	13.60000
336	336	1	0.00000	123.05368	142.25769	17.00000
337	337	1	0.00000	123.05368	142.25769	20.40000
338	338	1	0.00000	123.05368	142.25769	23.80000
339	339	1	0.00000	123.05368	142.25769	27.20000
340	340	1	0.00000	123.05368	142.25769	30.60000
341	341	1	0.00000	123.05368	142.25769	34.00000
342	342	1	0.00000	123.05368	142.25769	37.40000
343	343	1	0.00000	123.05368	142.25769	40.80000
344	344	1	0.00000	123.05368	142.25769	44.20000
345	345	1	0.00000	123.05368	142.25769	47.60000
346	346	1	0.00000	120.21683	144.15321	0.00000
347	347	1	0.00000	120.21683	144.15321	3.40000
348	348	1	0.00000	120.21683	144.15321	6.80000
349	349	1	0.00000	120.21683	144.15321	10.20000

350	350	1	0.00000	120.21683	144.15321	13.60000
351	351	1	0.00000	120.21683	144.15321	17.00000
352	352	1	0.00000	120.21683	144.15321	20.40000
353	353	1	0.00000	120.21683	144.15321	23.80000
354	354	1	0.00000	120.21683	144.15321	27.20000
355	355	1	0.00000	120.21683	144.15321	30.60000
356	356	1	0.00000	120.21683	144.15321	34.00000
357	357	1	0.00000	120.21683	144.15321	37.40000
358	358	1	0.00000	120.21683	144.15321	40.80000
359	359	1	0.00000	120.21683	144.15321	44.20000
360	360	1	0.00000	120.21683	144.15321	47.60000
361	361	1	0.00000	117.30000	145.92319	0.00000
362	362	1	0.00000	117.30000	145.92319	3.40000
363	363	1	0.00000	117.30000	145.92319	6.80000
364	364	1	0.00000	117.30000	145.92319	10.20000
365	365	1	0.00000	117.30000	145.92319	13.60000
366	366	1	0.00000	117.30000	145.92319	17.00000
367	367	1	0.00000	117.30000	145.92319	20.40000
368	368	1	0.00000	117.30000	145.92319	23.80000
369	369	1	0.00000	117.30000	145.92319	27.20000
370	370	1	0.00000	117.30000	145.92319	30.60000
371	371	1	0.00000	117.30000	145.92319	34.00000
372	372	1	0.00000	117.30000	145.92319	37.40000
373	373	1	0.00000	117.30000	145.92319	40.80000
374	374	1	0.00000	117.30000	145.92319	44.20000
375	375	1	0.00000	117.30000	145.92319	47.60000
376	376	1	0.00000	114.30874	147.56425	0.00000
377	377	1	0.00000	114.30874	147.56425	3.40000
378	378	1	0.00000	114.30874	147.56425	6.80000
379	379	1	0.00000	114.30874	147.56425	10.20000
380	380	1	0.00000	114.30874	147.56425	13.60000
381	381	1	0.00000	114.30874	147.56425	17.00000
382	382	1	0.00000	114.30874	147.56425	20.40000
383	383	1	0.00000	114.30874	147.56425	23.80000
384	384	1	0.00000	114.30874	147.56425	27.20000
385	385	1	0.00000	114.30874	147.56425	30.60000
386	386	1	0.00000	114.30874	147.56425	34.00000
387	387	1	0.00000	114.30874	147.56425	37.40000
388	388	1	0.00000	114.30874	147.56425	40.80000
389	389	1	0.00000	114.30874	147.56425	44.20000
390	390	1	0.00000	114.30874	147.56425	47.60000
391	391	1	0.00000	111.24875	149.07327	0.00000
392	392	1	0.00000	111.24875	149.07327	3.40000
393	393	1	0.00000	111.24875	149.07327	6.80000
394	394	1	0.00000	111.24875	149.07327	10.20000
395	395	1	0.00000	111.24875	149.07327	13.60000
396	396	1	0.00000	111.24875	149.07327	17.00000
397	397	1	0.00000	111.24875	149.07327	20.40000
398	398	1	0.00000	111.24875	149.07327	23.80000
399	399	1	0.00000	111.24875	149.07327	27.20000
400	400	1	0.00000	111.24875	149.07327	30.60000
401	401	1	0.00000	111.24875	149.07327	34.00000
402	402	1	0.00000	111.24875	149.07327	37.40000
403	403	1	0.00000	111.24875	149.07327	40.80000
404	404	1	0.00000	111.24875	149.07327	44.20000
405	405	1	0.00000	111.24875	149.07327	47.60000
406	406	1	0.00000	108.12584	150.44738	0.00000
407	407	1	0.00000	108.12584	150.44738	3.40000
408	408	1	0.00000	108.12584	150.44738	6.80000
409	409	1	0.00000	108.12584	150.44738	10.20000
410	410	1	0.00000	108.12584	150.44738	13.60000
411	411	1	0.00000	108.12584	150.44738	17.00000
412	412	1	0.00000	108.12584	150.44738	20.40000
413	413	1	0.00000	108.12584	150.44738	23.80000
414	414	1	0.00000	108.12584	150.44738	27.20000
415	415	1	0.00000	108.12584	150.44738	30.60000
416	416	1	0.00000	108.12584	150.44738	34.00000
417	417	1	0.00000	108.12584	150.44738	37.40000
418	418	1	0.00000	108.12584	150.44738	40.80000
419	419	1	0.00000	108.12584	150.44738	44.20000
420	420	1	0.00000	108.12584	150.44738	47.60000
421	421	1	0.00000	104.94598	151.68396	0.00000
422	422	1	0.00000	104.94598	151.68396	3.40000
423	423	1	0.00000	104.94598	151.68396	6.80000
424	424	1	0.00000	104.94598	151.68396	10.20000
425	425	1	0.00000	104.94598	151.68396	13.60000
426	426	1	0.00000	104.94598	151.68396	17.00000
427	427	1	0.00000	104.94598	151.68396	20.40000
428	428	1	0.00000	104.94598	151.68396	23.80000
429	429	1	0.00000	104.94598	151.68396	27.20000
430	430	1	0.00000	104.94598	151.68396	30.60000
431	431	1	0.00000	104.94598	151.68396	34.00000
432	432	1	0.00000	104.94598	151.68396	37.40000
433	433	1	0.00000	104.94598	151.68396	40.80000
434	434	1	0.00000	104.94598	151.68396	44.20000
435	435	1	0.00000	104.94598	151.68396	47.60000
436	436	1	0.00000	101.71519	152.78067	0.00000
437	437	1	0.00000	101.71519	152.78067	3.40000
438	438	1	0.00000	101.71519	152.78067	6.80000
439	439	1	0.00000	101.71519	152.78067	10.20000
440	440	1	0.00000	101.71519	152.78067	13.60000
441	441	1	0.00000	101.71519	152.78067	17.00000
442	442	1	0.00000	101.71519	152.78067	20.40000
443	443	1	0.00000	101.71519	152.78067	23.80000
444	444	1	0.00000	101.71519	152.78067	27.20000
445	445	1	0.00000	101.71519	152.78067	30.60000
446	446	1	0.00000	101.71519	152.78067	34.00000
447	447	1	0.00000	101.71519	152.78067	37.40000
448	448	1	0.00000	101.71519	152.78067	40.80000
449	449	1	0.00000	101.71519	152.78067	44.20000
450	450	1	0.00000	101.71519	152.78067	47.60000
451	451	1	0.00000	98.43965	153.73540	0.00000
452	452	1	0.00000	98.43965	153.73540	3.40000
453	453	1	0.00000	98.43965	153.73540	6.80000
454	454	1	0.00000	98.43965	153.73540	10.20000
455	455	1	0.00000	98.43965	153.73540	13.60000
456	456	1	0.00000	98.43965	153.73540	17.00000
457	457	1	0.00000	98.43965	153.73540	20.40000
458	458	1	0.00000	98.43965	153.73540	23.80000
459	459	1	0.00000	98.43965	153.73540	27.20000
460	460	1	0.00000	98.43965	153.73540	30.60000
461	461	1	0.00000	98.43965	153.73540	34.00000

462	462	1	0.00000	98.43965	153.73540	37.40000
463	463	1	0.00000	98.43965	153.73540	40.80000
464	464	1	0.00000	98.43965	153.73540	44.20000
465	465	1	0.00000	98.43965	153.73540	47.60000
466	466	1	0.00000	95.12558	154.54635	0.00000
467	467	1	0.00000	95.12558	154.54635	3.40000
468	468	1	0.00000	95.12558	154.54635	6.80000
469	469	1	0.00000	95.12558	154.54635	10.20000
470	470	1	0.00000	95.12558	154.54635	13.60000
471	471	1	0.00000	95.12558	154.54635	17.00000
472	472	1	0.00000	95.12558	154.54635	20.40000
473	473	1	0.00000	95.12558	154.54635	23.80000
474	474	1	0.00000	95.12558	154.54635	27.20000
475	475	1	0.00000	95.12558	154.54635	30.60000
476	476	1	0.00000	95.12558	154.54635	34.00000
477	477	1	0.00000	95.12558	154.54635	37.40000
478	478	1	0.00000	95.12558	154.54635	40.80000
479	479	1	0.00000	95.12558	154.54635	44.20000
480	480	1	0.00000	95.12558	154.54635	47.60000
481	481	1	0.00000	91.77929	155.21197	0.00000
482	482	1	0.00000	91.77929	155.21197	3.40000
483	483	1	0.00000	91.77929	155.21197	6.80000
484	484	1	0.00000	91.77929	155.21197	10.20000
485	485	1	0.00000	91.77929	155.21197	13.60000
486	486	1	0.00000	91.77929	155.21197	17.00000
487	487	1	0.00000	91.77929	155.21197	20.40000
488	488	1	0.00000	91.77929	155.21197	23.80000
489	489	1	0.00000	91.77929	155.21197	27.20000
490	490	1	0.00000	91.77929	155.21197	30.60000
491	491	1	0.00000	91.77929	155.21197	34.00000
492	492	1	0.00000	91.77929	155.21197	37.40000
493	493	1	0.00000	91.77929	155.21197	40.80000
494	494	1	0.00000	91.77929	155.21197	44.20000
495	495	1	0.00000	91.77929	155.21197	47.60000
496	496	1	0.00000	88.40715	155.73099	0.00000
497	497	1	0.00000	88.40715	155.73099	3.40000
498	498	1	0.00000	88.40715	155.73099	6.80000
499	499	1	0.00000	88.40715	155.73099	10.20000
500	500	1	0.00000	88.40715	155.73099	13.60000
501	501	1	0.00000	88.40715	155.73099	17.00000
502	502	1	0.00000	88.40715	155.73099	20.40000
503	503	1	0.00000	88.40715	155.73099	23.80000
504	504	1	0.00000	88.40715	155.73099	27.20000
505	505	1	0.00000	88.40715	155.73099	30.60000
506	506	1	0.00000	88.40715	155.73099	34.00000
507	507	1	0.00000	88.40715	155.73099	37.40000
508	508	1	0.00000	88.40715	155.73099	40.80000
509	509	1	0.00000	88.40715	155.73099	44.20000
510	510	1	0.00000	88.40715	155.73099	47.60000
511	511	1	0.00000	85.01558	156.10243	0.00000
512	512	1	0.00000	85.01558	156.10243	3.40000
513	513	1	0.00000	85.01558	156.10243	6.80000
514	514	1	0.00000	85.01558	156.10243	10.20000
515	515	1	0.00000	85.01558	156.10243	13.60000
516	516	1	0.00000	85.01558	156.10243	17.00000
517	517	1	0.00000	85.01558	156.10243	20.40000
518	518	1	0.00000	85.01558	156.10243	23.80000
519	519	1	0.00000	85.01558	156.10243	27.20000
520	520	1	0.00000	85.01558	156.10243	30.60000
521	521	1	0.00000	85.01558	156.10243	34.00000
522	522	1	0.00000	85.01558	156.10243	37.40000
523	523	1	0.00000	85.01558	156.10243	40.80000
524	524	1	0.00000	85.01558	156.10243	44.20000
525	525	1	0.00000	85.01558	156.10243	47.60000
526	526	1	0.00000	81.61104	156.32557	0.00000
527	527	1	0.00000	81.61104	156.32557	3.40000
528	528	1	0.00000	81.61104	156.32557	6.80000
529	529	1	0.00000	81.61104	156.32557	10.20000
530	530	1	0.00000	81.61104	156.32557	13.60000
531	531	1	0.00000	81.61104	156.32557	17.00000
532	532	1	0.00000	81.61104	156.32557	20.40000
533	533	1	0.00000	81.61104	156.32557	23.80000
534	534	1	0.00000	81.61104	156.32557	27.20000
535	535	1	0.00000	81.61104	156.32557	30.60000
536	536	1	0.00000	81.61104	156.32557	34.00000
537	537	1	0.00000	81.61104	156.32557	37.40000
538	538	1	0.00000	81.61104	156.32557	40.80000
539	539	1	0.00000	81.61104	156.32557	44.20000
540	540	1	0.00000	81.61104	156.32557	47.60000
541	541	1	0.00000	78.20000	156.40000	0.00000
542	542	1	0.00000	78.20000	156.40000	3.40000
543	543	1	0.00000	78.20000	156.40000	6.80000
544	544	1	0.00000	78.20000	156.40000	10.20000
545	545	1	0.00000	78.20000	156.40000	13.60000
546	546	1	0.00000	78.20000	156.40000	17.00000
547	547	1	0.00000	78.20000	156.40000	20.40000
548	548	1	0.00000	78.20000	156.40000	23.80000
549	549	1	0.00000	78.20000	156.40000	27.20000
550	550	1	0.00000	78.20000	156.40000	30.60000
551	551	1	0.00000	78.20000	156.40000	34.00000
552	552	1	0.00000	78.20000	156.40000	37.40000
553	553	1	0.00000	78.20000	156.40000	40.80000
554	554	1	0.00000	78.20000	156.40000	44.20000
555	555	1	0.00000	78.20000	156.40000	47.60000
556	556	1	0.00000	74.78896	156.32557	0.00000
557	557	1	0.00000	74.78896	156.32557	3.40000
558	558	1	0.00000	74.78896	156.32557	6.80000
559	559	1	0.00000	74.78896	156.32557	10.20000
560	560	1	0.00000	74.78896	156.32557	13.60000
561	561	1	0.00000	74.78896	156.32557	17.00000
562	562	1	0.00000	74.78896	156.32557	20.40000
563	563	1	0.00000	74.78896	156.32557	23.80000
564	564	1	0.00000	74.78896	156.32557	27.20000
565	565	1	0.00000	74.78896	156.32557	30.60000
566	566	1	0.00000	74.78896	156.32557	34.00000
567	567	1	0.00000	74.78896	156.32557	37.40000
568	568	1	0.00000	74.78896	156.32557	40.80000
569	569	1	0.00000	74.78896	156.32557	44.20000
570	570	1	0.00000	74.78896	156.32557	47.60000
571	571	1	0.00000	71.38442	156.10243	0.00000
572	572	1	0.00000	71.38442	156.10243	3.40000
573	573	1	0.00000	71.38442	156.10243	6.80000

574	574	1	0.00000	71.38442	156.10243	10.20000
575	575	1	0.00000	71.38442	156.10243	13.60000
576	576	1	0.00000	71.38442	156.10243	17.00000
577	577	1	0.00000	71.38442	156.10243	20.40000
578	578	1	0.00000	71.38442	156.10243	23.80000
579	579	1	0.00000	71.38442	156.10243	27.20000
580	580	1	0.00000	71.38442	156.10243	30.60000
581	581	1	0.00000	71.38442	156.10243	34.00000
582	582	1	0.00000	71.38442	156.10243	37.40000
583	583	1	0.00000	71.38442	156.10243	40.80000
584	584	1	0.00000	71.38442	156.10243	44.20000
585	585	1	0.00000	71.38442	156.10243	47.60000
586	586	1	0.00000	67.99285	155.73099	0.00000
587	587	1	0.00000	67.99285	155.73099	3.40000
588	588	1	0.00000	67.99285	155.73099	6.80000
589	589	1	0.00000	67.99285	155.73099	10.20000
590	590	1	0.00000	67.99285	155.73099	13.60000
591	591	1	0.00000	67.99285	155.73099	17.00000
592	592	1	0.00000	67.99285	155.73099	20.40000
593	593	1	0.00000	67.99285	155.73099	23.80000
594	594	1	0.00000	67.99285	155.73099	27.20000
595	595	1	0.00000	67.99285	155.73099	30.60000
596	596	1	0.00000	67.99285	155.73099	34.00000
597	597	1	0.00000	67.99285	155.73099	37.40000
598	598	1	0.00000	67.99285	155.73099	40.80000
599	599	1	0.00000	67.99285	155.73099	44.20000
600	600	1	0.00000	67.99285	155.73099	47.60000
601	601	1	0.00000	64.62071	155.21197	0.00000
602	602	1	0.00000	64.62071	155.21197	3.40000
603	603	1	0.00000	64.62071	155.21197	6.80000
604	604	1	0.00000	64.62071	155.21197	10.20000
605	605	1	0.00000	64.62071	155.21197	13.60000
606	606	1	0.00000	64.62071	155.21197	17.00000
607	607	1	0.00000	64.62071	155.21197	20.40000
608	608	1	0.00000	64.62071	155.21197	23.80000
609	609	1	0.00000	64.62071	155.21197	27.20000
610	610	1	0.00000	64.62071	155.21197	30.60000
611	611	1	0.00000	64.62071	155.21197	34.00000
612	612	1	0.00000	64.62071	155.21197	37.40000
613	613	1	0.00000	64.62071	155.21197	40.80000
614	614	1	0.00000	64.62071	155.21197	44.20000
615	615	1	0.00000	64.62071	155.21197	47.60000
616	616	1	0.00000	61.27442	154.54635	0.00000
617	617	1	0.00000	61.27442	154.54635	3.40000
618	618	1	0.00000	61.27442	154.54635	6.80000
619	619	1	0.00000	61.27442	154.54635	10.20000
620	620	1	0.00000	61.27442	154.54635	13.60000
621	621	1	0.00000	61.27442	154.54635	17.00000
622	622	1	0.00000	61.27442	154.54635	20.40000
623	623	1	0.00000	61.27442	154.54635	23.80000
624	624	1	0.00000	61.27442	154.54635	27.20000
625	625	1	0.00000	61.27442	154.54635	30.60000
626	626	1	0.00000	61.27442	154.54635	34.00000
627	627	1	0.00000	61.27442	154.54635	37.40000
628	628	1	0.00000	61.27442	154.54635	40.80000
629	629	1	0.00000	61.27442	154.54635	44.20000
630	630	1	0.00000	61.27442	154.54635	47.60000
631	631	1	0.00000	57.96035	153.73540	0.00000
632	632	1	0.00000	57.96035	153.73540	3.40000
633	633	1	0.00000	57.96035	153.73540	6.80000
634	634	1	0.00000	57.96035	153.73540	10.20000
635	635	1	0.00000	57.96035	153.73540	13.60000
636	636	1	0.00000	57.96035	153.73540	17.00000
637	637	1	0.00000	57.96035	153.73540	20.40000
638	638	1	0.00000	57.96035	153.73540	23.80000
639	639	1	0.00000	57.96035	153.73540	27.20000
640	640	1	0.00000	57.96035	153.73540	30.60000
641	641	1	0.00000	57.96035	153.73540	34.00000
642	642	1	0.00000	57.96035	153.73540	37.40000
643	643	1	0.00000	57.96035	153.73540	40.80000
644	644	1	0.00000	57.96035	153.73540	44.20000
645	645	1	0.00000	57.96035	153.73540	47.60000
646	646	1	0.00000	54.68481	152.78067	0.00000
647	647	1	0.00000	54.68481	152.78067	3.40000
648	648	1	0.00000	54.68481	152.78067	6.80000
649	649	1	0.00000	54.68481	152.78067	10.20000
650	650	1	0.00000	54.68481	152.78067	13.60000
651	651	1	0.00000	54.68481	152.78067	17.00000
652	652	1	0.00000	54.68481	152.78067	20.40000
653	653	1	0.00000	54.68481	152.78067	23.80000
654	654	1	0.00000	54.68481	152.78067	27.20000
655	655	1	0.00000	54.68481	152.78067	30.60000
656	656	1	0.00000	54.68481	152.78067	34.00000
657	657	1	0.00000	54.68481	152.78067	37.40000
658	658	1	0.00000	54.68481	152.78067	40.80000
659	659	1	0.00000	54.68481	152.78067	44.20000
660	660	1	0.00000	54.68481	152.78067	47.60000
661	661	1	0.00000	51.45402	151.68396	0.00000
662	662	1	0.00000	51.45402	151.68396	3.40000
663	663	1	0.00000	51.45402	151.68396	6.80000
664	664	1	0.00000	51.45402	151.68396	10.20000
665	665	1	0.00000	51.45402	151.68396	13.60000
666	666	1	0.00000	51.45402	151.68396	17.00000
667	667	1	0.00000	51.45402	151.68396	20.40000
668	668	1	0.00000	51.45402	151.68396	23.80000
669	669	1	0.00000	51.45402	151.68396	27.20000
670	670	1	0.00000	51.45402	151.68396	30.60000
671	671	1	0.00000	51.45402	151.68396	34.00000
672	672	1	0.00000	51.45402	151.68396	37.40000
673	673	1	0.00000	51.45402	151.68396	40.80000
674	674	1	0.00000	51.45402	151.68396	44.20000
675	675	1	0.00000	51.45402	151.68396	47.60000
676	676	1	0.00000	48.27416	150.44738	0.00000
677	677	1	0.00000	48.27416	150.44738	3.40000
678	678	1	0.00000	48.27416	150.44738	6.80000
679	679	1	0.00000	48.27416	150.44738	10.20000
680	680	1	0.00000	48.27416	150.44738	13.60000
681	681	1	0.00000	48.27416	150.44738	17.00000
682	682	1	0.00000	48.27416	150.44738	20.40000
683	683	1	0.00000	48.27416	150.44738	23.80000
684	684	1	0.00000	48.27416	150.44738	27.20000
685	685	1	0.00000	48.27416	150.44738	30.60000

686	686	1	0.00000	48.27416	150.44738	34.00000
687	687	1	0.00000	48.27416	150.44738	37.40000
688	688	1	0.00000	48.27416	150.44738	40.80000
689	689	1	0.00000	48.27416	150.44738	44.20000
690	690	1	0.00000	48.27416	150.44738	47.60000
691	691	1	0.00000	45.15125	149.07327	0.00000
692	692	1	0.00000	45.15125	149.07327	3.40000
693	693	1	0.00000	45.15125	149.07327	6.80000
694	694	1	0.00000	45.15125	149.07327	10.20000
695	695	1	0.00000	45.15125	149.07327	13.60000
696	696	1	0.00000	45.15125	149.07327	17.00000
697	697	1	0.00000	45.15125	149.07327	20.40000
698	698	1	0.00000	45.15125	149.07327	23.80000
699	699	1	0.00000	45.15125	149.07327	27.20000
700	700	1	0.00000	45.15125	149.07327	30.60000
701	701	1	0.00000	45.15125	149.07327	34.00000
702	702	1	0.00000	45.15125	149.07327	37.40000
703	703	1	0.00000	45.15125	149.07327	40.80000
704	704	1	0.00000	45.15125	149.07327	44.20000
705	705	1	0.00000	45.15125	149.07327	47.60000
706	706	1	0.00000	42.09126	147.56425	0.00000
707	707	1	0.00000	42.09126	147.56425	3.40000
708	708	1	0.00000	42.09126	147.56425	6.80000
709	709	1	0.00000	42.09126	147.56425	10.20000
710	710	1	0.00000	42.09126	147.56425	13.60000
711	711	1	0.00000	42.09126	147.56425	17.00000
712	712	1	0.00000	42.09126	147.56425	20.40000
713	713	1	0.00000	42.09126	147.56425	23.80000
714	714	1	0.00000	42.09126	147.56425	27.20000
715	715	1	0.00000	42.09126	147.56425	30.60000
716	716	1	0.00000	42.09126	147.56425	34.00000
717	717	1	0.00000	42.09126	147.56425	37.40000
718	718	1	0.00000	42.09126	147.56425	40.80000
719	719	1	0.00000	42.09126	147.56425	44.20000
720	720	1	0.00000	42.09126	147.56425	47.60000
721	721	1	0.00000	39.10000	145.92319	0.00000
722	722	1	0.00000	39.10000	145.92319	3.40000
723	723	1	0.00000	39.10000	145.92319	6.80000
724	724	1	0.00000	39.10000	145.92319	10.20000
725	725	1	0.00000	39.10000	145.92319	13.60000
726	726	1	0.00000	39.10000	145.92319	17.00000
727	727	1	0.00000	39.10000	145.92319	20.40000
728	728	1	0.00000	39.10000	145.92319	23.80000
729	729	1	0.00000	39.10000	145.92319	27.20000
730	730	1	0.00000	39.10000	145.92319	30.60000
731	731	1	0.00000	39.10000	145.92319	34.00000
732	732	1	0.00000	39.10000	145.92319	37.40000
733	733	1	0.00000	39.10000	145.92319	40.80000
734	734	1	0.00000	39.10000	145.92319	44.20000
735	735	1	0.00000	39.10000	145.92319	47.60000
736	736	1	0.00000	36.18317	144.15321	0.00000
737	737	1	0.00000	36.18317	144.15321	3.40000
738	738	1	0.00000	36.18317	144.15321	6.80000
739	739	1	0.00000	36.18317	144.15321	10.20000
740	740	1	0.00000	36.18317	144.15321	13.60000
741	741	1	0.00000	36.18317	144.15321	17.00000
742	742	1	0.00000	36.18317	144.15321	20.40000
743	743	1	0.00000	36.18317	144.15321	23.80000
744	744	1	0.00000	36.18317	144.15321	27.20000
745	745	1	0.00000	36.18317	144.15321	30.60000
746	746	1	0.00000	36.18317	144.15321	34.00000
747	747	1	0.00000	36.18317	144.15321	37.40000
748	748	1	0.00000	36.18317	144.15321	40.80000
749	749	1	0.00000	36.18317	144.15321	44.20000
750	750	1	0.00000	36.18317	144.15321	47.60000
751	751	1	0.00000	33.34632	142.25769	0.00000
752	752	1	0.00000	33.34632	142.25769	3.40000
753	753	1	0.00000	33.34632	142.25769	6.80000
754	754	1	0.00000	33.34632	142.25769	10.20000
755	755	1	0.00000	33.34632	142.25769	13.60000
756	756	1	0.00000	33.34632	142.25769	17.00000
757	757	1	0.00000	33.34632	142.25769	20.40000
758	758	1	0.00000	33.34632	142.25769	23.80000
759	759	1	0.00000	33.34632	142.25769	27.20000
760	760	1	0.00000	33.34632	142.25769	30.60000
761	761	1	0.00000	33.34632	142.25769	34.00000
762	762	1	0.00000	33.34632	142.25769	37.40000
763	763	1	0.00000	33.34632	142.25769	40.80000
764	764	1	0.00000	33.34632	142.25769	44.20000
765	765	1	0.00000	33.34632	142.25769	47.60000
766	766	1	0.00000	30.59486	140.24023	0.00000
767	767	1	0.00000	30.59486	140.24023	3.40000
768	768	1	0.00000	30.59486	140.24023	6.80000
769	769	1	0.00000	30.59486	140.24023	10.20000
770	770	1	0.00000	30.59486	140.24023	13.60000
771	771	1	0.00000	30.59486	140.24023	17.00000
772	772	1	0.00000	30.59486	140.24023	20.40000
773	773	1	0.00000	30.59486	140.24023	23.80000
774	774	1	0.00000	30.59486	140.24023	27.20000
775	775	1	0.00000	30.59486	140.24023	30.60000
776	776	1	0.00000	30.59486	140.24023	34.00000
777	777	1	0.00000	30.59486	140.24023	37.40000
778	778	1	0.00000	30.59486	140.24023	40.80000
779	779	1	0.00000	30.59486	140.24023	44.20000
780	780	1	0.00000	30.59486	140.24023	47.60000
781	781	1	0.00000	27.93401	138.10468	0.00000
782	782	1	0.00000	27.93401	138.10468	3.40000
783	783	1	0.00000	27.93401	138.10468	6.80000
784	784	1	0.00000	27.93401	138.10468	10.20000
785	785	1	0.00000	27.93401	138.10468	13.60000
786	786	1	0.00000	27.93401	138.10468	17.00000
787	787	1	0.00000	27.93401	138.10468	20.40000
788	788	1	0.00000	27.93401	138.10468	23.80000
789	789	1	0.00000	27.93401	138.10468	27.20000
790	790	1	0.00000	27.93401	138.10468	30.60000
791	791	1	0.00000	27.93401	138.10468	34.00000
792	792	1	0.00000	27.93401	138.10468	37.40000
793	793	1	0.00000	27.93401	138.10468	40.80000
794	794	1	0.00000	27.93401	138.10468	44.20000
795	795	1	0.00000	27.93401	138.10468	47.60000
796	796	1	0.00000	25.36885	135.85509	0.00000
797	797	1	0.00000	25.36885	135.85509	3.40000

798	798	1	0.00000	25.36885	135.85509	6.80000
799	799	1	0.00000	25.36885	135.85509	10.20000
800	800	1	0.00000	25.36885	135.85509	13.60000
801	801	1	0.00000	25.36885	135.85509	17.00000
802	802	1	0.00000	25.36885	135.85509	20.40000
803	803	1	0.00000	25.36885	135.85509	23.80000
804	804	1	0.00000	25.36885	135.85509	27.20000
805	805	1	0.00000	25.36885	135.85509	30.60000
806	806	1	0.00000	25.36885	135.85509	34.00000
807	807	1	0.00000	25.36885	135.85509	37.40000
808	808	1	0.00000	25.36885	135.85509	40.80000
809	809	1	0.00000	25.36885	135.85509	44.20000
810	810	1	0.00000	25.36885	135.85509	47.60000
811	811	1	0.00000	22.90425	133.49575	0.00000
812	812	1	0.00000	22.90425	133.49575	3.40000
813	813	1	0.00000	22.90425	133.49575	6.80000
814	814	1	0.00000	22.90425	133.49575	10.20000
815	815	1	0.00000	22.90425	133.49575	13.60000
816	816	1	0.00000	22.90425	133.49575	17.00000
817	817	1	0.00000	22.90425	133.49575	20.40000
818	818	1	0.00000	22.90425	133.49575	23.80000
819	819	1	0.00000	22.90425	133.49575	27.20000
820	820	1	0.00000	22.90425	133.49575	30.60000
821	821	1	0.00000	22.90425	133.49575	34.00000
822	822	1	0.00000	22.90425	133.49575	37.40000
823	823	1	0.00000	22.90425	133.49575	40.80000
824	824	1	0.00000	22.90425	133.49575	44.20000
825	825	1	0.00000	22.90425	133.49575	47.60000
826	826	1	0.00000	20.54491	131.03115	0.00000
827	827	1	0.00000	20.54491	131.03115	3.40000
828	828	1	0.00000	20.54491	131.03115	6.80000
829	829	1	0.00000	20.54491	131.03115	10.20000
830	830	1	0.00000	20.54491	131.03115	13.60000
831	831	1	0.00000	20.54491	131.03115	17.00000
832	832	1	0.00000	20.54491	131.03115	20.40000
833	833	1	0.00000	20.54491	131.03115	23.80000
834	834	1	0.00000	20.54491	131.03115	27.20000
835	835	1	0.00000	20.54491	131.03115	30.60000
836	836	1	0.00000	20.54491	131.03115	34.00000
837	837	1	0.00000	20.54491	131.03115	37.40000
838	838	1	0.00000	20.54491	131.03115	40.80000
839	839	1	0.00000	20.54491	131.03115	44.20000
840	840	1	0.00000	20.54491	131.03115	47.60000
841	841	1	0.00000	18.29532	128.46599	0.00000
842	842	1	0.00000	18.29532	128.46599	3.40000
843	843	1	0.00000	18.29532	128.46599	6.80000
844	844	1	0.00000	18.29532	128.46599	10.20000
845	845	1	0.00000	18.29532	128.46599	13.60000
846	846	1	0.00000	18.29532	128.46599	17.00000
847	847	1	0.00000	18.29532	128.46599	20.40000
848	848	1	0.00000	18.29532	128.46599	23.80000
849	849	1	0.00000	18.29532	128.46599	27.20000
850	850	1	0.00000	18.29532	128.46599	30.60000
851	851	1	0.00000	18.29532	128.46599	34.00000
852	852	1	0.00000	18.29532	128.46599	37.40000
853	853	1	0.00000	18.29532	128.46599	40.80000
854	854	1	0.00000	18.29532	128.46599	44.20000
855	855	1	0.00000	18.29532	128.46599	47.60000
856	856	1	0.00000	16.15977	125.80514	0.00000
857	857	1	0.00000	16.15977	125.80514	3.40000
858	858	1	0.00000	16.15977	125.80514	6.80000
859	859	1	0.00000	16.15977	125.80514	10.20000
860	860	1	0.00000	16.15977	125.80514	13.60000
861	861	1	0.00000	16.15977	125.80514	17.00000
862	862	1	0.00000	16.15977	125.80514	20.40000
863	863	1	0.00000	16.15977	125.80514	23.80000
864	864	1	0.00000	16.15977	125.80514	27.20000
865	865	1	0.00000	16.15977	125.80514	30.60000
866	866	1	0.00000	16.15977	125.80514	34.00000
867	867	1	0.00000	16.15977	125.80514	37.40000
868	868	1	0.00000	16.15977	125.80514	40.80000
869	869	1	0.00000	16.15977	125.80514	44.20000
870	870	1	0.00000	16.15977	125.80514	47.60000
871	871	1	0.00000	14.14231	123.05368	0.00000
872	872	1	0.00000	14.14231	123.05368	3.40000
873	873	1	0.00000	14.14231	123.05368	6.80000
874	874	1	0.00000	14.14231	123.05368	10.20000
875	875	1	0.00000	14.14231	123.05368	13.60000
876	876	1	0.00000	14.14231	123.05368	17.00000
877	877	1	0.00000	14.14231	123.05368	20.40000
878	878	1	0.00000	14.14231	123.05368	23.80000
879	879	1	0.00000	14.14231	123.05368	27.20000
880	880	1	0.00000	14.14231	123.05368	30.60000
881	881	1	0.00000	14.14231	123.05368	34.00000
882	882	1	0.00000	14.14231	123.05368	37.40000
883	883	1	0.00000	14.14231	123.05368	40.80000
884	884	1	0.00000	14.14231	123.05368	44.20000
885	885	1	0.00000	14.14231	123.05368	47.60000
886	886	1	0.00000	12.24679	120.21683	0.00000
887	887	1	0.00000	12.24679	120.21683	3.40000
888	888	1	0.00000	12.24679	120.21683	6.80000
889	889	1	0.00000	12.24679	120.21683	10.20000
890	890	1	0.00000	12.24679	120.21683	13.60000
891	891	1	0.00000	12.24679	120.21683	17.00000
892	892	1	0.00000	12.24679	120.21683	20.40000
893	893	1	0.00000	12.24679	120.21683	23.80000
894	894	1	0.00000	12.24679	120.21683	27.20000
895	895	1	0.00000	12.24679	120.21683	30.60000
896	896	1	0.00000	12.24679	120.21683	34.00000
897	897	1	0.00000	12.24679	120.21683	37.40000
898	898	1	0.00000	12.24679	120.21683	40.80000
899	899	1	0.00000	12.24679	120.21683	44.20000
900	900	1	0.00000	12.24679	120.21683	47.60000
901	901	1	0.00000	10.47681	117.30000	0.00000
902	902	1	0.00000	10.47681	117.30000	3.40000
903	903	1	0.00000	10.47681	117.30000	6.80000
904	904	1	0.00000	10.47681	117.30000	10.20000
905	905	1	0.00000	10.47681	117.30000	13.60000
906	906	1	0.00000	10.47681	117.30000	17.00000
907	907	1	0.00000	10.47681	117.30000	20.40000
908	908	1	0.00000	10.47681	117.30000	23.80000
909	909	1	0.00000	10.47681	117.30000	27.20000

910	910	1	0.00000	10.47681	117.30000	30.60000
911	911	1	0.00000	10.47681	117.30000	34.00000
912	912	1	0.00000	10.47681	117.30000	37.40000
913	913	1	0.00000	10.47681	117.30000	40.80000
914	914	1	0.00000	10.47681	117.30000	44.20000
915	915	1	0.00000	10.47681	117.30000	47.60000
916	916	1	0.00000	8.83575	114.30874	0.00000
917	917	1	0.00000	8.83575	114.30874	3.40000
918	918	1	0.00000	8.83575	114.30874	6.80000
919	919	1	0.00000	8.83575	114.30874	10.20000
920	920	1	0.00000	8.83575	114.30874	13.60000
921	921	1	0.00000	8.83575	114.30874	17.00000
922	922	1	0.00000	8.83575	114.30874	20.40000
923	923	1	0.00000	8.83575	114.30874	23.80000
924	924	1	0.00000	8.83575	114.30874	27.20000
925	925	1	0.00000	8.83575	114.30874	30.60000
926	926	1	0.00000	8.83575	114.30874	34.00000
927	927	1	0.00000	8.83575	114.30874	37.40000
928	928	1	0.00000	8.83575	114.30874	40.80000
929	929	1	0.00000	8.83575	114.30874	44.20000
930	930	1	0.00000	8.83575	114.30874	47.60000
931	931	1	0.00000	7.32673	111.24875	0.00000
932	932	1	0.00000	7.32673	111.24875	3.40000
933	933	1	0.00000	7.32673	111.24875	6.80000
934	934	1	0.00000	7.32673	111.24875	10.20000
935	935	1	0.00000	7.32673	111.24875	13.60000
936	936	1	0.00000	7.32673	111.24875	17.00000
937	937	1	0.00000	7.32673	111.24875	20.40000
938	938	1	0.00000	7.32673	111.24875	23.80000
939	939	1	0.00000	7.32673	111.24875	27.20000
940	940	1	0.00000	7.32673	111.24875	30.60000
941	941	1	0.00000	7.32673	111.24875	34.00000
942	942	1	0.00000	7.32673	111.24875	37.40000
943	943	1	0.00000	7.32673	111.24875	40.80000
944	944	1	0.00000	7.32673	111.24875	44.20000
945	945	1	0.00000	7.32673	111.24875	47.60000
946	946	1	0.00000	5.95262	108.12584	0.00000
947	947	1	0.00000	5.95262	108.12584	3.40000
948	948	1	0.00000	5.95262	108.12584	6.80000
949	949	1	0.00000	5.95262	108.12584	10.20000
950	950	1	0.00000	5.95262	108.12584	13.60000
951	951	1	0.00000	5.95262	108.12584	17.00000
952	952	1	0.00000	5.95262	108.12584	20.40000
953	953	1	0.00000	5.95262	108.12584	23.80000
954	954	1	0.00000	5.95262	108.12584	27.20000
955	955	1	0.00000	5.95262	108.12584	30.60000
956	956	1	0.00000	5.95262	108.12584	34.00000
957	957	1	0.00000	5.95262	108.12584	37.40000
958	958	1	0.00000	5.95262	108.12584	40.80000
959	959	1	0.00000	5.95262	108.12584	44.20000
960	960	1	0.00000	5.95262	108.12584	47.60000
961	961	1	0.00000	4.71604	104.94598	0.00000
962	962	1	0.00000	4.71604	104.94598	3.40000
963	963	1	0.00000	4.71604	104.94598	6.80000
964	964	1	0.00000	4.71604	104.94598	10.20000
965	965	1	0.00000	4.71604	104.94598	13.60000
966	966	1	0.00000	4.71604	104.94598	17.00000
967	967	1	0.00000	4.71604	104.94598	20.40000
968	968	1	0.00000	4.71604	104.94598	23.80000
969	969	1	0.00000	4.71604	104.94598	27.20000
970	970	1	0.00000	4.71604	104.94598	30.60000
971	971	1	0.00000	4.71604	104.94598	34.00000
972	972	1	0.00000	4.71604	104.94598	37.40000
973	973	1	0.00000	4.71604	104.94598	40.80000
974	974	1	0.00000	4.71604	104.94598	44.20000
975	975	1	0.00000	4.71604	104.94598	47.60000
976	976	1	0.00000	3.61933	101.71519	0.00000
977	977	1	0.00000	3.61933	101.71519	3.40000
978	978	1	0.00000	3.61933	101.71519	6.80000
979	979	1	0.00000	3.61933	101.71519	10.20000
980	980	1	0.00000	3.61933	101.71519	13.60000
981	981	1	0.00000	3.61933	101.71519	17.00000
982	982	1	0.00000	3.61933	101.71519	20.40000
983	983	1	0.00000	3.61933	101.71519	23.80000
984	984	1	0.00000	3.61933	101.71519	27.20000
985	985	1	0.00000	3.61933	101.71519	30.60000
986	986	1	0.00000	3.61933	101.71519	34.00000
987	987	1	0.00000	3.61933	101.71519	37.40000
988	988	1	0.00000	3.61933	101.71519	40.80000
989	989	1	0.00000	3.61933	101.71519	44.20000
990	990	1	0.00000	3.61933	101.71519	47.60000
991	991	1	0.00000	2.66460	98.43965	0.00000
992	992	1	0.00000	2.66460	98.43965	3.40000
993	993	1	0.00000	2.66460	98.43965	6.80000
994	994	1	0.00000	2.66460	98.43965	10.20000
995	995	1	0.00000	2.66460	98.43965	13.60000
996	996	1	0.00000	2.66460	98.43965	17.00000
997	997	1	0.00000	2.66460	98.43965	20.40000
998	998	1	0.00000	2.66460	98.43965	23.80000
999	999	1	0.00000	2.66460	98.43965	27.20000
1000	1000	1	0.00000	2.66460	98.43965	30.60000
1001	1001	1	0.00000	2.66460	98.43965	34.00000
1002	1002	1	0.00000	2.66460	98.43965	37.40000
1003	1003	1	0.00000	2.66460	98.43965	40.80000
1004	1004	1	0.00000	2.66460	98.43965	44.20000
1005	1005	1	0.00000	2.66460	98.43965	47.60000
1006	1006	1	0.00000	1.85365	95.12558	0.00000
1007	1007	1	0.00000	1.85365	95.12558	3.40000
1008	1008	1	0.00000	1.85365	95.12558	6.80000
1009	1009	1	0.00000	1.85365	95.12558	10.20000
1010	1010	1	0.00000	1.85365	95.12558	13.60000
1011	1011	1	0.00000	1.85365	95.12558	17.00000
1012	1012	1	0.00000	1.85365	95.12558	20.40000
1013	1013	1	0.00000	1.85365	95.12558	23.80000
1014	1014	1	0.00000	1.85365	95.12558	27.20000
1015	1015	1	0.00000	1.85365	95.12558	30.60000
1016	1016	1	0.00000	1.85365	95.12558	34.00000
1017	1017	1	0.00000	1.85365	95.12558	37.40000
1018	1018	1	0.00000	1.85365	95.12558	40.80000
1019	1019	1	0.00000	1.85365	95.12558	44.20000
1020	1020	1	0.00000	1.85365	95.12558	47.60000
1021	1021	1	0.00000	1.18803	91.77929	0.00000

1022	1022	1	0.00000	1.18803	91.77929	3.40000
1023	1023	1	0.00000	1.18803	91.77929	6.80000
1024	1024	1	0.00000	1.18803	91.77929	10.20000
1025	1025	1	0.00000	1.18803	91.77929	13.60000
1026	1026	1	0.00000	1.18803	91.77929	17.00000
1027	1027	1	0.00000	1.18803	91.77929	20.40000
1028	1028	1	0.00000	1.18803	91.77929	23.80000
1029	1029	1	0.00000	1.18803	91.77929	27.20000
1030	1030	1	0.00000	1.18803	91.77929	30.60000
1031	1031	1	0.00000	1.18803	91.77929	34.00000
1032	1032	1	0.00000	1.18803	91.77929	37.40000
1033	1033	1	0.00000	1.18803	91.77929	40.80000
1034	1034	1	0.00000	1.18803	91.77929	44.20000
1035	1035	1	0.00000	1.18803	91.77929	47.60000
1036	1036	1	0.00000	0.66901	88.40715	0.00000
1037	1037	1	0.00000	0.66901	88.40715	3.40000
1038	1038	1	0.00000	0.66901	88.40715	6.80000
1039	1039	1	0.00000	0.66901	88.40715	10.20000
1040	1040	1	0.00000	0.66901	88.40715	13.60000
1041	1041	1	0.00000	0.66901	88.40715	17.00000
1042	1042	1	0.00000	0.66901	88.40715	20.40000
1043	1043	1	0.00000	0.66901	88.40715	23.80000
1044	1044	1	0.00000	0.66901	88.40715	27.20000
1045	1045	1	0.00000	0.66901	88.40715	30.60000
1046	1046	1	0.00000	0.66901	88.40715	34.00000
1047	1047	1	0.00000	0.66901	88.40715	37.40000
1048	1048	1	0.00000	0.66901	88.40715	40.80000
1049	1049	1	0.00000	0.66901	88.40715	44.20000
1050	1050	1	0.00000	0.66901	88.40715	47.60000
1051	1051	1	0.00000	0.29757	85.01558	0.00000
1052	1052	1	0.00000	0.29757	85.01558	3.40000
1053	1053	1	0.00000	0.29757	85.01558	6.80000
1054	1054	1	0.00000	0.29757	85.01558	10.20000
1055	1055	1	0.00000	0.29757	85.01558	13.60000
1056	1056	1	0.00000	0.29757	85.01558	17.00000
1057	1057	1	0.00000	0.29757	85.01558	20.40000
1058	1058	1	0.00000	0.29757	85.01558	23.80000
1059	1059	1	0.00000	0.29757	85.01558	27.20000
1060	1060	1	0.00000	0.29757	85.01558	30.60000
1061	1061	1	0.00000	0.29757	85.01558	34.00000
1062	1062	1	0.00000	0.29757	85.01558	37.40000
1063	1063	1	0.00000	0.29757	85.01558	40.80000
1064	1064	1	0.00000	0.29757	85.01558	44.20000
1065	1065	1	0.00000	0.29757	85.01558	47.60000
1066	1066	1	0.00000	0.7443	81.61104	0.00000
1067	1067	1	0.00000	0.7443	81.61104	3.40000
1068	1068	1	0.00000	0.7443	81.61104	6.80000
1069	1069	1	0.00000	0.7443	81.61104	10.20000
1070	1070	1	0.00000	0.7443	81.61104	13.60000
1071	1071	1	0.00000	0.7443	81.61104	17.00000
1072	1072	1	0.00000	0.7443	81.61104	20.40000
1073	1073	1	0.00000	0.7443	81.61104	23.80000
1074	1074	1	0.00000	0.7443	81.61104	27.20000
1075	1075	1	0.00000	0.7443	81.61104	30.60000
1076	1076	1	0.00000	0.7443	81.61104	34.00000
1077	1077	1	0.00000	0.7443	81.61104	37.40000
1078	1078	1	0.00000	0.7443	81.61104	40.80000
1079	1079	1	0.00000	0.7443	81.61104	44.20000
1080	1080	1	0.00000	0.7443	81.61104	47.60000
1081	1081	1	0.00000	0.00000	78.20000	0.00000
1082	1082	1	0.00000	0.00000	78.20000	3.40000
1083	1083	1	0.00000	0.00000	78.20000	6.80000
1084	1084	1	0.00000	0.00000	78.20000	10.20000
1085	1085	1	0.00000	0.00000	78.20000	13.60000
1086	1086	1	0.00000	0.00000	78.20000	17.00000
1087	1087	1	0.00000	0.00000	78.20000	20.40000
1088	1088	1	0.00000	0.00000	78.20000	23.80000
1089	1089	1	0.00000	0.00000	78.20000	27.20000
1090	1090	1	0.00000	0.00000	78.20000	30.60000
1091	1091	1	0.00000	0.00000	78.20000	34.00000
1092	1092	1	0.00000	0.00000	78.20000	37.40000
1093	1093	1	0.00000	0.00000	78.20000	40.80000
1094	1094	1	0.00000	0.00000	78.20000	44.20000
1095	1095	1	0.00000	0.00000	78.20000	47.60000
1096	1096	1	0.00000	0.7443	74.78896	0.00000
1097	1097	1	0.00000	0.7443	74.78896	3.40000
1098	1098	1	0.00000	0.7443	74.78896	6.80000
1099	1099	1	0.00000	0.7443	74.78896	10.20000
1100	1100	1	0.00000	0.7443	74.78896	13.60000
1101	1101	1	0.00000	0.7443	74.78896	17.00000
1102	1102	1	0.00000	0.7443	74.78896	20.40000
1103	1103	1	0.00000	0.7443	74.78896	23.80000
1104	1104	1	0.00000	0.7443	74.78896	27.20000
1105	1105	1	0.00000	0.7443	74.78896	30.60000
1106	1106	1	0.00000	0.7443	74.78896	34.00000
1107	1107	1	0.00000	0.7443	74.78896	37.40000
1108	1108	1	0.00000	0.7443	74.78896	40.80000
1109	1109	1	0.00000	0.7443	74.78896	44.20000
1110	1110	1	0.00000	0.7443	74.78896	47.60000
1111	1111	1	0.00000	0.29757	71.38442	0.00000
1112	1112	1	0.00000	0.29757	71.38442	3.40000
1113	1113	1	0.00000	0.29757	71.38442	6.80000
1114	1114	1	0.00000	0.29757	71.38442	10.20000
1115	1115	1	0.00000	0.29757	71.38442	13.60000
1116	1116	1	0.00000	0.29757	71.38442	17.00000
1117	1117	1	0.00000	0.29757	71.38442	20.40000
1118	1118	1	0.00000	0.29757	71.38442	23.80000
1119	1119	1	0.00000	0.29757	71.38442	27.20000
1120	1120	1	0.00000	0.29757	71.38442	30.60000
1121	1121	1	0.00000	0.29757	71.38442	34.00000
1122	1122	1	0.00000	0.29757	71.38442	37.40000
1123	1123	1	0.00000	0.29757	71.38442	40.80000
1124	1124	1	0.00000	0.29757	71.38442	44.20000
1125	1125	1	0.00000	0.29757	71.38442	47.60000
1126	1126	1	0.00000	0.66901	67.99285	0.00000
1127	1127	1	0.00000	0.66901	67.99285	3.40000
1128	1128	1	0.00000	0.66901	67.99285	6.80000
1129	1129	1	0.00000	0.66901	67.99285	10.20000
1130	1130	1	0.00000	0.66901	67.99285	13.60000
1131	1131	1	0.00000	0.66901	67.99285	17.00000
1132	1132	1	0.00000	0.66901	67.99285	20.40000
1133	1133	1	0.00000	0.66901	67.99285	23.80000

1134	1134	1	0.00000	0.66901	67.99285	27.20000
1135	1135	1	0.00000	0.66901	67.99285	30.60000
1136	1136	1	0.00000	0.66901	67.99285	34.00000
1137	1137	1	0.00000	0.66901	67.99285	37.40000
1138	1138	1	0.00000	0.66901	67.99285	40.80000
1139	1139	1	0.00000	0.66901	67.99285	44.20000
1140	1140	1	0.00000	0.66901	67.99285	47.60000
1141	1141	1	0.00000	1.18803	64.62071	0.00000
1142	1142	1	0.00000	1.18803	64.62071	3.40000
1143	1143	1	0.00000	1.18803	64.62071	6.80000
1144	1144	1	0.00000	1.18803	64.62071	10.20000
1145	1145	1	0.00000	1.18803	64.62071	13.60000
1146	1146	1	0.00000	1.18803	64.62071	17.00000
1147	1147	1	0.00000	1.18803	64.62071	20.40000
1148	1148	1	0.00000	1.18803	64.62071	23.80000
1149	1149	1	0.00000	1.18803	64.62071	27.20000
1150	1150	1	0.00000	1.18803	64.62071	30.60000
1151	1151	1	0.00000	1.18803	64.62071	34.00000
1152	1152	1	0.00000	1.18803	64.62071	37.40000
1153	1153	1	0.00000	1.18803	64.62071	40.80000
1154	1154	1	0.00000	1.18803	64.62071	44.20000
1155	1155	1	0.00000	1.18803	64.62071	47.60000
1156	1156	1	0.00000	1.85365	61.27442	0.00000
1157	1157	1	0.00000	1.85365	61.27442	3.40000
1158	1158	1	0.00000	1.85365	61.27442	6.80000
1159	1159	1	0.00000	1.85365	61.27442	10.20000
1160	1160	1	0.00000	1.85365	61.27442	13.60000
1161	1161	1	0.00000	1.85365	61.27442	17.00000
1162	1162	1	0.00000	1.85365	61.27442	20.40000
1163	1163	1	0.00000	1.85365	61.27442	23.80000
1164	1164	1	0.00000	1.85365	61.27442	27.20000
1165	1165	1	0.00000	1.85365	61.27442	30.60000
1166	1166	1	0.00000	1.85365	61.27442	34.00000
1167	1167	1	0.00000	1.85365	61.27442	37.40000
1168	1168	1	0.00000	1.85365	61.27442	40.80000
1169	1169	1	0.00000	1.85365	61.27442	44.20000
1170	1170	1	0.00000	1.85365	61.27442	47.60000
1171	1171	1	0.00000	2.66460	57.96035	0.00000
1172	1172	1	0.00000	2.66460	57.96035	3.40000
1173	1173	1	0.00000	2.66460	57.96035	6.80000
1174	1174	1	0.00000	2.66460	57.96035	10.20000
1175	1175	1	0.00000	2.66460	57.96035	13.60000
1176	1176	1	0.00000	2.66460	57.96035	17.00000
1177	1177	1	0.00000	2.66460	57.96035	20.40000
1178	1178	1	0.00000	2.66460	57.96035	23.80000
1179	1179	1	0.00000	2.66460	57.96035	27.20000
1180	1180	1	0.00000	2.66460	57.96035	30.60000
1181	1181	1	0.00000	2.66460	57.96035	34.00000
1182	1182	1	0.00000	2.66460	57.96035	37.40000
1183	1183	1	0.00000	2.66460	57.96035	40.80000
1184	1184	1	0.00000	2.66460	57.96035	44.20000
1185	1185	1	0.00000	2.66460	57.96035	47.60000
1186	1186	1	0.00000	3.61933	54.68481	0.00000
1187	1187	1	0.00000	3.61933	54.68481	3.40000
1188	1188	1	0.00000	3.61933	54.68481	6.80000
1189	1189	1	0.00000	3.61933	54.68481	10.20000
1190	1190	1	0.00000	3.61933	54.68481	13.60000
1191	1191	1	0.00000	3.61933	54.68481	17.00000
1192	1192	1	0.00000	3.61933	54.68481	20.40000
1193	1193	1	0.00000	3.61933	54.68481	23.80000
1194	1194	1	0.00000	3.61933	54.68481	27.20000
1195	1195	1	0.00000	3.61933	54.68481	30.60000
1196	1196	1	0.00000	3.61933	54.68481	34.00000
1197	1197	1	0.00000	3.61933	54.68481	37.40000
1198	1198	1	0.00000	3.61933	54.68481	40.80000
1199	1199	1	0.00000	3.61933	54.68481	44.20000
1200	1200	1	0.00000	3.61933	54.68481	47.60000
1201	1201	1	0.00000	4.71604	51.45402	0.00000
1202	1202	1	0.00000	4.71604	51.45402	3.40000
1203	1203	1	0.00000	4.71604	51.45402	6.80000
1204	1204	1	0.00000	4.71604	51.45402	10.20000
1205	1205	1	0.00000	4.71604	51.45402	13.60000
1206	1206	1	0.00000	4.71604	51.45402	17.00000
1207	1207	1	0.00000	4.71604	51.45402	20.40000
1208	1208	1	0.00000	4.71604	51.45402	23.80000
1209	1209	1	0.00000	4.71604	51.45402	27.20000
1210	1210	1	0.00000	4.71604	51.45402	30.60000
1211	1211	1	0.00000	4.71604	51.45402	34.00000
1212	1212	1	0.00000	4.71604	51.45402	37.40000
1213	1213	1	0.00000	4.71604	51.45402	40.80000
1214	1214	1	0.00000	4.71604	51.45402	44.20000
1215	1215	1	0.00000	4.71604	51.45402	47.60000
1216	1216	1	0.00000	5.95262	48.27416	0.00000
1217	1217	1	0.00000	5.95262	48.27416	3.40000
1218	1218	1	0.00000	5.95262	48.27416	6.80000
1219	1219	1	0.00000	5.95262	48.27416	10.20000
1220	1220	1	0.00000	5.95262	48.27416	13.60000
1221	1221	1	0.00000	5.95262	48.27416	17.00000
1222	1222	1	0.00000	5.95262	48.27416	20.40000
1223	1223	1	0.00000	5.95262	48.27416	23.80000
1224	1224	1	0.00000	5.95262	48.27416	27.20000
1225	1225	1	0.00000	5.95262	48.27416	30.60000
1226	1226	1	0.00000	5.95262	48.27416	34.00000
1227	1227	1	0.00000	5.95262	48.27416	37.40000
1228	1228	1	0.00000	5.95262	48.27416	40.80000
1229	1229	1	0.00000	5.95262	48.27416	44.20000
1230	1230	1	0.00000	5.95262	48.27416	47.60000
1231	1231	1	0.00000	7.32673	45.15125	0.00000
1232	1232	1	0.00000	7.32673	45.15125	3.40000
1233	1233	1	0.00000	7.32673	45.15125	6.80000
1234	1234	1	0.00000	7.32673	45.15125	10.20000
1235	1235	1	0.00000	7.32673	45.15125	13.60000
1236	1236	1	0.00000	7.32673	45.15125	17.00000
1237	1237	1	0.00000	7.32673	45.15125	20.40000
1238	1238	1	0.00000	7.32673	45.15125	23.80000
1239	1239	1	0.00000	7.32673	45.15125	27.20000
1240	1240	1	0.00000	7.32673	45.15125	30.60000
1241	1241	1	0.00000	7.32673	45.15125	34.00000
1242	1242	1	0.00000	7.32673	45.15125	37.40000
1243	1243	1	0.00000	7.32673	45.15125	40.80000
1244	1244	1	0.00000	7.32673	45.15125	44.20000
1245	1245	1	0.00000	7.32673	45.15125	47.60000

1246	1246	1	0.00000	8.83575	42.09126	0.00000
1247	1247	1	0.00000	8.83575	42.09126	3.40000
1248	1248	1	0.00000	8.83575	42.09126	6.80000
1249	1249	1	0.00000	8.83575	42.09126	10.20000
1250	1250	1	0.00000	8.83575	42.09126	13.60000
1251	1251	1	0.00000	8.83575	42.09126	17.00000
1252	1252	1	0.00000	8.83575	42.09126	20.40000
1253	1253	1	0.00000	8.83575	42.09126	23.80000
1254	1254	1	0.00000	8.83575	42.09126	27.20000
1255	1255	1	0.00000	8.83575	42.09126	30.60000
1256	1256	1	0.00000	8.83575	42.09126	34.00000
1257	1257	1	0.00000	8.83575	42.09126	37.40000
1258	1258	1	0.00000	8.83575	42.09126	40.80000
1259	1259	1	0.00000	8.83575	42.09126	44.20000
1260	1260	1	0.00000	8.83575	42.09126	47.60000
1261	1261	1	0.00000	10.47681	39.10000	0.00000
1262	1262	1	0.00000	10.47681	39.10000	3.40000
1263	1263	1	0.00000	10.47681	39.10000	6.80000
1264	1264	1	0.00000	10.47681	39.10000	10.20000
1265	1265	1	0.00000	10.47681	39.10000	13.60000
1266	1266	1	0.00000	10.47681	39.10000	17.00000
1267	1267	1	0.00000	10.47681	39.10000	20.40000
1268	1268	1	0.00000	10.47681	39.10000	23.80000
1269	1269	1	0.00000	10.47681	39.10000	27.20000
1270	1270	1	0.00000	10.47681	39.10000	30.60000
1271	1271	1	0.00000	10.47681	39.10000	34.00000
1272	1272	1	0.00000	10.47681	39.10000	37.40000
1273	1273	1	0.00000	10.47681	39.10000	40.80000
1274	1274	1	0.00000	10.47681	39.10000	44.20000
1275	1275	1	0.00000	10.47681	39.10000	47.60000
1276	1276	1	0.00000	12.24679	36.18317	0.00000
1277	1277	1	0.00000	12.24679	36.18317	3.40000
1278	1278	1	0.00000	12.24679	36.18317	6.80000
1279	1279	1	0.00000	12.24679	36.18317	10.20000
1280	1280	1	0.00000	12.24679	36.18317	13.60000
1281	1281	1	0.00000	12.24679	36.18317	17.00000
1282	1282	1	0.00000	12.24679	36.18317	20.40000
1283	1283	1	0.00000	12.24679	36.18317	23.80000
1284	1284	1	0.00000	12.24679	36.18317	27.20000
1285	1285	1	0.00000	12.24679	36.18317	30.60000
1286	1286	1	0.00000	12.24679	36.18317	34.00000
1287	1287	1	0.00000	12.24679	36.18317	37.40000
1288	1288	1	0.00000	12.24679	36.18317	40.80000
1289	1289	1	0.00000	12.24679	36.18317	44.20000
1290	1290	1	0.00000	12.24679	36.18317	47.60000
1291	1291	1	0.00000	14.14231	33.34632	0.00000
1292	1292	1	0.00000	14.14231	33.34632	3.40000
1293	1293	1	0.00000	14.14231	33.34632	6.80000
1294	1294	1	0.00000	14.14231	33.34632	10.20000
1295	1295	1	0.00000	14.14231	33.34632	13.60000
1296	1296	1	0.00000	14.14231	33.34632	17.00000
1297	1297	1	0.00000	14.14231	33.34632	20.40000
1298	1298	1	0.00000	14.14231	33.34632	23.80000
1299	1299	1	0.00000	14.14231	33.34632	27.20000
1300	1300	1	0.00000	14.14231	33.34632	30.60000
1301	1301	1	0.00000	14.14231	33.34632	34.00000
1302	1302	1	0.00000	14.14231	33.34632	37.40000
1303	1303	1	0.00000	14.14231	33.34632	40.80000
1304	1304	1	0.00000	14.14231	33.34632	44.20000
1305	1305	1	0.00000	14.14231	33.34632	47.60000
1306	1306	1	0.00000	16.15977	30.59486	0.00000
1307	1307	1	0.00000	16.15977	30.59486	3.40000
1308	1308	1	0.00000	16.15977	30.59486	6.80000
1309	1309	1	0.00000	16.15977	30.59486	10.20000
1310	1310	1	0.00000	16.15977	30.59486	13.60000
1311	1311	1	0.00000	16.15977	30.59486	17.00000
1312	1312	1	0.00000	16.15977	30.59486	20.40000
1313	1313	1	0.00000	16.15977	30.59486	23.80000
1314	1314	1	0.00000	16.15977	30.59486	27.20000
1315	1315	1	0.00000	16.15977	30.59486	30.60000
1316	1316	1	0.00000	16.15977	30.59486	34.00000
1317	1317	1	0.00000	16.15977	30.59486	37.40000
1318	1318	1	0.00000	16.15977	30.59486	40.80000
1319	1319	1	0.00000	16.15977	30.59486	44.20000
1320	1320	1	0.00000	16.15977	30.59486	47.60000
1321	1321	1	0.00000	18.29532	27.93401	0.00000
1322	1322	1	0.00000	18.29532	27.93401	3.40000
1323	1323	1	0.00000	18.29532	27.93401	6.80000
1324	1324	1	0.00000	18.29532	27.93401	10.20000
1325	1325	1	0.00000	18.29532	27.93401	13.60000
1326	1326	1	0.00000	18.29532	27.93401	17.00000
1327	1327	1	0.00000	18.29532	27.93401	20.40000
1328	1328	1	0.00000	18.29532	27.93401	23.80000
1329	1329	1	0.00000	18.29532	27.93401	27.20000
1330	1330	1	0.00000	18.29532	27.93401	30.60000
1331	1331	1	0.00000	18.29532	27.93401	34.00000
1332	1332	1	0.00000	18.29532	27.93401	37.40000
1333	1333	1	0.00000	18.29532	27.93401	40.80000
1334	1334	1	0.00000	18.29532	27.93401	44.20000
1335	1335	1	0.00000	18.29532	27.93401	47.60000
1336	1336	1	0.00000	20.54491	25.36885	0.00000
1337	1337	1	0.00000	20.54491	25.36885	3.40000
1338	1338	1	0.00000	20.54491	25.36885	6.80000
1339	1339	1	0.00000	20.54491	25.36885	10.20000
1340	1340	1	0.00000	20.54491	25.36885	13.60000
1341	1341	1	0.00000	20.54491	25.36885	17.00000
1342	1342	1	0.00000	20.54491	25.36885	20.40000
1343	1343	1	0.00000	20.54491	25.36885	23.80000
1344	1344	1	0.00000	20.54491	25.36885	27.20000
1345	1345	1	0.00000	20.54491	25.36885	30.60000
1346	1346	1	0.00000	20.54491	25.36885	34.00000
1347	1347	1	0.00000	20.54491	25.36885	37.40000
1348	1348	1	0.00000	20.54491	25.36885	40.80000
1349	1349	1	0.00000	20.54491	25.36885	44.20000
1350	1350	1	0.00000	20.54491	25.36885	47.60000
1351	1351	1	0.00000	22.90425	22.90425	0.00000
1352	1352	1	0.00000	22.90425	22.90425	3.40000
1353	1353	1	0.00000	22.90425	22.90425	6.80000
1354	1354	1	0.00000	22.90425	22.90425	10.20000
1355	1355	1	0.00000	22.90425	22.90425	13.60000
1356	1356	1	0.00000	22.90425	22.90425	17.00000
1357	1357	1	0.00000	22.90425	22.90425	20.40000

1358	1358	1	0.00000	22.90425	22.90425	23.80000
1359	1359	1	0.00000	22.90425	22.90425	27.20000
1360	1360	1	0.00000	22.90425	22.90425	30.60000
1361	1361	1	0.00000	22.90425	22.90425	34.00000
1362	1362	1	0.00000	22.90425	22.90425	37.40000
1363	1363	1	0.00000	22.90425	22.90425	40.80000
1364	1364	1	0.00000	22.90425	22.90425	44.20000
1365	1365	1	0.00000	22.90425	22.90425	47.60000
1366	1366	1	0.00000	25.36885	20.54491	0.00000
1367	1367	1	0.00000	25.36885	20.54491	3.40000
1368	1368	1	0.00000	25.36885	20.54491	6.80000
1369	1369	1	0.00000	25.36885	20.54491	10.20000
1370	1370	1	0.00000	25.36885	20.54491	13.60000
1371	1371	1	0.00000	25.36885	20.54491	17.00000
1372	1372	1	0.00000	25.36885	20.54491	20.40000
1373	1373	1	0.00000	25.36885	20.54491	23.80000
1374	1374	1	0.00000	25.36885	20.54491	27.20000
1375	1375	1	0.00000	25.36885	20.54491	30.60000
1376	1376	1	0.00000	25.36885	20.54491	34.00000
1377	1377	1	0.00000	25.36885	20.54491	37.40000
1378	1378	1	0.00000	25.36885	20.54491	40.80000
1379	1379	1	0.00000	25.36885	20.54491	44.20000
1380	1380	1	0.00000	25.36885	20.54491	47.60000
1381	1381	1	0.00000	27.93401	18.29532	0.00000
1382	1382	1	0.00000	27.93401	18.29532	3.40000
1383	1383	1	0.00000	27.93401	18.29532	6.80000
1384	1384	1	0.00000	27.93401	18.29532	10.20000
1385	1385	1	0.00000	27.93401	18.29532	13.60000
1386	1386	1	0.00000	27.93401	18.29532	17.00000
1387	1387	1	0.00000	27.93401	18.29532	20.40000
1388	1388	1	0.00000	27.93401	18.29532	23.80000
1389	1389	1	0.00000	27.93401	18.29532	27.20000
1390	1390	1	0.00000	27.93401	18.29532	30.60000
1391	1391	1	0.00000	27.93401	18.29532	34.00000
1392	1392	1	0.00000	27.93401	18.29532	37.40000
1393	1393	1	0.00000	27.93401	18.29532	40.80000
1394	1394	1	0.00000	27.93401	18.29532	44.20000
1395	1395	1	0.00000	27.93401	18.29532	47.60000
1396	1396	1	0.00000	30.59486	16.15977	0.00000
1397	1397	1	0.00000	30.59486	16.15977	3.40000
1398	1398	1	0.00000	30.59486	16.15977	6.80000
1399	1399	1	0.00000	30.59486	16.15977	10.20000
1400	1400	1	0.00000	30.59486	16.15977	13.60000
1401	1401	1	0.00000	30.59486	16.15977	17.00000
1402	1402	1	0.00000	30.59486	16.15977	20.40000
1403	1403	1	0.00000	30.59486	16.15977	23.80000
1404	1404	1	0.00000	30.59486	16.15977	27.20000
1405	1405	1	0.00000	30.59486	16.15977	30.60000
1406	1406	1	0.00000	30.59486	16.15977	34.00000
1407	1407	1	0.00000	30.59486	16.15977	37.40000
1408	1408	1	0.00000	30.59486	16.15977	40.80000
1409	1409	1	0.00000	30.59486	16.15977	44.20000
1410	1410	1	0.00000	30.59486	16.15977	47.60000
1411	1411	1	0.00000	33.34632	14.14231	0.00000
1412	1412	1	0.00000	33.34632	14.14231	3.40000
1413	1413	1	0.00000	33.34632	14.14231	6.80000
1414	1414	1	0.00000	33.34632	14.14231	10.20000
1415	1415	1	0.00000	33.34632	14.14231	13.60000
1416	1416	1	0.00000	33.34632	14.14231	17.00000
1417	1417	1	0.00000	33.34632	14.14231	20.40000
1418	1418	1	0.00000	33.34632	14.14231	23.80000
1419	1419	1	0.00000	33.34632	14.14231	27.20000
1420	1420	1	0.00000	33.34632	14.14231	30.60000
1421	1421	1	0.00000	33.34632	14.14231	34.00000
1422	1422	1	0.00000	33.34632	14.14231	37.40000
1423	1423	1	0.00000	33.34632	14.14231	40.80000
1424	1424	1	0.00000	33.34632	14.14231	44.20000
1425	1425	1	0.00000	33.34632	14.14231	47.60000
1426	1426	1	0.00000	36.18317	12.24679	0.00000
1427	1427	1	0.00000	36.18317	12.24679	3.40000
1428	1428	1	0.00000	36.18317	12.24679	6.80000
1429	1429	1	0.00000	36.18317	12.24679	10.20000
1430	1430	1	0.00000	36.18317	12.24679	13.60000
1431	1431	1	0.00000	36.18317	12.24679	17.00000
1432	1432	1	0.00000	36.18317	12.24679	20.40000
1433	1433	1	0.00000	36.18317	12.24679	23.80000
1434	1434	1	0.00000	36.18317	12.24679	27.20000
1435	1435	1	0.00000	36.18317	12.24679	30.60000
1436	1436	1	0.00000	36.18317	12.24679	34.00000
1437	1437	1	0.00000	36.18317	12.24679	37.40000
1438	1438	1	0.00000	36.18317	12.24679	40.80000
1439	1439	1	0.00000	36.18317	12.24679	44.20000
1440	1440	1	0.00000	36.18317	12.24679	47.60000
1441	1441	1	0.00000	39.10000	10.47681	0.00000
1442	1442	1	0.00000	39.10000	10.47681	3.40000
1443	1443	1	0.00000	39.10000	10.47681	6.80000
1444	1444	1	0.00000	39.10000	10.47681	10.20000
1445	1445	1	0.00000	39.10000	10.47681	13.60000
1446	1446	1	0.00000	39.10000	10.47681	17.00000
1447	1447	1	0.00000	39.10000	10.47681	20.40000
1448	1448	1	0.00000	39.10000	10.47681	23.80000
1449	1449	1	0.00000	39.10000	10.47681	27.20000
1450	1450	1	0.00000	39.10000	10.47681	30.60000
1451	1451	1	0.00000	39.10000	10.47681	34.00000
1452	1452	1	0.00000	39.10000	10.47681	37.40000
1453	1453	1	0.00000	39.10000	10.47681	40.80000
1454	1454	1	0.00000	39.10000	10.47681	44.20000
1455	1455	1	0.00000	39.10000	10.47681	47.60000
1456	1456	1	0.00000	42.09126	8.83575	0.00000
1457	1457	1	0.00000	42.09126	8.83575	3.40000
1458	1458	1	0.00000	42.09126	8.83575	6.80000
1459	1459	1	0.00000	42.09126	8.83575	10.20000
1460	1460	1	0.00000	42.09126	8.83575	13.60000
1461	1461	1	0.00000	42.09126	8.83575	17.00000
1462	1462	1	0.00000	42.09126	8.83575	20.40000
1463	1463	1	0.00000	42.09126	8.83575	23.80000
1464	1464	1	0.00000	42.09126	8.83575	27.20000
1465	1465	1	0.00000	42.09126	8.83575	30.60000
1466	1466	1	0.00000	42.09126	8.83575	34.00000
1467	1467	1	0.00000	42.09126	8.83575	37.40000
1468	1468	1	0.00000	42.09126	8.83575	40.80000
1469	1469	1	0.00000	42.09126	8.83575	44.20000

1470	1470	1	0.00000	42.09126	8.83575	47.60000
1471	1471	1	0.00000	45.15125	7.32673	0.00000
1472	1472	1	0.00000	45.15125	7.32673	3.40000
1473	1473	1	0.00000	45.15125	7.32673	6.80000
1474	1474	1	0.00000	45.15125	7.32673	10.20000
1475	1475	1	0.00000	45.15125	7.32673	13.60000
1476	1476	1	0.00000	45.15125	7.32673	17.00000
1477	1477	1	0.00000	45.15125	7.32673	20.40000
1478	1478	1	0.00000	45.15125	7.32673	23.80000
1479	1479	1	0.00000	45.15125	7.32673	27.20000
1480	1480	1	0.00000	45.15125	7.32673	30.60000
1481	1481	1	0.00000	45.15125	7.32673	34.00000
1482	1482	1	0.00000	45.15125	7.32673	37.40000
1483	1483	1	0.00000	45.15125	7.32673	40.80000
1484	1484	1	0.00000	45.15125	7.32673	44.20000
1485	1485	1	0.00000	45.15125	7.32673	47.60000
1486	1486	1	0.00000	48.27416	5.95262	0.00000
1487	1487	1	0.00000	48.27416	5.95262	3.40000
1488	1488	1	0.00000	48.27416	5.95262	6.80000
1489	1489	1	0.00000	48.27416	5.95262	10.20000
1490	1490	1	0.00000	48.27416	5.95262	13.60000
1491	1491	1	0.00000	48.27416	5.95262	17.00000
1492	1492	1	0.00000	48.27416	5.95262	20.40000
1493	1493	1	0.00000	48.27416	5.95262	23.80000
1494	1494	1	0.00000	48.27416	5.95262	27.20000
1495	1495	1	0.00000	48.27416	5.95262	30.60000
1496	1496	1	0.00000	48.27416	5.95262	34.00000
1497	1497	1	0.00000	48.27416	5.95262	37.40000
1498	1498	1	0.00000	48.27416	5.95262	40.80000
1499	1499	1	0.00000	48.27416	5.95262	44.20000
1500	1500	1	0.00000	48.27416	5.95262	47.60000
1501	1501	1	0.00000	51.45402	4.71604	0.00000
1502	1502	1	0.00000	51.45402	4.71604	3.40000
1503	1503	1	0.00000	51.45402	4.71604	6.80000
1504	1504	1	0.00000	51.45402	4.71604	10.20000
1505	1505	1	0.00000	51.45402	4.71604	13.60000
1506	1506	1	0.00000	51.45402	4.71604	17.00000
1507	1507	1	0.00000	51.45402	4.71604	20.40000
1508	1508	1	0.00000	51.45402	4.71604	23.80000
1509	1509	1	0.00000	51.45402	4.71604	27.20000
1510	1510	1	0.00000	51.45402	4.71604	30.60000
1511	1511	1	0.00000	51.45402	4.71604	34.00000
1512	1512	1	0.00000	51.45402	4.71604	37.40000
1513	1513	1	0.00000	51.45402	4.71604	40.80000
1514	1514	1	0.00000	51.45402	4.71604	44.20000
1515	1515	1	0.00000	51.45402	4.71604	47.60000
1516	1516	1	0.00000	54.68481	3.61933	0.00000
1517	1517	1	0.00000	54.68481	3.61933	3.40000
1518	1518	1	0.00000	54.68481	3.61933	6.80000
1519	1519	1	0.00000	54.68481	3.61933	10.20000
1520	1520	1	0.00000	54.68481	3.61933	13.60000
1521	1521	1	0.00000	54.68481	3.61933	17.00000
1522	1522	1	0.00000	54.68481	3.61933	20.40000
1523	1523	1	0.00000	54.68481	3.61933	23.80000
1524	1524	1	0.00000	54.68481	3.61933	27.20000
1525	1525	1	0.00000	54.68481	3.61933	30.60000
1526	1526	1	0.00000	54.68481	3.61933	34.00000
1527	1527	1	0.00000	54.68481	3.61933	37.40000
1528	1528	1	0.00000	54.68481	3.61933	40.80000
1529	1529	1	0.00000	54.68481	3.61933	44.20000
1530	1530	1	0.00000	54.68481	3.61933	47.60000
1531	1531	1	0.00000	57.96035	2.66460	0.00000
1532	1532	1	0.00000	57.96035	2.66460	3.40000
1533	1533	1	0.00000	57.96035	2.66460	6.80000
1534	1534	1	0.00000	57.96035	2.66460	10.20000
1535	1535	1	0.00000	57.96035	2.66460	13.60000
1536	1536	1	0.00000	57.96035	2.66460	17.00000
1537	1537	1	0.00000	57.96035	2.66460	20.40000
1538	1538	1	0.00000	57.96035	2.66460	23.80000
1539	1539	1	0.00000	57.96035	2.66460	27.20000
1540	1540	1	0.00000	57.96035	2.66460	30.60000
1541	1541	1	0.00000	57.96035	2.66460	34.00000
1542	1542	1	0.00000	57.96035	2.66460	37.40000
1543	1543	1	0.00000	57.96035	2.66460	40.80000
1544	1544	1	0.00000	57.96035	2.66460	44.20000
1545	1545	1	0.00000	57.96035	2.66460	47.60000
1546	1546	1	0.00000	61.27442	1.85365	0.00000
1547	1547	1	0.00000	61.27442	1.85365	3.40000
1548	1548	1	0.00000	61.27442	1.85365	6.80000
1549	1549	1	0.00000	61.27442	1.85365	10.20000
1550	1550	1	0.00000	61.27442	1.85365	13.60000
1551	1551	1	0.00000	61.27442	1.85365	17.00000
1552	1552	1	0.00000	61.27442	1.85365	20.40000
1553	1553	1	0.00000	61.27442	1.85365	23.80000
1554	1554	1	0.00000	61.27442	1.85365	27.20000
1555	1555	1	0.00000	61.27442	1.85365	30.60000
1556	1556	1	0.00000	61.27442	1.85365	34.00000
1557	1557	1	0.00000	61.27442	1.85365	37.40000
1558	1558	1	0.00000	61.27442	1.85365	40.80000
1559	1559	1	0.00000	61.27442	1.85365	44.20000
1560	1560	1	0.00000	61.27442	1.85365	47.60000
1561	1561	1	0.00000	64.62071	1.18803	0.00000
1562	1562	1	0.00000	64.62071	1.18803	3.40000
1563	1563	1	0.00000	64.62071	1.18803	6.80000
1564	1564	1	0.00000	64.62071	1.18803	10.20000
1565	1565	1	0.00000	64.62071	1.18803	13.60000
1566	1566	1	0.00000	64.62071	1.18803	17.00000
1567	1567	1	0.00000	64.62071	1.18803	20.40000
1568	1568	1	0.00000	64.62071	1.18803	23.80000
1569	1569	1	0.00000	64.62071	1.18803	27.20000
1570	1570	1	0.00000	64.62071	1.18803	30.60000
1571	1571	1	0.00000	64.62071	1.18803	34.00000
1572	1572	1	0.00000	64.62071	1.18803	37.40000
1573	1573	1	0.00000	64.62071	1.18803	40.80000
1574	1574	1	0.00000	64.62071	1.18803	44.20000
1575	1575	1	0.00000	64.62071	1.18803	47.60000
1576	1576	1	0.00000	67.99285	0.66901	0.00000
1577	1577	1	0.00000	67.99285	0.66901	3.40000
1578	1578	1	0.00000	67.99285	0.66901	6.80000
1579	1579	1	0.00000	67.99285	0.66901	10.20000
1580	1580	1	0.00000	67.99285	0.66901	13.60000
1581	1581	1	0.00000	67.99285	0.66901	17.00000

1582	1582	1	0.00000	67.99285	0.66901	20.40000
1583	1583	1	0.00000	67.99285	0.66901	23.80000
1584	1584	1	0.00000	67.99285	0.66901	27.20000
1585	1585	1	0.00000	67.99285	0.66901	30.60000
1586	1586	1	0.00000	67.99285	0.66901	34.00000
1587	1587	1	0.00000	67.99285	0.66901	37.40000
1588	1588	1	0.00000	67.99285	0.66901	40.80000
1589	1589	1	0.00000	67.99285	0.66901	44.20000
1590	1590	1	0.00000	67.99285	0.66901	47.60000
1591	1591	1	0.00000	71.38442	0.29757	0.00000
1592	1592	1	0.00000	71.38442	0.29757	3.40000
1593	1593	1	0.00000	71.38442	0.29757	6.80000
1594	1594	1	0.00000	71.38442	0.29757	10.20000
1595	1595	1	0.00000	71.38442	0.29757	13.60000
1596	1596	1	0.00000	71.38442	0.29757	17.00000
1597	1597	1	0.00000	71.38442	0.29757	20.40000
1598	1598	1	0.00000	71.38442	0.29757	23.80000
1599	1599	1	0.00000	71.38442	0.29757	27.20000
1600	1600	1	0.00000	71.38442	0.29757	30.60000
1601	1601	1	0.00000	71.38442	0.29757	34.00000
1602	1602	1	0.00000	71.38442	0.29757	37.40000
1603	1603	1	0.00000	71.38442	0.29757	40.80000
1604	1604	1	0.00000	71.38442	0.29757	44.20000
1605	1605	1	0.00000	71.38442	0.29757	47.60000
1606	1606	1	0.00000	74.78896	0.07443	0.00000
1607	1607	1	0.00000	74.78896	0.07443	3.40000
1608	1608	1	0.00000	74.78896	0.07443	6.80000
1609	1609	1	0.00000	74.78896	0.07443	10.20000
1610	1610	1	0.00000	74.78896	0.07443	13.60000
1611	1611	1	0.00000	74.78896	0.07443	17.00000
1612	1612	1	0.00000	74.78896	0.07443	20.40000
1613	1613	1	0.00000	74.78896	0.07443	23.80000
1614	1614	1	0.00000	74.78896	0.07443	27.20000
1615	1615	1	0.00000	74.78896	0.07443	30.60000
1616	1616	1	0.00000	74.78896	0.07443	34.00000
1617	1617	1	0.00000	74.78896	0.07443	37.40000
1618	1618	1	0.00000	74.78896	0.07443	40.80000
1619	1619	1	0.00000	74.78896	0.07443	44.20000
1620	1620	1	0.00000	74.78896	0.07443	47.60000
1621	1621	1	0.00000	78.20000	0.00000	0.00000
1622	1622	1	0.00000	78.20000	0.00000	3.40000
1623	1623	1	0.00000	78.20000	0.00000	6.80000
1624	1624	1	0.00000	78.20000	0.00000	10.20000
1625	1625	1	0.00000	78.20000	0.00000	13.60000
1626	1626	1	0.00000	78.20000	0.00000	17.00000
1627	1627	1	0.00000	78.20000	0.00000	20.40000
1628	1628	1	0.00000	78.20000	0.00000	23.80000
1629	1629	1	0.00000	78.20000	0.00000	27.20000
1630	1630	1	0.00000	78.20000	0.00000	30.60000
1631	1631	1	0.00000	78.20000	0.00000	34.00000
1632	1632	1	0.00000	78.20000	0.00000	37.40000
1633	1633	1	0.00000	78.20000	0.00000	40.80000
1634	1634	1	0.00000	78.20000	0.00000	44.20000
1635	1635	1	0.00000	78.20000	0.00000	47.60000
1636	1636	1	0.00000	81.61104	0.07443	0.00000
1637	1637	1	0.00000	81.61104	0.07443	3.40000
1638	1638	1	0.00000	81.61104	0.07443	6.80000
1639	1639	1	0.00000	81.61104	0.07443	10.20000
1640	1640	1	0.00000	81.61104	0.07443	13.60000
1641	1641	1	0.00000	81.61104	0.07443	17.00000
1642	1642	1	0.00000	81.61104	0.07443	20.40000
1643	1643	1	0.00000	81.61104	0.07443	23.80000
1644	1644	1	0.00000	81.61104	0.07443	27.20000
1645	1645	1	0.00000	81.61104	0.07443	30.60000
1646	1646	1	0.00000	81.61104	0.07443	34.00000
1647	1647	1	0.00000	81.61104	0.07443	37.40000
1648	1648	1	0.00000	81.61104	0.07443	40.80000
1649	1649	1	0.00000	81.61104	0.07443	44.20000
1650	1650	1	0.00000	81.61104	0.07443	47.60000
1651	1651	1	0.00000	85.01558	0.29757	0.00000
1652	1652	1	0.00000	85.01558	0.29757	3.40000
1653	1653	1	0.00000	85.01558	0.29757	6.80000
1654	1654	1	0.00000	85.01558	0.29757	10.20000
1655	1655	1	0.00000	85.01558	0.29757	13.60000
1656	1656	1	0.00000	85.01558	0.29757	17.00000
1657	1657	1	0.00000	85.01558	0.29757	20.40000
1658	1658	1	0.00000	85.01558	0.29757	23.80000
1659	1659	1	0.00000	85.01558	0.29757	27.20000
1660	1660	1	0.00000	85.01558	0.29757	30.60000
1661	1661	1	0.00000	85.01558	0.29757	34.00000
1662	1662	1	0.00000	85.01558	0.29757	37.40000
1663	1663	1	0.00000	85.01558	0.29757	40.80000
1664	1664	1	0.00000	85.01558	0.29757	44.20000
1665	1665	1	0.00000	85.01558	0.29757	47.60000
1666	1666	1	0.00000	88.40715	0.66901	0.00000
1667	1667	1	0.00000	88.40715	0.66901	3.40000
1668	1668	1	0.00000	88.40715	0.66901	6.80000
1669	1669	1	0.00000	88.40715	0.66901	10.20000
1670	1670	1	0.00000	88.40715	0.66901	13.60000
1671	1671	1	0.00000	88.40715	0.66901	17.00000
1672	1672	1	0.00000	88.40715	0.66901	20.40000
1673	1673	1	0.00000	88.40715	0.66901	23.80000
1674	1674	1	0.00000	88.40715	0.66901	27.20000
1675	1675	1	0.00000	88.40715	0.66901	30.60000
1676	1676	1	0.00000	88.40715	0.66901	34.00000
1677	1677	1	0.00000	88.40715	0.66901	37.40000
1678	1678	1	0.00000	88.40715	0.66901	40.80000
1679	1679	1	0.00000	88.40715	0.66901	44.20000
1680	1680	1	0.00000	88.40715	0.66901	47.60000
1681	1681	1	0.00000	91.77929	1.18803	0.00000
1682	1682	1	0.00000	91.77929	1.18803	3.40000
1683	1683	1	0.00000	91.77929	1.18803	6.80000
1684	1684	1	0.00000	91.77929	1.18803	10.20000
1685	1685	1	0.00000	91.77929	1.18803	13.60000
1686	1686	1	0.00000	91.77929	1.18803	17.00000
1687	1687	1	0.00000	91.77929	1.18803	20.40000
1688	1688	1	0.00000	91.77929	1.18803	23.80000
1689	1689	1	0.00000	91.77929	1.18803	27.20000
1690	1690	1	0.00000	91.77929	1.18803	30.60000
1691	1691	1	0.00000	91.77929	1.18803	34.00000
1692	1692	1	0.00000	91.77929	1.18803	37.40000
1693	1693	1	0.00000	91.77929	1.18803	40.80000

1694	1694	1	0.00000	91.77929	1.18803	44.20000
1695	1695	1	0.00000	91.77929	1.18803	47.60000
1696	1696	1	0.00000	95.12558	1.85365	0.00000
1697	1697	1	0.00000	95.12558	1.85365	3.40000
1698	1698	1	0.00000	95.12558	1.85365	6.80000
1699	1699	1	0.00000	95.12558	1.85365	10.20000
1700	1700	1	0.00000	95.12558	1.85365	13.60000
1701	1701	1	0.00000	95.12558	1.85365	17.00000
1702	1702	1	0.00000	95.12558	1.85365	20.40000
1703	1703	1	0.00000	95.12558	1.85365	23.80000
1704	1704	1	0.00000	95.12558	1.85365	27.20000
1705	1705	1	0.00000	95.12558	1.85365	30.60000
1706	1706	1	0.00000	95.12558	1.85365	34.00000
1707	1707	1	0.00000	95.12558	1.85365	37.40000
1708	1708	1	0.00000	95.12558	1.85365	40.80000
1709	1709	1	0.00000	95.12558	1.85365	44.20000
1710	1710	1	0.00000	95.12558	1.85365	47.60000
1711	1711	1	0.00000	98.43965	2.66460	0.00000
1712	1712	1	0.00000	98.43965	2.66460	3.40000
1713	1713	1	0.00000	98.43965	2.66460	6.80000
1714	1714	1	0.00000	98.43965	2.66460	10.20000
1715	1715	1	0.00000	98.43965	2.66460	13.60000
1716	1716	1	0.00000	98.43965	2.66460	17.00000
1717	1717	1	0.00000	98.43965	2.66460	20.40000
1718	1718	1	0.00000	98.43965	2.66460	23.80000
1719	1719	1	0.00000	98.43965	2.66460	27.20000
1720	1720	1	0.00000	98.43965	2.66460	30.60000
1721	1721	1	0.00000	98.43965	2.66460	34.00000
1722	1722	1	0.00000	98.43965	2.66460	37.40000
1723	1723	1	0.00000	98.43965	2.66460	40.80000
1724	1724	1	0.00000	98.43965	2.66460	44.20000
1725	1725	1	0.00000	98.43965	2.66460	47.60000
1726	1726	1	0.00000	101.71519	3.61933	0.00000
1727	1727	1	0.00000	101.71519	3.61933	3.40000
1728	1728	1	0.00000	101.71519	3.61933	6.80000
1729	1729	1	0.00000	101.71519	3.61933	10.20000
1730	1730	1	0.00000	101.71519	3.61933	13.60000
1731	1731	1	0.00000	101.71519	3.61933	17.00000
1732	1732	1	0.00000	101.71519	3.61933	20.40000
1733	1733	1	0.00000	101.71519	3.61933	23.80000
1734	1734	1	0.00000	101.71519	3.61933	27.20000
1735	1735	1	0.00000	101.71519	3.61933	30.60000
1736	1736	1	0.00000	101.71519	3.61933	34.00000
1737	1737	1	0.00000	101.71519	3.61933	37.40000
1738	1738	1	0.00000	101.71519	3.61933	40.80000
1739	1739	1	0.00000	101.71519	3.61933	44.20000
1740	1740	1	0.00000	101.71519	3.61933	47.60000
1741	1741	1	0.00000	104.94598	4.71604	0.00000
1742	1742	1	0.00000	104.94598	4.71604	3.40000
1743	1743	1	0.00000	104.94598	4.71604	6.80000
1744	1744	1	0.00000	104.94598	4.71604	10.20000
1745	1745	1	0.00000	104.94598	4.71604	13.60000
1746	1746	1	0.00000	104.94598	4.71604	17.00000
1747	1747	1	0.00000	104.94598	4.71604	20.40000
1748	1748	1	0.00000	104.94598	4.71604	23.80000
1749	1749	1	0.00000	104.94598	4.71604	27.20000
1750	1750	1	0.00000	104.94598	4.71604	30.60000
1751	1751	1	0.00000	104.94598	4.71604	34.00000
1752	1752	1	0.00000	104.94598	4.71604	37.40000
1753	1753	1	0.00000	104.94598	4.71604	40.80000
1754	1754	1	0.00000	104.94598	4.71604	44.20000
1755	1755	1	0.00000	104.94598	4.71604	47.60000
1756	1756	1	0.00000	108.12584	5.95262	0.00000
1757	1757	1	0.00000	108.12584	5.95262	3.40000
1758	1758	1	0.00000	108.12584	5.95262	6.80000
1759	1759	1	0.00000	108.12584	5.95262	10.20000
1760	1760	1	0.00000	108.12584	5.95262	13.60000
1761	1761	1	0.00000	108.12584	5.95262	17.00000
1762	1762	1	0.00000	108.12584	5.95262	20.40000
1763	1763	1	0.00000	108.12584	5.95262	23.80000
1764	1764	1	0.00000	108.12584	5.95262	27.20000
1765	1765	1	0.00000	108.12584	5.95262	30.60000
1766	1766	1	0.00000	108.12584	5.95262	34.00000
1767	1767	1	0.00000	108.12584	5.95262	37.40000
1768	1768	1	0.00000	108.12584	5.95262	40.80000
1769	1769	1	0.00000	108.12584	5.95262	44.20000
1770	1770	1	0.00000	108.12584	5.95262	47.60000
1771	1771	1	0.00000	111.24875	7.32673	0.00000
1772	1772	1	0.00000	111.24875	7.32673	3.40000
1773	1773	1	0.00000	111.24875	7.32673	6.80000
1774	1774	1	0.00000	111.24875	7.32673	10.20000
1775	1775	1	0.00000	111.24875	7.32673	13.60000
1776	1776	1	0.00000	111.24875	7.32673	17.00000
1777	1777	1	0.00000	111.24875	7.32673	20.40000
1778	1778	1	0.00000	111.24875	7.32673	23.80000
1779	1779	1	0.00000	111.24875	7.32673	27.20000
1780	1780	1	0.00000	111.24875	7.32673	30.60000
1781	1781	1	0.00000	111.24875	7.32673	34.00000
1782	1782	1	0.00000	111.24875	7.32673	37.40000
1783	1783	1	0.00000	111.24875	7.32673	40.80000
1784	1784	1	0.00000	111.24875	7.32673	44.20000
1785	1785	1	0.00000	111.24875	7.32673	47.60000
1786	1786	1	0.00000	114.30874	8.83575	0.00000
1787	1787	1	0.00000	114.30874	8.83575	3.40000
1788	1788	1	0.00000	114.30874	8.83575	6.80000
1789	1789	1	0.00000	114.30874	8.83575	10.20000
1790	1790	1	0.00000	114.30874	8.83575	13.60000
1791	1791	1	0.00000	114.30874	8.83575	17.00000
1792	1792	1	0.00000	114.30874	8.83575	20.40000
1793	1793	1	0.00000	114.30874	8.83575	23.80000
1794	1794	1	0.00000	114.30874	8.83575	27.20000
1795	1795	1	0.00000	114.30874	8.83575	30.60000
1796	1796	1	0.00000	114.30874	8.83575	34.00000
1797	1797	1	0.00000	114.30874	8.83575	37.40000
1798	1798	1	0.00000	114.30874	8.83575	40.80000
1799	1799	1	0.00000	114.30874	8.83575	44.20000
1800	1800	1	0.00000	114.30874	8.83575	47.60000
1801	1801	1	0.00000	117.30000	10.47681	0.00000
1802	1802	1	0.00000	117.30000	10.47681	3.40000
1803	1803	1	0.00000	117.30000	10.47681	6.80000
1804	1804	1	0.00000	117.30000	10.47681	10.20000
1805	1805	1	0.00000	117.30000	10.47681	13.60000

1806	1806	1	0.00000	117.30000	10.47681	17.00000
1807	1807	1	0.00000	117.30000	10.47681	20.40000
1808	1808	1	0.00000	117.30000	10.47681	23.80000
1809	1809	1	0.00000	117.30000	10.47681	27.20000
1810	1810	1	0.00000	117.30000	10.47681	30.60000
1811	1811	1	0.00000	117.30000	10.47681	34.00000
1812	1812	1	0.00000	117.30000	10.47681	37.40000
1813	1813	1	0.00000	117.30000	10.47681	40.80000
1814	1814	1	0.00000	117.30000	10.47681	44.20000
1815	1815	1	0.00000	117.30000	10.47681	47.60000
1816	1816	1	0.00000	120.21683	12.24679	0.00000
1817	1817	1	0.00000	120.21683	12.24679	3.40000
1818	1818	1	0.00000	120.21683	12.24679	6.80000
1819	1819	1	0.00000	120.21683	12.24679	10.20000
1820	1820	1	0.00000	120.21683	12.24679	13.60000
1821	1821	1	0.00000	120.21683	12.24679	17.00000
1822	1822	1	0.00000	120.21683	12.24679	20.40000
1823	1823	1	0.00000	120.21683	12.24679	23.80000
1824	1824	1	0.00000	120.21683	12.24679	27.20000
1825	1825	1	0.00000	120.21683	12.24679	30.60000
1826	1826	1	0.00000	120.21683	12.24679	34.00000
1827	1827	1	0.00000	120.21683	12.24679	37.40000
1828	1828	1	0.00000	120.21683	12.24679	40.80000
1829	1829	1	0.00000	120.21683	12.24679	44.20000
1830	1830	1	0.00000	120.21683	12.24679	47.60000
1831	1831	1	0.00000	123.05368	14.14231	0.00000
1832	1832	1	0.00000	123.05368	14.14231	3.40000
1833	1833	1	0.00000	123.05368	14.14231	6.80000
1834	1834	1	0.00000	123.05368	14.14231	10.20000
1835	1835	1	0.00000	123.05368	14.14231	13.60000
1836	1836	1	0.00000	123.05368	14.14231	17.00000
1837	1837	1	0.00000	123.05368	14.14231	20.40000
1838	1838	1	0.00000	123.05368	14.14231	23.80000
1839	1839	1	0.00000	123.05368	14.14231	27.20000
1840	1840	1	0.00000	123.05368	14.14231	30.60000
1841	1841	1	0.00000	123.05368	14.14231	34.00000
1842	1842	1	0.00000	123.05368	14.14231	37.40000
1843	1843	1	0.00000	123.05368	14.14231	40.80000
1844	1844	1	0.00000	123.05368	14.14231	44.20000
1845	1845	1	0.00000	123.05368	14.14231	47.60000
1846	1846	1	0.00000	125.80514	16.15977	0.00000
1847	1847	1	0.00000	125.80514	16.15977	3.40000
1848	1848	1	0.00000	125.80514	16.15977	6.80000
1849	1849	1	0.00000	125.80514	16.15977	10.20000
1850	1850	1	0.00000	125.80514	16.15977	13.60000
1851	1851	1	0.00000	125.80514	16.15977	17.00000
1852	1852	1	0.00000	125.80514	16.15977	20.40000
1853	1853	1	0.00000	125.80514	16.15977	23.80000
1854	1854	1	0.00000	125.80514	16.15977	27.20000
1855	1855	1	0.00000	125.80514	16.15977	30.60000
1856	1856	1	0.00000	125.80514	16.15977	34.00000
1857	1857	1	0.00000	125.80514	16.15977	37.40000
1858	1858	1	0.00000	125.80514	16.15977	40.80000
1859	1859	1	0.00000	125.80514	16.15977	44.20000
1860	1860	1	0.00000	125.80514	16.15977	47.60000
1861	1861	1	0.00000	128.46599	18.29532	0.00000
1862	1862	1	0.00000	128.46599	18.29532	3.40000
1863	1863	1	0.00000	128.46599	18.29532	6.80000
1864	1864	1	0.00000	128.46599	18.29532	10.20000
1865	1865	1	0.00000	128.46599	18.29532	13.60000
1866	1866	1	0.00000	128.46599	18.29532	17.00000
1867	1867	1	0.00000	128.46599	18.29532	20.40000
1868	1868	1	0.00000	128.46599	18.29532	23.80000
1869	1869	1	0.00000	128.46599	18.29532	27.20000
1870	1870	1	0.00000	128.46599	18.29532	30.60000
1871	1871	1	0.00000	128.46599	18.29532	34.00000
1872	1872	1	0.00000	128.46599	18.29532	37.40000
1873	1873	1	0.00000	128.46599	18.29532	40.80000
1874	1874	1	0.00000	128.46599	18.29532	44.20000
1875	1875	1	0.00000	128.46599	18.29532	47.60000
1876	1876	1	0.00000	131.03115	20.54491	0.00000
1877	1877	1	0.00000	131.03115	20.54491	3.40000
1878	1878	1	0.00000	131.03115	20.54491	6.80000
1879	1879	1	0.00000	131.03115	20.54491	10.20000
1880	1880	1	0.00000	131.03115	20.54491	13.60000
1881	1881	1	0.00000	131.03115	20.54491	17.00000
1882	1882	1	0.00000	131.03115	20.54491	20.40000
1883	1883	1	0.00000	131.03115	20.54491	23.80000
1884	1884	1	0.00000	131.03115	20.54491	27.20000
1885	1885	1	0.00000	131.03115	20.54491	30.60000
1886	1886	1	0.00000	131.03115	20.54491	34.00000
1887	1887	1	0.00000	131.03115	20.54491	37.40000
1888	1888	1	0.00000	131.03115	20.54491	40.80000
1889	1889	1	0.00000	131.03115	20.54491	44.20000
1890	1890	1	0.00000	131.03115	20.54491	47.60000
1891	1891	1	0.00000	133.49575	22.90425	0.00000
1892	1892	1	0.00000	133.49575	22.90425	3.40000
1893	1893	1	0.00000	133.49575	22.90425	6.80000
1894	1894	1	0.00000	133.49575	22.90425	10.20000
1895	1895	1	0.00000	133.49575	22.90425	13.60000
1896	1896	1	0.00000	133.49575	22.90425	17.00000
1897	1897	1	0.00000	133.49575	22.90425	20.40000
1898	1898	1	0.00000	133.49575	22.90425	23.80000
1899	1899	1	0.00000	133.49575	22.90425	27.20000
1900	1900	1	0.00000	133.49575	22.90425	30.60000
1901	1901	1	0.00000	133.49575	22.90425	34.00000
1902	1902	1	0.00000	133.49575	22.90425	37.40000
1903	1903	1	0.00000	133.49575	22.90425	40.80000
1904	1904	1	0.00000	133.49575	22.90425	44.20000
1905	1905	1	0.00000	133.49575	22.90425	47.60000
1906	1906	1	0.00000	135.85509	25.36885	0.00000
1907	1907	1	0.00000	135.85509	25.36885	3.40000
1908	1908	1	0.00000	135.85509	25.36885	6.80000
1909	1909	1	0.00000	135.85509	25.36885	10.20000
1910	1910	1	0.00000	135.85509	25.36885	13.60000
1911	1911	1	0.00000	135.85509	25.36885	17.00000
1912	1912	1	0.00000	135.85509	25.36885	20.40000
1913	1913	1	0.00000	135.85509	25.36885	23.80000
1914	1914	1	0.00000	135.85509	25.36885	27.20000
1915	1915	1	0.00000	135.85509	25.36885	30.60000
1916	1916	1	0.00000	135.85509	25.36885	34.00000
1917	1917	1	0.00000	135.85509	25.36885	37.40000

1918	1918	1	0.00000	135.85509	25.36885	40.80000
1919	1919	1	0.00000	135.85509	25.36885	44.20000
1920	1920	1	0.00000	135.85509	25.36885	47.60000
1921	1921	1	0.00000	138.10468	27.93401	0.00000
1922	1922	1	0.00000	138.10468	27.93401	3.40000
1923	1923	1	0.00000	138.10468	27.93401	6.80000
1924	1924	1	0.00000	138.10468	27.93401	10.20000
1925	1925	1	0.00000	138.10468	27.93401	13.60000
1926	1926	1	0.00000	138.10468	27.93401	17.00000
1927	1927	1	0.00000	138.10468	27.93401	20.40000
1928	1928	1	0.00000	138.10468	27.93401	23.80000
1929	1929	1	0.00000	138.10468	27.93401	27.20000
1930	1930	1	0.00000	138.10468	27.93401	30.60000
1931	1931	1	0.00000	138.10468	27.93401	34.00000
1932	1932	1	0.00000	138.10468	27.93401	37.40000
1933	1933	1	0.00000	138.10468	27.93401	40.80000
1934	1934	1	0.00000	138.10468	27.93401	44.20000
1935	1935	1	0.00000	138.10468	27.93401	47.60000
1936	1936	1	0.00000	140.24023	30.59486	0.00000
1937	1937	1	0.00000	140.24023	30.59486	3.40000
1938	1938	1	0.00000	140.24023	30.59486	6.80000
1939	1939	1	0.00000	140.24023	30.59486	10.20000
1940	1940	1	0.00000	140.24023	30.59486	13.60000
1941	1941	1	0.00000	140.24023	30.59486	17.00000
1942	1942	1	0.00000	140.24023	30.59486	20.40000
1943	1943	1	0.00000	140.24023	30.59486	23.80000
1944	1944	1	0.00000	140.24023	30.59486	27.20000
1945	1945	1	0.00000	140.24023	30.59486	30.60000
1946	1946	1	0.00000	140.24023	30.59486	34.00000
1947	1947	1	0.00000	140.24023	30.59486	37.40000
1948	1948	1	0.00000	140.24023	30.59486	40.80000
1949	1949	1	0.00000	140.24023	30.59486	44.20000
1950	1950	1	0.00000	140.24023	30.59486	47.60000
1951	1951	1	0.00000	142.25769	33.34632	0.00000
1952	1952	1	0.00000	142.25769	33.34632	3.40000
1953	1953	1	0.00000	142.25769	33.34632	6.80000
1954	1954	1	0.00000	142.25769	33.34632	10.20000
1955	1955	1	0.00000	142.25769	33.34632	13.60000
1956	1956	1	0.00000	142.25769	33.34632	17.00000
1957	1957	1	0.00000	142.25769	33.34632	20.40000
1958	1958	1	0.00000	142.25769	33.34632	23.80000
1959	1959	1	0.00000	142.25769	33.34632	27.20000
1960	1960	1	0.00000	142.25769	33.34632	30.60000
1961	1961	1	0.00000	142.25769	33.34632	34.00000
1962	1962	1	0.00000	142.25769	33.34632	37.40000
1963	1963	1	0.00000	142.25769	33.34632	40.80000
1964	1964	1	0.00000	142.25769	33.34632	44.20000
1965	1965	1	0.00000	142.25769	33.34632	47.60000
1966	1966	1	0.00000	144.15321	36.18317	0.00000
1967	1967	1	0.00000	144.15321	36.18317	3.40000
1968	1968	1	0.00000	144.15321	36.18317	6.80000
1969	1969	1	0.00000	144.15321	36.18317	10.20000
1970	1970	1	0.00000	144.15321	36.18317	13.60000
1971	1971	1	0.00000	144.15321	36.18317	17.00000
1972	1972	1	0.00000	144.15321	36.18317	20.40000
1973	1973	1	0.00000	144.15321	36.18317	23.80000
1974	1974	1	0.00000	144.15321	36.18317	27.20000
1975	1975	1	0.00000	144.15321	36.18317	30.60000
1976	1976	1	0.00000	144.15321	36.18317	34.00000
1977	1977	1	0.00000	144.15321	36.18317	37.40000
1978	1978	1	0.00000	144.15321	36.18317	40.80000
1979	1979	1	0.00000	144.15321	36.18317	44.20000
1980	1980	1	0.00000	144.15321	36.18317	47.60000
1981	1981	1	0.00000	145.92319	39.10000	0.00000
1982	1982	1	0.00000	145.92319	39.10000	3.40000
1983	1983	1	0.00000	145.92319	39.10000	6.80000
1984	1984	1	0.00000	145.92319	39.10000	10.20000
1985	1985	1	0.00000	145.92319	39.10000	13.60000
1986	1986	1	0.00000	145.92319	39.10000	17.00000
1987	1987	1	0.00000	145.92319	39.10000	20.40000
1988	1988	1	0.00000	145.92319	39.10000	23.80000
1989	1989	1	0.00000	145.92319	39.10000	27.20000
1990	1990	1	0.00000	145.92319	39.10000	30.60000
1991	1991	1	0.00000	145.92319	39.10000	34.00000
1992	1992	1	0.00000	145.92319	39.10000	37.40000
1993	1993	1	0.00000	145.92319	39.10000	40.80000
1994	1994	1	0.00000	145.92319	39.10000	44.20000
1995	1995	1	0.00000	145.92319	39.10000	47.60000
1996	1996	1	0.00000	147.56425	42.09126	0.00000
1997	1997	1	0.00000	147.56425	42.09126	3.40000
1998	1998	1	0.00000	147.56425	42.09126	6.80000
1999	1999	1	0.00000	147.56425	42.09126	10.20000
2000	2000	1	0.00000	147.56425	42.09126	13.60000
2001	2001	1	0.00000	147.56425	42.09126	17.00000
2002	2002	1	0.00000	147.56425	42.09126	20.40000
2003	2003	1	0.00000	147.56425	42.09126	23.80000
2004	2004	1	0.00000	147.56425	42.09126	27.20000
2005	2005	1	0.00000	147.56425	42.09126	30.60000
2006	2006	1	0.00000	147.56425	42.09126	34.00000
2007	2007	1	0.00000	147.56425	42.09126	37.40000
2008	2008	1	0.00000	147.56425	42.09126	40.80000
2009	2009	1	0.00000	147.56425	42.09126	44.20000
2010	2010	1	0.00000	147.56425	42.09126	47.60000
2011	2011	1	0.00000	149.07327	45.15125	0.00000
2012	2012	1	0.00000	149.07327	45.15125	3.40000
2013	2013	1	0.00000	149.07327	45.15125	6.80000
2014	2014	1	0.00000	149.07327	45.15125	10.20000
2015	2015	1	0.00000	149.07327	45.15125	13.60000
2016	2016	1	0.00000	149.07327	45.15125	17.00000
2017	2017	1	0.00000	149.07327	45.15125	20.40000
2018	2018	1	0.00000	149.07327	45.15125	23.80000
2019	2019	1	0.00000	149.07327	45.15125	27.20000
2020	2020	1	0.00000	149.07327	45.15125	30.60000
2021	2021	1	0.00000	149.07327	45.15125	34.00000
2022	2022	1	0.00000	149.07327	45.15125	37.40000
2023	2023	1	0.00000	149.07327	45.15125	40.80000
2024	2024	1	0.00000	149.07327	45.15125	44.20000
2025	2025	1	0.00000	149.07327	45.15125	47.60000
2026	2026	1	0.00000	150.44738	48.27416	0.00000
2027	2027	1	0.00000	150.44738	48.27416	3.40000
2028	2028	1	0.00000	150.44738	48.27416	6.80000
2029	2029	1	0.00000	150.44738	48.27416	10.20000

2030	2030	1	0.00000	150.44738	48.27416	13.60000
2031	2031	1	0.00000	150.44738	48.27416	17.00000
2032	2032	1	0.00000	150.44738	48.27416	20.40000
2033	2033	1	0.00000	150.44738	48.27416	23.80000
2034	2034	1	0.00000	150.44738	48.27416	27.20000
2035	2035	1	0.00000	150.44738	48.27416	30.60000
2036	2036	1	0.00000	150.44738	48.27416	34.00000
2037	2037	1	0.00000	150.44738	48.27416	37.40000
2038	2038	1	0.00000	150.44738	48.27416	40.80000
2039	2039	1	0.00000	150.44738	48.27416	44.20000
2040	2040	1	0.00000	150.44738	48.27416	47.60000
2041	2041	1	0.00000	151.68396	51.45402	0.00000
2042	2042	1	0.00000	151.68396	51.45402	3.40000
2043	2043	1	0.00000	151.68396	51.45402	6.80000
2044	2044	1	0.00000	151.68396	51.45402	10.20000
2045	2045	1	0.00000	151.68396	51.45402	13.60000
2046	2046	1	0.00000	151.68396	51.45402	17.00000
2047	2047	1	0.00000	151.68396	51.45402	20.40000
2048	2048	1	0.00000	151.68396	51.45402	23.80000
2049	2049	1	0.00000	151.68396	51.45402	27.20000
2050	2050	1	0.00000	151.68396	51.45402	30.60000
2051	2051	1	0.00000	151.68396	51.45402	34.00000
2052	2052	1	0.00000	151.68396	51.45402	37.40000
2053	2053	1	0.00000	151.68396	51.45402	40.80000
2054	2054	1	0.00000	151.68396	51.45402	44.20000
2055	2055	1	0.00000	151.68396	51.45402	47.60000
2056	2056	1	0.00000	152.78067	54.68481	0.00000
2057	2057	1	0.00000	152.78067	54.68481	3.40000
2058	2058	1	0.00000	152.78067	54.68481	6.80000
2059	2059	1	0.00000	152.78067	54.68481	10.20000
2060	2060	1	0.00000	152.78067	54.68481	13.60000
2061	2061	1	0.00000	152.78067	54.68481	17.00000
2062	2062	1	0.00000	152.78067	54.68481	20.40000
2063	2063	1	0.00000	152.78067	54.68481	23.80000
2064	2064	1	0.00000	152.78067	54.68481	27.20000
2065	2065	1	0.00000	152.78067	54.68481	30.60000
2066	2066	1	0.00000	152.78067	54.68481	34.00000
2067	2067	1	0.00000	152.78067	54.68481	37.40000
2068	2068	1	0.00000	152.78067	54.68481	40.80000
2069	2069	1	0.00000	152.78067	54.68481	44.20000
2070	2070	1	0.00000	152.78067	54.68481	47.60000
2071	2071	1	0.00000	153.73540	57.96035	0.00000
2072	2072	1	0.00000	153.73540	57.96035	3.40000
2073	2073	1	0.00000	153.73540	57.96035	6.80000
2074	2074	1	0.00000	153.73540	57.96035	10.20000
2075	2075	1	0.00000	153.73540	57.96035	13.60000
2076	2076	1	0.00000	153.73540	57.96035	17.00000
2077	2077	1	0.00000	153.73540	57.96035	20.40000
2078	2078	1	0.00000	153.73540	57.96035	23.80000
2079	2079	1	0.00000	153.73540	57.96035	27.20000
2080	2080	1	0.00000	153.73540	57.96035	30.60000
2081	2081	1	0.00000	153.73540	57.96035	34.00000
2082	2082	1	0.00000	153.73540	57.96035	37.40000
2083	2083	1	0.00000	153.73540	57.96035	40.80000
2084	2084	1	0.00000	153.73540	57.96035	44.20000
2085	2085	1	0.00000	153.73540	57.96035	47.60000
2086	2086	1	0.00000	154.54635	61.27442	0.00000
2087	2087	1	0.00000	154.54635	61.27442	3.40000
2088	2088	1	0.00000	154.54635	61.27442	6.80000
2089	2089	1	0.00000	154.54635	61.27442	10.20000
2090	2090	1	0.00000	154.54635	61.27442	13.60000
2091	2091	1	0.00000	154.54635	61.27442	17.00000
2092	2092	1	0.00000	154.54635	61.27442	20.40000
2093	2093	1	0.00000	154.54635	61.27442	23.80000
2094	2094	1	0.00000	154.54635	61.27442	27.20000
2095	2095	1	0.00000	154.54635	61.27442	30.60000
2096	2096	1	0.00000	154.54635	61.27442	34.00000
2097	2097	1	0.00000	154.54635	61.27442	37.40000
2098	2098	1	0.00000	154.54635	61.27442	40.80000
2099	2099	1	0.00000	154.54635	61.27442	44.20000
2100	2100	1	0.00000	154.54635	61.27442	47.60000
2101	2101	1	0.00000	155.21197	64.62071	0.00000
2102	2102	1	0.00000	155.21197	64.62071	3.40000
2103	2103	1	0.00000	155.21197	64.62071	6.80000
2104	2104	1	0.00000	155.21197	64.62071	10.20000
2105	2105	1	0.00000	155.21197	64.62071	13.60000
2106	2106	1	0.00000	155.21197	64.62071	17.00000
2107	2107	1	0.00000	155.21197	64.62071	20.40000
2108	2108	1	0.00000	155.21197	64.62071	23.80000
2109	2109	1	0.00000	155.21197	64.62071	27.20000
2110	2110	1	0.00000	155.21197	64.62071	30.60000
2111	2111	1	0.00000	155.21197	64.62071	34.00000
2112	2112	1	0.00000	155.21197	64.62071	37.40000
2113	2113	1	0.00000	155.21197	64.62071	40.80000
2114	2114	1	0.00000	155.21197	64.62071	44.20000
2115	2115	1	0.00000	155.21197	64.62071	47.60000
2116	2116	1	0.00000	155.73099	67.99285	0.00000
2117	2117	1	0.00000	155.73099	67.99285	3.40000
2118	2118	1	0.00000	155.73099	67.99285	6.80000
2119	2119	1	0.00000	155.73099	67.99285	10.20000
2120	2120	1	0.00000	155.73099	67.99285	13.60000
2121	2121	1	0.00000	155.73099	67.99285	17.00000
2122	2122	1	0.00000	155.73099	67.99285	20.40000
2123	2123	1	0.00000	155.73099	67.99285	23.80000
2124	2124	1	0.00000	155.73099	67.99285	27.20000
2125	2125	1	0.00000	155.73099	67.99285	30.60000
2126	2126	1	0.00000	155.73099	67.99285	34.00000
2127	2127	1	0.00000	155.73099	67.99285	37.40000
2128	2128	1	0.00000	155.73099	67.99285	40.80000
2129	2129	1	0.00000	155.73099	67.99285	44.20000
2130	2130	1	0.00000	155.73099	67.99285	47.60000
2131	2131	1	0.00000	156.10243	71.38442	0.00000
2132	2132	1	0.00000	156.10243	71.38442	3.40000
2133	2133	1	0.00000	156.10243	71.38442	6.80000
2134	2134	1	0.00000	156.10243	71.38442	10.20000
2135	2135	1	0.00000	156.10243	71.38442	13.60000
2136	2136	1	0.00000	156.10243	71.38442	17.00000
2137	2137	1	0.00000	156.10243	71.38442	20.40000
2138	2138	1	0.00000	156.10243	71.38442	23.80000
2139	2139	1	0.00000	156.10243	71.38442	27.20000
2140	2140	1	0.00000	156.10243	71.38442	30.60000
2141	2141	1	0.00000	156.10243	71.38442	34.00000

```

2142 2142      1  0.00000 156.10243 71.38442 37.40000
2143 2143      1  0.00000 156.10243 71.38442 40.80000
2144 2144      1  0.00000 156.10243 71.38442 44.20000
2145 2145      1  0.00000 156.10243 71.38442 47.60000
2146 2146      1  0.00000 156.32557 74.78896 0.00000
2147 2147      1  0.00000 156.32557 74.78896 3.40000
2148 2148      1  0.00000 156.32557 74.78896 6.80000
2149 2149      1  0.00000 156.32557 74.78896 10.20000
2150 2150      1  0.00000 156.32557 74.78896 13.60000
2151 2151      1  0.00000 156.32557 74.78896 17.00000
2152 2152      1  0.00000 156.32557 74.78896 20.40000
2153 2153      1  0.00000 156.32557 74.78896 23.80000
2154 2154      1  0.00000 156.32557 74.78896 27.20000
2155 2155      1  0.00000 156.32557 74.78896 30.60000
2156 2156      1  0.00000 156.32557 74.78896 34.00000
2157 2157      1  0.00000 156.32557 74.78896 37.40000
2158 2158      1  0.00000 156.32557 74.78896 40.80000
2159 2159      1  0.00000 156.32557 74.78896 44.20000
2160 2160      1  0.00000 156.32557 74.78896 47.60000

```

Hexagonal Pore LAMMPS script:

```

log          log.insert

# ----- ADJUSTABLE VARIABLES -----

variable     LOWTEMP equal 508.61
variable     HIGHTEMP equal 500.0
variable     RHO equal 0.001739      # fluid density sigma^3
variable     SIGMAW equal 3.4        # wall LJ sigma in Ang
variable     SIGMAF equal 5.61841    # fluid LJ sigma in Ang
variable     LENGTH equal 15.0*${SIGMAW} # Cell xy parameter in Ang
variable     HEIGHT equal 45*${SIGMAW} # Pore height H in Ang
variable     EPSW equal 0.086000159  # wall-wall LJ epsilon in kcal/mol
variable     EPSF equal 0.863956     # fluid-fluid LJ epsilon in kcal/mol
variable     MASSW equal 12.0        # wall atom mass in g/mol
variable     MASSF equal 86.18       # fluid atom mass in g/mol
variable     RC equal 15.0           # real-space cutoff, 12.0 Ang

variable     PI equal 3.14159265359   # pi, yum

# ----- DEPENDENT VARIABLES -----

variable     SIGMAFW equal (${SIGMAW}+${SIGMAF})/2 # fluid-wall LJ sigma in Ang
variable     EPSFW equal sqrt(${EPSF}*${EPSW})    # fluid-wall LJ epsilon in kcal/mol
variable     XHI equal ${HEIGHT}+2.0             # cell length in x
variable     YHI equal ${HEIGHT}+2.0             # cell length in y
variable     ZHI equal ${LENGTH}                 # cell length in z

#variable     XMID equal (${HEIGHT}+1)/2          # mid point in x
variable     YMID equal (${HEIGHT}+(1*${SIGMAW}))/2 # mid point in y
variable     RAD equal (${HEIGHT}-(1*${SIGMAW}))/2 # effect radius of pore
variable     NBIN equal ${RAD}/.01               # number of bins for 1D density profile

variable     SQRT75 equal 0.8660254037
variable     A equal ${YMID}/${SQRT75}
variable     XMID equal ${A}

variable     PX_1 equal (${A}*1.0)+${A}-${SIGMAW}*0.8660254037)
variable     PY_1 equal (${A}*0.0)+${YMID}+(${SIGMAW}*0.5)
variable     PX_2 equal (${A}*0.5)+${A}-${SIGMAW}*1.0)
variable     PY_2 equal (${A}*0.8660254037)+${YMID}
variable     PX_3 equal (${A}*(-0.5))+${A}-${SIGMAW}*0.5)
variable     PY_3 equal (${A}*0.8660254037)+${YMID}-${SIGMAW}*0.866025403)
variable     PX_4 equal (${A}*(-1.0))+${A}+(${SIGMAW}*0.5)
variable     PY_4 equal (${A}*0.0)+${YMID}-${SIGMAW}*0.866025403)
variable     PX_5 equal (${A}*(-0.5))+${A}+(${SIGMAW}*1.0)
variable     PY_5 equal (${A}*(-0.8660254037))+${YMID}
variable     PX_6 equal (${A}*0.5)+${A}+(${SIGMAW}*0.5)
variable     PY_6 equal (${A}*(-0.8660254037))+${YMID}+(${SIGMAW}*0.8660254037)

variable     VOIDVOL equal 6.0*${LENGTH}*0.577350269*${HEIGHT}*${HEIGHT}*0.25 # 6 times the area of a triangle times L
variable     NUM equal round(${RHO}*${VOIDVOL}) # number of fluid atoms

# ----- GENERAL PARAMETERS -----

units        real
atom_style   full

# ----- CREATE AND READ DATA FILE -----

boundary     f f p
read_data    lammps.data extra/atom/types 1

# ----- FILL VOID REGION AND FILL WITH FLUID ATOM TYPE 2 -----

mass         1 ${MASSW}
mass         2 ${MASSF}
pair_style    lj/cut ${RC}
pair_modify   shift yes # shifted and truncated potential, subtracts E_LJ at r=RC
pair_coeff     * * 0 1
pair_coeff     1 2 ${EPSFW} ${SIGMAFW}
pair_coeff     2 2 ${EPSF} ${SIGMAF}

region        plane_1 plane ${PX_1} ${PY_1} 0.0 0.866025404 -0.50 0.0 side out
region        plane_2 plane ${PX_2} ${PY_2} 0.0 0.866025404 0.50 0.0 side out
region        plane_3 plane ${PX_3} ${PY_3} 0.0 0.0 1.00 0.0 side out
region        plane_4 plane ${PX_4} ${PY_4} 0.0 -0.866025404 0.50 0.0 side out
region        plane_5 plane ${PX_5} ${PY_5} 0.0 -0.866025404 -0.50 0.0 side out
region        plane_6 plane ${PX_6} ${PY_6} 0.0 0.0 -1.00 0.0 side out
region        hexagon intersect 6 plane_1 plane_2 plane_3 plane_4 plane_5 plane_6 side in

create_atoms  2 random ${NUM} 668334 hexagon units box
group         wall type 1
group         fluid type 2

write_data    wall_fluid_init.data

```

```

# ----- MINIMIZE FLUID -----

fix          freeze wall setforce 0.0 0.0 0.0
minimize     1.0e-4 1.0e-4 1000 1000
unfix       freeze
restart      0
write_data   wall_fluid.data
write_restart wall_fluid.restart

# ----- fluid equilibration-----

log          log.equil
timestep     0.1
thermo       1000
compute      ftemp fluid temp          # temperature of fluid atoms
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
reset_timestep 0

velocity     fluid create ${HIGHTEMP} 4928459 dist gaussian

fix          1 fluid nvt temp ${HIGHTEMP} ${HIGHTEMP} 100
run          1000000
unfix       1

fix          2 fluid nvt temp ${HIGHTEMP} ${LOWTEMP} 100
run          1000000
unfix       2

timestep     0.001
fix          3 fluid nvt temp ${LOWTEMP} ${LOWTEMP} 100
run          10000000

log          log.prod

# ----- nve production to calculate msds -----
# ----- fitslopxy gives D_parallel in LJ units (sigma^2/t*) ---
# ----- fitslopetot gives D_total in LJ units (sigma^2/t*) -----

reset_timestep 0
timestep     1.0

fix          5 fluid ave/atom 100 100000 10000000 x y z          # average xyz coords for each atom
dump         5 fluid custom 10000000 dump.xyz id type f_5[*]
dump         4 all atom 1000000 dump.nve

compute      layers all chunk/atom bin/cylinder z lower ${LENGTH} ${XMID} ${YMID} 0.0 ${RAD} ${NBIN} region hexagon units box # bins for 1D profiles
fix          6 all ave/chunk 100 100000 10000000 layers density/number file density_fluid.txt # 1D density profile
fix          7 all ave/chunk 100 100000 10000000 layers vx file velx_fluid.txt # Velocity_x profile

compute      liqrdf all rdf 320 2 2          # RDF for liquid atoms
fix          8 all ave/time 100 100000 10000000 c_liqrdf[*] file rdf.nvt mode vector

compute      molmsd fluid msd com yes          # COM of fluid is subtracted out
fix          9 all vector 1 c_molmsd[3]
variable     fitslopxy equal slope(f_9)/(2*(dt))
fix          10 all vector 1 c_molmsd[4]          # sum of msd_x, msd_y, msd_z
variable     fitslopetot equal slope(f_10)/(6*(dt))
thermo_style custom elaplong c_molmsd[1] c_molmsd[2] c_molmsd[3] c_molmsd[4] c_ftemp v_fitslopxy v_fitslopetot
run          10000000

uncompute    layers
uncompute    liqrdf
uncompute    molmsd
unfix        5
unfix        6
unfix        7
unfix        8
unfix        9
unfix        10
undump       4
undump       5
thermo_style custom step etotal pe ke c_ftemp press cella cellb cellc
write_restart nve_final.restart
write_data   nve_final.data

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Hexagonal Pore LAMMPS data file:

LAMMPS data file

2340 atoms

1 atom types

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0.0000000000 183.9951642025 xlo xhi
0.0000000000 159.8000000000 ylo yhi
0.0000000000 51.0000000000 zlo zhi

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Atoms

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3 3 1 0.00000 180.59516 78.20000 6.80000
4 4 1 0.00000 180.59516 78.20000 10.20000
5 5 1 0.00000 180.59516 78.20000 13.60000
6 6 1 0.00000 180.59516 78.20000 17.00000
7 7 1 0.00000 180.59516 78.20000 20.40000
8 8 1 0.00000 180.59516 78.20000 23.80000
9 9 1 0.00000 180.59516 78.20000 27.20000
10 10 1 0.00000 180.59516 78.20000 30.60000
11 11 1 0.00000 180.59516 78.20000 34.00000
12 12 1 0.00000 180.59516 78.20000 37.40000
13 13 1 0.00000 180.59516 78.20000 40.80000
14 14 1 0.00000 180.59516 78.20000 44.20000
15 15 1 0.00000 180.59516 78.20000 47.60000
16 16 1 0.00000 178.85867 81.20769 0.00000
17 17 1 0.00000 178.85867 81.20769 3.40000
18 18 1 0.00000 178.85867 81.20769 6.80000
19 19 1 0.00000 178.85867 81.20769 10.20000

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23	23	1	0.00000	178.85867	81.20769	23.80000
24	24	1	0.00000	178.85867	81.20769	27.20000
25	25	1	0.00000	178.85867	81.20769	30.60000
26	26	1	0.00000	178.85867	81.20769	34.00000
27	27	1	0.00000	178.85867	81.20769	37.40000
28	28	1	0.00000	178.85867	81.20769	40.80000
29	29	1	0.00000	178.85867	81.20769	44.20000
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32	32	1	0.00000	177.12218	84.21538	3.40000
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87	87	1	0.00000	171.91270	93.23846	37.40000
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92	92	1	0.00000	170.17621	96.24615	3.40000
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95	95	1	0.00000	170.17621	96.24615	13.60000
96	96	1	0.00000	170.17621	96.24615	17.00000
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129	129	1	0.00000	166.70323	102.26154	27.20000
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143	143	1	0.00000	164.96674	105.26923	23.80000
144	144	1	0.00000	164.96674	105.26923	27.20000
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201	201	1	0.00000	158.02077	117.30000	17.00000
202	202	1	0.00000	158.02077	117.30000	20.40000
203	203	1	0.00000	158.02077	117.30000	23.80000
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269	269	1	0.00000	151.07480	129.33077	44.20000
270	270	1	0.00000	151.07480	129.33077	47.60000
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287	287	1	0.00000	147.60182	135.34615	3.40000
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305	305	1	0.00000	145.86532	138.35385	13.60000
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309	309	1	0.00000	145.86532	138.35385	27.20000
310	310	1	0.00000	145.86532	138.35385	30.60000
311	311	1	0.00000	145.86532	138.35385	34.00000
312	312	1	0.00000	145.86532	138.35385	37.40000
313	313	1	0.00000	145.86532	138.35385	40.80000
314	314	1	0.00000	145.86532	138.35385	44.20000
315	315	1	0.00000	145.86532	138.35385	47.60000
316	316	1	0.00000	144.12883	141.36154	0.00000
317	317	1	0.00000	144.12883	141.36154	3.40000
318	318	1	0.00000	144.12883	141.36154	6.80000
319	319	1	0.00000	144.12883	141.36154	10.20000
320	320	1	0.00000	144.12883	141.36154	13.60000
321	321	1	0.00000	144.12883	141.36154	17.00000
322	322	1	0.00000	144.12883	141.36154	20.40000
323	323	1	0.00000	144.12883	141.36154	23.80000
324	324	1	0.00000	144.12883	141.36154	27.20000
325	325	1	0.00000	144.12883	141.36154	30.60000
326	326	1	0.00000	144.12883	141.36154	34.00000
327	327	1	0.00000	144.12883	141.36154	37.40000
328	328	1	0.00000	144.12883	141.36154	40.80000
329	329	1	0.00000	144.12883	141.36154	44.20000
330	330	1	0.00000	144.12883	141.36154	47.60000
331	331	1	0.00000	142.39234	144.36923	0.00000
332	332	1	0.00000	142.39234	144.36923	3.40000
333	333	1	0.00000	142.39234	144.36923	6.80000
334	334	1	0.00000	142.39234	144.36923	10.20000
335	335	1	0.00000	142.39234	144.36923	13.60000
336	336	1	0.00000	142.39234	144.36923	17.00000
337	337	1	0.00000	142.39234	144.36923	20.40000
338	338	1	0.00000	142.39234	144.36923	23.80000
339	339	1	0.00000	142.39234	144.36923	27.20000
340	340	1	0.00000	142.39234	144.36923	30.60000
341	341	1	0.00000	142.39234	144.36923	34.00000
342	342	1	0.00000	142.39234	144.36923	37.40000
343	343	1	0.00000	142.39234	144.36923	40.80000
344	344	1	0.00000	142.39234	144.36923	44.20000
345	345	1	0.00000	142.39234	144.36923	47.60000
346	346	1	0.00000	140.65585	147.37692	0.00000
347	347	1	0.00000	140.65585	147.37692	3.40000
348	348	1	0.00000	140.65585	147.37692	6.80000
349	349	1	0.00000	140.65585	147.37692	10.20000
350	350	1	0.00000	140.65585	147.37692	13.60000
351	351	1	0.00000	140.65585	147.37692	17.00000
352	352	1	0.00000	140.65585	147.37692	20.40000
353	353	1	0.00000	140.65585	147.37692	23.80000
354	354	1	0.00000	140.65585	147.37692	27.20000
355	355	1	0.00000	140.65585	147.37692	30.60000

356	356	1	0.00000	140.65585	147.37692	34.00000
357	357	1	0.00000	140.65585	147.37692	37.40000
358	358	1	0.00000	140.65585	147.37692	40.80000
359	359	1	0.00000	140.65585	147.37692	44.20000
360	360	1	0.00000	140.65585	147.37692	47.60000
361	361	1	0.00000	138.91936	150.38462	0.00000
362	362	1	0.00000	138.91936	150.38462	3.40000
363	363	1	0.00000	138.91936	150.38462	6.80000
364	364	1	0.00000	138.91936	150.38462	10.20000
365	365	1	0.00000	138.91936	150.38462	13.60000
366	366	1	0.00000	138.91936	150.38462	17.00000
367	367	1	0.00000	138.91936	150.38462	20.40000
368	368	1	0.00000	138.91936	150.38462	23.80000
369	369	1	0.00000	138.91936	150.38462	27.20000
370	370	1	0.00000	138.91936	150.38462	30.60000
371	371	1	0.00000	138.91936	150.38462	34.00000
372	372	1	0.00000	138.91936	150.38462	37.40000
373	373	1	0.00000	138.91936	150.38462	40.80000
374	374	1	0.00000	138.91936	150.38462	44.20000
375	375	1	0.00000	138.91936	150.38462	47.60000
376	376	1	0.00000	137.18287	153.39231	0.00000
377	377	1	0.00000	137.18287	153.39231	3.40000
378	378	1	0.00000	137.18287	153.39231	6.80000
379	379	1	0.00000	137.18287	153.39231	10.20000
380	380	1	0.00000	137.18287	153.39231	13.60000
381	381	1	0.00000	137.18287	153.39231	17.00000
382	382	1	0.00000	137.18287	153.39231	20.40000
383	383	1	0.00000	137.18287	153.39231	23.80000
384	384	1	0.00000	137.18287	153.39231	27.20000
385	385	1	0.00000	137.18287	153.39231	30.60000
386	386	1	0.00000	137.18287	153.39231	34.00000
387	387	1	0.00000	137.18287	153.39231	37.40000
388	388	1	0.00000	137.18287	153.39231	40.80000
389	389	1	0.00000	137.18287	153.39231	44.20000
390	390	1	0.00000	137.18287	153.39231	47.60000
391	391	1	0.00000	135.44637	156.40000	0.00000
392	392	1	0.00000	135.44637	156.40000	3.40000
393	393	1	0.00000	135.44637	156.40000	6.80000
394	394	1	0.00000	135.44637	156.40000	10.20000
395	395	1	0.00000	135.44637	156.40000	13.60000
396	396	1	0.00000	135.44637	156.40000	17.00000
397	397	1	0.00000	135.44637	156.40000	20.40000
398	398	1	0.00000	135.44637	156.40000	23.80000
399	399	1	0.00000	135.44637	156.40000	27.20000
400	400	1	0.00000	135.44637	156.40000	30.60000
401	401	1	0.00000	135.44637	156.40000	34.00000
402	402	1	0.00000	135.44637	156.40000	37.40000
403	403	1	0.00000	135.44637	156.40000	40.80000
404	404	1	0.00000	135.44637	156.40000	44.20000
405	405	1	0.00000	135.44637	156.40000	47.60000
406	406	1	0.00000	131.97339	156.40000	0.00000
407	407	1	0.00000	131.97339	156.40000	3.40000
408	408	1	0.00000	131.97339	156.40000	6.80000
409	409	1	0.00000	131.97339	156.40000	10.20000
410	410	1	0.00000	131.97339	156.40000	13.60000
411	411	1	0.00000	131.97339	156.40000	17.00000
412	412	1	0.00000	131.97339	156.40000	20.40000
413	413	1	0.00000	131.97339	156.40000	23.80000
414	414	1	0.00000	131.97339	156.40000	27.20000
415	415	1	0.00000	131.97339	156.40000	30.60000
416	416	1	0.00000	131.97339	156.40000	34.00000
417	417	1	0.00000	131.97339	156.40000	37.40000
418	418	1	0.00000	131.97339	156.40000	40.80000
419	419	1	0.00000	131.97339	156.40000	44.20000
420	420	1	0.00000	131.97339	156.40000	47.60000
421	421	1	0.00000	128.50041	156.40000	0.00000
422	422	1	0.00000	128.50041	156.40000	3.40000
423	423	1	0.00000	128.50041	156.40000	6.80000
424	424	1	0.00000	128.50041	156.40000	10.20000
425	425	1	0.00000	128.50041	156.40000	13.60000
426	426	1	0.00000	128.50041	156.40000	17.00000
427	427	1	0.00000	128.50041	156.40000	20.40000
428	428	1	0.00000	128.50041	156.40000	23.80000
429	429	1	0.00000	128.50041	156.40000	27.20000
430	430	1	0.00000	128.50041	156.40000	30.60000
431	431	1	0.00000	128.50041	156.40000	34.00000
432	432	1	0.00000	128.50041	156.40000	37.40000
433	433	1	0.00000	128.50041	156.40000	40.80000
434	434	1	0.00000	128.50041	156.40000	44.20000
435	435	1	0.00000	128.50041	156.40000	47.60000
436	436	1	0.00000	125.02742	156.40000	0.00000
437	437	1	0.00000	125.02742	156.40000	3.40000
438	438	1	0.00000	125.02742	156.40000	6.80000
439	439	1	0.00000	125.02742	156.40000	10.20000
440	440	1	0.00000	125.02742	156.40000	13.60000
441	441	1	0.00000	125.02742	156.40000	17.00000
442	442	1	0.00000	125.02742	156.40000	20.40000
443	443	1	0.00000	125.02742	156.40000	23.80000
444	444	1	0.00000	125.02742	156.40000	27.20000
445	445	1	0.00000	125.02742	156.40000	30.60000
446	446	1	0.00000	125.02742	156.40000	34.00000
447	447	1	0.00000	125.02742	156.40000	37.40000
448	448	1	0.00000	125.02742	156.40000	40.80000
449	449	1	0.00000	125.02742	156.40000	44.20000
450	450	1	0.00000	125.02742	156.40000	47.60000
451	451	1	0.00000	121.55444	156.40000	0.00000
452	452	1	0.00000	121.55444	156.40000	3.40000
453	453	1	0.00000	121.55444	156.40000	6.80000
454	454	1	0.00000	121.55444	156.40000	10.20000
455	455	1	0.00000	121.55444	156.40000	13.60000
456	456	1	0.00000	121.55444	156.40000	17.00000
457	457	1	0.00000	121.55444	156.40000	20.40000
458	458	1	0.00000	121.55444	156.40000	23.80000
459	459	1	0.00000	121.55444	156.40000	27.20000
460	460	1	0.00000	121.55444	156.40000	30.60000
461	461	1	0.00000	121.55444	156.40000	34.00000
462	462	1	0.00000	121.55444	156.40000	37.40000
463	463	1	0.00000	121.55444	156.40000	40.80000
464	464	1	0.00000	121.55444	156.40000	44.20000
465	465	1	0.00000	121.55444	156.40000	47.60000
466	466	1	0.00000	118.08145	156.40000	0.00000
467	467	1	0.00000	118.08145	156.40000	3.40000

468	468	1	0.00000	118.08145	156.40000	6.80000
469	469	1	0.00000	118.08145	156.40000	10.20000
470	470	1	0.00000	118.08145	156.40000	13.60000
471	471	1	0.00000	118.08145	156.40000	17.00000
472	472	1	0.00000	118.08145	156.40000	20.40000
473	473	1	0.00000	118.08145	156.40000	23.80000
474	474	1	0.00000	118.08145	156.40000	27.20000
475	475	1	0.00000	118.08145	156.40000	30.60000
476	476	1	0.00000	118.08145	156.40000	34.00000
477	477	1	0.00000	118.08145	156.40000	37.40000
478	478	1	0.00000	118.08145	156.40000	40.80000
479	479	1	0.00000	118.08145	156.40000	44.20000
480	480	1	0.00000	118.08145	156.40000	47.60000
481	481	1	0.00000	114.60847	156.40000	0.00000
482	482	1	0.00000	114.60847	156.40000	3.40000
483	483	1	0.00000	114.60847	156.40000	6.80000
484	484	1	0.00000	114.60847	156.40000	10.20000
485	485	1	0.00000	114.60847	156.40000	13.60000
486	486	1	0.00000	114.60847	156.40000	17.00000
487	487	1	0.00000	114.60847	156.40000	20.40000
488	488	1	0.00000	114.60847	156.40000	23.80000
489	489	1	0.00000	114.60847	156.40000	27.20000
490	490	1	0.00000	114.60847	156.40000	30.60000
491	491	1	0.00000	114.60847	156.40000	34.00000
492	492	1	0.00000	114.60847	156.40000	37.40000
493	493	1	0.00000	114.60847	156.40000	40.80000
494	494	1	0.00000	114.60847	156.40000	44.20000
495	495	1	0.00000	114.60847	156.40000	47.60000
496	496	1	0.00000	111.13549	156.40000	0.00000
497	497	1	0.00000	111.13549	156.40000	3.40000
498	498	1	0.00000	111.13549	156.40000	6.80000
499	499	1	0.00000	111.13549	156.40000	10.20000
500	500	1	0.00000	111.13549	156.40000	13.60000
501	501	1	0.00000	111.13549	156.40000	17.00000
502	502	1	0.00000	111.13549	156.40000	20.40000
503	503	1	0.00000	111.13549	156.40000	23.80000
504	504	1	0.00000	111.13549	156.40000	27.20000
505	505	1	0.00000	111.13549	156.40000	30.60000
506	506	1	0.00000	111.13549	156.40000	34.00000
507	507	1	0.00000	111.13549	156.40000	37.40000
508	508	1	0.00000	111.13549	156.40000	40.80000
509	509	1	0.00000	111.13549	156.40000	44.20000
510	510	1	0.00000	111.13549	156.40000	47.60000
511	511	1	0.00000	107.66250	156.40000	0.00000
512	512	1	0.00000	107.66250	156.40000	3.40000
513	513	1	0.00000	107.66250	156.40000	6.80000
514	514	1	0.00000	107.66250	156.40000	10.20000
515	515	1	0.00000	107.66250	156.40000	13.60000
516	516	1	0.00000	107.66250	156.40000	17.00000
517	517	1	0.00000	107.66250	156.40000	20.40000
518	518	1	0.00000	107.66250	156.40000	23.80000
519	519	1	0.00000	107.66250	156.40000	27.20000
520	520	1	0.00000	107.66250	156.40000	30.60000
521	521	1	0.00000	107.66250	156.40000	34.00000
522	522	1	0.00000	107.66250	156.40000	37.40000
523	523	1	0.00000	107.66250	156.40000	40.80000
524	524	1	0.00000	107.66250	156.40000	44.20000
525	525	1	0.00000	107.66250	156.40000	47.60000
526	526	1	0.00000	104.18952	156.40000	0.00000
527	527	1	0.00000	104.18952	156.40000	3.40000
528	528	1	0.00000	104.18952	156.40000	6.80000
529	529	1	0.00000	104.18952	156.40000	10.20000
530	530	1	0.00000	104.18952	156.40000	13.60000
531	531	1	0.00000	104.18952	156.40000	17.00000
532	532	1	0.00000	104.18952	156.40000	20.40000
533	533	1	0.00000	104.18952	156.40000	23.80000
534	534	1	0.00000	104.18952	156.40000	27.20000
535	535	1	0.00000	104.18952	156.40000	30.60000
536	536	1	0.00000	104.18952	156.40000	34.00000
537	537	1	0.00000	104.18952	156.40000	37.40000
538	538	1	0.00000	104.18952	156.40000	40.80000
539	539	1	0.00000	104.18952	156.40000	44.20000
540	540	1	0.00000	104.18952	156.40000	47.60000
541	541	1	0.00000	100.71653	156.40000	0.00000
542	542	1	0.00000	100.71653	156.40000	3.40000
543	543	1	0.00000	100.71653	156.40000	6.80000
544	544	1	0.00000	100.71653	156.40000	10.20000
545	545	1	0.00000	100.71653	156.40000	13.60000
546	546	1	0.00000	100.71653	156.40000	17.00000
547	547	1	0.00000	100.71653	156.40000	20.40000
548	548	1	0.00000	100.71653	156.40000	23.80000
549	549	1	0.00000	100.71653	156.40000	27.20000
550	550	1	0.00000	100.71653	156.40000	30.60000
551	551	1	0.00000	100.71653	156.40000	34.00000
552	552	1	0.00000	100.71653	156.40000	37.40000
553	553	1	0.00000	100.71653	156.40000	40.80000
554	554	1	0.00000	100.71653	156.40000	44.20000
555	555	1	0.00000	100.71653	156.40000	47.60000
556	556	1	0.00000	97.24355	156.40000	0.00000
557	557	1	0.00000	97.24355	156.40000	3.40000
558	558	1	0.00000	97.24355	156.40000	6.80000
559	559	1	0.00000	97.24355	156.40000	10.20000
560	560	1	0.00000	97.24355	156.40000	13.60000
561	561	1	0.00000	97.24355	156.40000	17.00000
562	562	1	0.00000	97.24355	156.40000	20.40000
563	563	1	0.00000	97.24355	156.40000	23.80000
564	564	1	0.00000	97.24355	156.40000	27.20000
565	565	1	0.00000	97.24355	156.40000	30.60000
566	566	1	0.00000	97.24355	156.40000	34.00000
567	567	1	0.00000	97.24355	156.40000	37.40000
568	568	1	0.00000	97.24355	156.40000	40.80000
569	569	1	0.00000	97.24355	156.40000	44.20000
570	570	1	0.00000	97.24355	156.40000	47.60000
571	571	1	0.00000	93.77057	156.40000	0.00000
572	572	1	0.00000	93.77057	156.40000	3.40000
573	573	1	0.00000	93.77057	156.40000	6.80000
574	574	1	0.00000	93.77057	156.40000	10.20000
575	575	1	0.00000	93.77057	156.40000	13.60000
576	576	1	0.00000	93.77057	156.40000	17.00000
577	577	1	0.00000	93.77057	156.40000	20.40000
578	578	1	0.00000	93.77057	156.40000	23.80000
579	579	1	0.00000	93.77057	156.40000	27.20000

580	580	1	0.00000	93.77057	156.40000	30.60000
581	581	1	0.00000	93.77057	156.40000	34.00000
582	582	1	0.00000	93.77057	156.40000	37.40000
583	583	1	0.00000	93.77057	156.40000	40.80000
584	584	1	0.00000	93.77057	156.40000	44.20000
585	585	1	0.00000	93.77057	156.40000	47.60000
586	586	1	0.00000	90.29758	156.40000	0.00000
587	587	1	0.00000	90.29758	156.40000	3.40000
588	588	1	0.00000	90.29758	156.40000	6.80000
589	589	1	0.00000	90.29758	156.40000	10.20000
590	590	1	0.00000	90.29758	156.40000	13.60000
591	591	1	0.00000	90.29758	156.40000	17.00000
592	592	1	0.00000	90.29758	156.40000	20.40000
593	593	1	0.00000	90.29758	156.40000	23.80000
594	594	1	0.00000	90.29758	156.40000	27.20000
595	595	1	0.00000	90.29758	156.40000	30.60000
596	596	1	0.00000	90.29758	156.40000	34.00000
597	597	1	0.00000	90.29758	156.40000	37.40000
598	598	1	0.00000	90.29758	156.40000	40.80000
599	599	1	0.00000	90.29758	156.40000	44.20000
600	600	1	0.00000	90.29758	156.40000	47.60000
601	601	1	0.00000	86.82460	156.40000	0.00000
602	602	1	0.00000	86.82460	156.40000	3.40000
603	603	1	0.00000	86.82460	156.40000	6.80000
604	604	1	0.00000	86.82460	156.40000	10.20000
605	605	1	0.00000	86.82460	156.40000	13.60000
606	606	1	0.00000	86.82460	156.40000	17.00000
607	607	1	0.00000	86.82460	156.40000	20.40000
608	608	1	0.00000	86.82460	156.40000	23.80000
609	609	1	0.00000	86.82460	156.40000	27.20000
610	610	1	0.00000	86.82460	156.40000	30.60000
611	611	1	0.00000	86.82460	156.40000	34.00000
612	612	1	0.00000	86.82460	156.40000	37.40000
613	613	1	0.00000	86.82460	156.40000	40.80000
614	614	1	0.00000	86.82460	156.40000	44.20000
615	615	1	0.00000	86.82460	156.40000	47.60000
616	616	1	0.00000	83.35161	156.40000	0.00000
617	617	1	0.00000	83.35161	156.40000	3.40000
618	618	1	0.00000	83.35161	156.40000	6.80000
619	619	1	0.00000	83.35161	156.40000	10.20000
620	620	1	0.00000	83.35161	156.40000	13.60000
621	621	1	0.00000	83.35161	156.40000	17.00000
622	622	1	0.00000	83.35161	156.40000	20.40000
623	623	1	0.00000	83.35161	156.40000	23.80000
624	624	1	0.00000	83.35161	156.40000	27.20000
625	625	1	0.00000	83.35161	156.40000	30.60000
626	626	1	0.00000	83.35161	156.40000	34.00000
627	627	1	0.00000	83.35161	156.40000	37.40000
628	628	1	0.00000	83.35161	156.40000	40.80000
629	629	1	0.00000	83.35161	156.40000	44.20000
630	630	1	0.00000	83.35161	156.40000	47.60000
631	631	1	0.00000	79.87863	156.40000	0.00000
632	632	1	0.00000	79.87863	156.40000	3.40000
633	633	1	0.00000	79.87863	156.40000	6.80000
634	634	1	0.00000	79.87863	156.40000	10.20000
635	635	1	0.00000	79.87863	156.40000	13.60000
636	636	1	0.00000	79.87863	156.40000	17.00000
637	637	1	0.00000	79.87863	156.40000	20.40000
638	638	1	0.00000	79.87863	156.40000	23.80000
639	639	1	0.00000	79.87863	156.40000	27.20000
640	640	1	0.00000	79.87863	156.40000	30.60000
641	641	1	0.00000	79.87863	156.40000	34.00000
642	642	1	0.00000	79.87863	156.40000	37.40000
643	643	1	0.00000	79.87863	156.40000	40.80000
644	644	1	0.00000	79.87863	156.40000	44.20000
645	645	1	0.00000	79.87863	156.40000	47.60000
646	646	1	0.00000	76.40565	156.40000	0.00000
647	647	1	0.00000	76.40565	156.40000	3.40000
648	648	1	0.00000	76.40565	156.40000	6.80000
649	649	1	0.00000	76.40565	156.40000	10.20000
650	650	1	0.00000	76.40565	156.40000	13.60000
651	651	1	0.00000	76.40565	156.40000	17.00000
652	652	1	0.00000	76.40565	156.40000	20.40000
653	653	1	0.00000	76.40565	156.40000	23.80000
654	654	1	0.00000	76.40565	156.40000	27.20000
655	655	1	0.00000	76.40565	156.40000	30.60000
656	656	1	0.00000	76.40565	156.40000	34.00000
657	657	1	0.00000	76.40565	156.40000	37.40000
658	658	1	0.00000	76.40565	156.40000	40.80000
659	659	1	0.00000	76.40565	156.40000	44.20000
660	660	1	0.00000	76.40565	156.40000	47.60000
661	661	1	0.00000	72.93266	156.40000	0.00000
662	662	1	0.00000	72.93266	156.40000	3.40000
663	663	1	0.00000	72.93266	156.40000	6.80000
664	664	1	0.00000	72.93266	156.40000	10.20000
665	665	1	0.00000	72.93266	156.40000	13.60000
666	666	1	0.00000	72.93266	156.40000	17.00000
667	667	1	0.00000	72.93266	156.40000	20.40000
668	668	1	0.00000	72.93266	156.40000	23.80000
669	669	1	0.00000	72.93266	156.40000	27.20000
670	670	1	0.00000	72.93266	156.40000	30.60000
671	671	1	0.00000	72.93266	156.40000	34.00000
672	672	1	0.00000	72.93266	156.40000	37.40000
673	673	1	0.00000	72.93266	156.40000	40.80000
674	674	1	0.00000	72.93266	156.40000	44.20000
675	675	1	0.00000	72.93266	156.40000	47.60000
676	676	1	0.00000	69.45968	156.40000	0.00000
677	677	1	0.00000	69.45968	156.40000	3.40000
678	678	1	0.00000	69.45968	156.40000	6.80000
679	679	1	0.00000	69.45968	156.40000	10.20000
680	680	1	0.00000	69.45968	156.40000	13.60000
681	681	1	0.00000	69.45968	156.40000	17.00000
682	682	1	0.00000	69.45968	156.40000	20.40000
683	683	1	0.00000	69.45968	156.40000	23.80000
684	684	1	0.00000	69.45968	156.40000	27.20000
685	685	1	0.00000	69.45968	156.40000	30.60000
686	686	1	0.00000	69.45968	156.40000	34.00000
687	687	1	0.00000	69.45968	156.40000	37.40000
688	688	1	0.00000	69.45968	156.40000	40.80000
689	689	1	0.00000	69.45968	156.40000	44.20000
690	690	1	0.00000	69.45968	156.40000	47.60000
691	691	1	0.00000	65.98669	156.40000	0.00000

692	692	1	0.00000	65.98669	156.40000	3.40000
693	693	1	0.00000	65.98669	156.40000	6.80000
694	694	1	0.00000	65.98669	156.40000	10.20000
695	695	1	0.00000	65.98669	156.40000	13.60000
696	696	1	0.00000	65.98669	156.40000	17.00000
697	697	1	0.00000	65.98669	156.40000	20.40000
698	698	1	0.00000	65.98669	156.40000	23.80000
699	699	1	0.00000	65.98669	156.40000	27.20000
700	700	1	0.00000	65.98669	156.40000	30.60000
701	701	1	0.00000	65.98669	156.40000	34.00000
702	702	1	0.00000	65.98669	156.40000	37.40000
703	703	1	0.00000	65.98669	156.40000	40.80000
704	704	1	0.00000	65.98669	156.40000	44.20000
705	705	1	0.00000	65.98669	156.40000	47.60000
706	706	1	0.00000	62.51371	156.40000	0.00000
707	707	1	0.00000	62.51371	156.40000	3.40000
708	708	1	0.00000	62.51371	156.40000	6.80000
709	709	1	0.00000	62.51371	156.40000	10.20000
710	710	1	0.00000	62.51371	156.40000	13.60000
711	711	1	0.00000	62.51371	156.40000	17.00000
712	712	1	0.00000	62.51371	156.40000	20.40000
713	713	1	0.00000	62.51371	156.40000	23.80000
714	714	1	0.00000	62.51371	156.40000	27.20000
715	715	1	0.00000	62.51371	156.40000	30.60000
716	716	1	0.00000	62.51371	156.40000	34.00000
717	717	1	0.00000	62.51371	156.40000	37.40000
718	718	1	0.00000	62.51371	156.40000	40.80000
719	719	1	0.00000	62.51371	156.40000	44.20000
720	720	1	0.00000	62.51371	156.40000	47.60000
721	721	1	0.00000	59.04073	156.40000	0.00000
722	722	1	0.00000	59.04073	156.40000	3.40000
723	723	1	0.00000	59.04073	156.40000	6.80000
724	724	1	0.00000	59.04073	156.40000	10.20000
725	725	1	0.00000	59.04073	156.40000	13.60000
726	726	1	0.00000	59.04073	156.40000	17.00000
727	727	1	0.00000	59.04073	156.40000	20.40000
728	728	1	0.00000	59.04073	156.40000	23.80000
729	729	1	0.00000	59.04073	156.40000	27.20000
730	730	1	0.00000	59.04073	156.40000	30.60000
731	731	1	0.00000	59.04073	156.40000	34.00000
732	732	1	0.00000	59.04073	156.40000	37.40000
733	733	1	0.00000	59.04073	156.40000	40.80000
734	734	1	0.00000	59.04073	156.40000	44.20000
735	735	1	0.00000	59.04073	156.40000	47.60000
736	736	1	0.00000	55.56774	156.40000	0.00000
737	737	1	0.00000	55.56774	156.40000	3.40000
738	738	1	0.00000	55.56774	156.40000	6.80000
739	739	1	0.00000	55.56774	156.40000	10.20000
740	740	1	0.00000	55.56774	156.40000	13.60000
741	741	1	0.00000	55.56774	156.40000	17.00000
742	742	1	0.00000	55.56774	156.40000	20.40000
743	743	1	0.00000	55.56774	156.40000	23.80000
744	744	1	0.00000	55.56774	156.40000	27.20000
745	745	1	0.00000	55.56774	156.40000	30.60000
746	746	1	0.00000	55.56774	156.40000	34.00000
747	747	1	0.00000	55.56774	156.40000	37.40000
748	748	1	0.00000	55.56774	156.40000	40.80000
749	749	1	0.00000	55.56774	156.40000	44.20000
750	750	1	0.00000	55.56774	156.40000	47.60000
751	751	1	0.00000	52.09476	156.40000	0.00000
752	752	1	0.00000	52.09476	156.40000	3.40000
753	753	1	0.00000	52.09476	156.40000	6.80000
754	754	1	0.00000	52.09476	156.40000	10.20000
755	755	1	0.00000	52.09476	156.40000	13.60000
756	756	1	0.00000	52.09476	156.40000	17.00000
757	757	1	0.00000	52.09476	156.40000	20.40000
758	758	1	0.00000	52.09476	156.40000	23.80000
759	759	1	0.00000	52.09476	156.40000	27.20000
760	760	1	0.00000	52.09476	156.40000	30.60000
761	761	1	0.00000	52.09476	156.40000	34.00000
762	762	1	0.00000	52.09476	156.40000	37.40000
763	763	1	0.00000	52.09476	156.40000	40.80000
764	764	1	0.00000	52.09476	156.40000	44.20000
765	765	1	0.00000	52.09476	156.40000	47.60000
766	766	1	0.00000	48.62177	156.40000	0.00000
767	767	1	0.00000	48.62177	156.40000	3.40000
768	768	1	0.00000	48.62177	156.40000	6.80000
769	769	1	0.00000	48.62177	156.40000	10.20000
770	770	1	0.00000	48.62177	156.40000	13.60000
771	771	1	0.00000	48.62177	156.40000	17.00000
772	772	1	0.00000	48.62177	156.40000	20.40000
773	773	1	0.00000	48.62177	156.40000	23.80000
774	774	1	0.00000	48.62177	156.40000	27.20000
775	775	1	0.00000	48.62177	156.40000	30.60000
776	776	1	0.00000	48.62177	156.40000	34.00000
777	777	1	0.00000	48.62177	156.40000	37.40000
778	778	1	0.00000	48.62177	156.40000	40.80000
779	779	1	0.00000	48.62177	156.40000	44.20000
780	780	1	0.00000	48.62177	156.40000	47.60000
781	781	1	0.00000	45.14879	156.40000	0.00000
782	782	1	0.00000	45.14879	156.40000	3.40000
783	783	1	0.00000	45.14879	156.40000	6.80000
784	784	1	0.00000	45.14879	156.40000	10.20000
785	785	1	0.00000	45.14879	156.40000	13.60000
786	786	1	0.00000	45.14879	156.40000	17.00000
787	787	1	0.00000	45.14879	156.40000	20.40000
788	788	1	0.00000	45.14879	156.40000	23.80000
789	789	1	0.00000	45.14879	156.40000	27.20000
790	790	1	0.00000	45.14879	156.40000	30.60000
791	791	1	0.00000	45.14879	156.40000	34.00000
792	792	1	0.00000	45.14879	156.40000	37.40000
793	793	1	0.00000	45.14879	156.40000	40.80000
794	794	1	0.00000	45.14879	156.40000	44.20000
795	795	1	0.00000	45.14879	156.40000	47.60000
796	796	1	0.00000	43.41230	153.39231	0.00000
797	797	1	0.00000	43.41230	153.39231	3.40000
798	798	1	0.00000	43.41230	153.39231	6.80000
799	799	1	0.00000	43.41230	153.39231	10.20000
800	800	1	0.00000	43.41230	153.39231	13.60000
801	801	1	0.00000	43.41230	153.39231	17.00000
802	802	1	0.00000	43.41230	153.39231	20.40000
803	803	1	0.00000	43.41230	153.39231	23.80000

804	804	1	0.00000	43.41230	153.39231	27.20000
805	805	1	0.00000	43.41230	153.39231	30.60000
806	806	1	0.00000	43.41230	153.39231	34.00000
807	807	1	0.00000	43.41230	153.39231	37.40000
808	808	1	0.00000	43.41230	153.39231	40.80000
809	809	1	0.00000	43.41230	153.39231	44.20000
810	810	1	0.00000	43.41230	153.39231	47.60000
811	811	1	0.00000	41.67581	150.38462	0.00000
812	812	1	0.00000	41.67581	150.38462	3.40000
813	813	1	0.00000	41.67581	150.38462	6.80000
814	814	1	0.00000	41.67581	150.38462	10.20000
815	815	1	0.00000	41.67581	150.38462	13.60000
816	816	1	0.00000	41.67581	150.38462	17.00000
817	817	1	0.00000	41.67581	150.38462	20.40000
818	818	1	0.00000	41.67581	150.38462	23.80000
819	819	1	0.00000	41.67581	150.38462	27.20000
820	820	1	0.00000	41.67581	150.38462	30.60000
821	821	1	0.00000	41.67581	150.38462	34.00000
822	822	1	0.00000	41.67581	150.38462	37.40000
823	823	1	0.00000	41.67581	150.38462	40.80000
824	824	1	0.00000	41.67581	150.38462	44.20000
825	825	1	0.00000	41.67581	150.38462	47.60000
826	826	1	0.00000	39.93932	147.37692	0.00000
827	827	1	0.00000	39.93932	147.37692	3.40000
828	828	1	0.00000	39.93932	147.37692	6.80000
829	829	1	0.00000	39.93932	147.37692	10.20000
830	830	1	0.00000	39.93932	147.37692	13.60000
831	831	1	0.00000	39.93932	147.37692	17.00000
832	832	1	0.00000	39.93932	147.37692	20.40000
833	833	1	0.00000	39.93932	147.37692	23.80000
834	834	1	0.00000	39.93932	147.37692	27.20000
835	835	1	0.00000	39.93932	147.37692	30.60000
836	836	1	0.00000	39.93932	147.37692	34.00000
837	837	1	0.00000	39.93932	147.37692	37.40000
838	838	1	0.00000	39.93932	147.37692	40.80000
839	839	1	0.00000	39.93932	147.37692	44.20000
840	840	1	0.00000	39.93932	147.37692	47.60000
841	841	1	0.00000	38.20282	144.36923	0.00000
842	842	1	0.00000	38.20282	144.36923	3.40000
843	843	1	0.00000	38.20282	144.36923	6.80000
844	844	1	0.00000	38.20282	144.36923	10.20000
845	845	1	0.00000	38.20282	144.36923	13.60000
846	846	1	0.00000	38.20282	144.36923	17.00000
847	847	1	0.00000	38.20282	144.36923	20.40000
848	848	1	0.00000	38.20282	144.36923	23.80000
849	849	1	0.00000	38.20282	144.36923	27.20000
850	850	1	0.00000	38.20282	144.36923	30.60000
851	851	1	0.00000	38.20282	144.36923	34.00000
852	852	1	0.00000	38.20282	144.36923	37.40000
853	853	1	0.00000	38.20282	144.36923	40.80000
854	854	1	0.00000	38.20282	144.36923	44.20000
855	855	1	0.00000	38.20282	144.36923	47.60000
856	856	1	0.00000	36.46633	141.36154	0.00000
857	857	1	0.00000	36.46633	141.36154	3.40000
858	858	1	0.00000	36.46633	141.36154	6.80000
859	859	1	0.00000	36.46633	141.36154	10.20000
860	860	1	0.00000	36.46633	141.36154	13.60000
861	861	1	0.00000	36.46633	141.36154	17.00000
862	862	1	0.00000	36.46633	141.36154	20.40000
863	863	1	0.00000	36.46633	141.36154	23.80000
864	864	1	0.00000	36.46633	141.36154	27.20000
865	865	1	0.00000	36.46633	141.36154	30.60000
866	866	1	0.00000	36.46633	141.36154	34.00000
867	867	1	0.00000	36.46633	141.36154	37.40000
868	868	1	0.00000	36.46633	141.36154	40.80000
869	869	1	0.00000	36.46633	141.36154	44.20000
870	870	1	0.00000	36.46633	141.36154	47.60000
871	871	1	0.00000	34.72984	138.35385	0.00000
872	872	1	0.00000	34.72984	138.35385	3.40000
873	873	1	0.00000	34.72984	138.35385	6.80000
874	874	1	0.00000	34.72984	138.35385	10.20000
875	875	1	0.00000	34.72984	138.35385	13.60000
876	876	1	0.00000	34.72984	138.35385	17.00000
877	877	1	0.00000	34.72984	138.35385	20.40000
878	878	1	0.00000	34.72984	138.35385	23.80000
879	879	1	0.00000	34.72984	138.35385	27.20000
880	880	1	0.00000	34.72984	138.35385	30.60000
881	881	1	0.00000	34.72984	138.35385	34.00000
882	882	1	0.00000	34.72984	138.35385	37.40000
883	883	1	0.00000	34.72984	138.35385	40.80000
884	884	1	0.00000	34.72984	138.35385	44.20000
885	885	1	0.00000	34.72984	138.35385	47.60000
886	886	1	0.00000	32.99335	135.34615	0.00000
887	887	1	0.00000	32.99335	135.34615	3.40000
888	888	1	0.00000	32.99335	135.34615	6.80000
889	889	1	0.00000	32.99335	135.34615	10.20000
890	890	1	0.00000	32.99335	135.34615	13.60000
891	891	1	0.00000	32.99335	135.34615	17.00000
892	892	1	0.00000	32.99335	135.34615	20.40000
893	893	1	0.00000	32.99335	135.34615	23.80000
894	894	1	0.00000	32.99335	135.34615	27.20000
895	895	1	0.00000	32.99335	135.34615	30.60000
896	896	1	0.00000	32.99335	135.34615	34.00000
897	897	1	0.00000	32.99335	135.34615	37.40000
898	898	1	0.00000	32.99335	135.34615	40.80000
899	899	1	0.00000	32.99335	135.34615	44.20000
900	900	1	0.00000	32.99335	135.34615	47.60000
901	901	1	0.00000	31.25686	132.33846	0.00000
902	902	1	0.00000	31.25686	132.33846	3.40000
903	903	1	0.00000	31.25686	132.33846	6.80000
904	904	1	0.00000	31.25686	132.33846	10.20000
905	905	1	0.00000	31.25686	132.33846	13.60000
906	906	1	0.00000	31.25686	132.33846	17.00000
907	907	1	0.00000	31.25686	132.33846	20.40000
908	908	1	0.00000	31.25686	132.33846	23.80000
909	909	1	0.00000	31.25686	132.33846	27.20000
910	910	1	0.00000	31.25686	132.33846	30.60000
911	911	1	0.00000	31.25686	132.33846	34.00000
912	912	1	0.00000	31.25686	132.33846	37.40000
913	913	1	0.00000	31.25686	132.33846	40.80000
914	914	1	0.00000	31.25686	132.33846	44.20000
915	915	1	0.00000	31.25686	132.33846	47.60000

916	916	1	0.00000	29.52036	129.33077	0.00000
917	917	1	0.00000	29.52036	129.33077	3.40000
918	918	1	0.00000	29.52036	129.33077	6.80000
919	919	1	0.00000	29.52036	129.33077	10.20000
920	920	1	0.00000	29.52036	129.33077	13.60000
921	921	1	0.00000	29.52036	129.33077	17.00000
922	922	1	0.00000	29.52036	129.33077	20.40000
923	923	1	0.00000	29.52036	129.33077	23.80000
924	924	1	0.00000	29.52036	129.33077	27.20000
925	925	1	0.00000	29.52036	129.33077	30.60000
926	926	1	0.00000	29.52036	129.33077	34.00000
927	927	1	0.00000	29.52036	129.33077	37.40000
928	928	1	0.00000	29.52036	129.33077	40.80000
929	929	1	0.00000	29.52036	129.33077	44.20000
930	930	1	0.00000	29.52036	129.33077	47.60000
931	931	1	0.00000	27.78387	126.32308	0.00000
932	932	1	0.00000	27.78387	126.32308	3.40000
933	933	1	0.00000	27.78387	126.32308	6.80000
934	934	1	0.00000	27.78387	126.32308	10.20000
935	935	1	0.00000	27.78387	126.32308	13.60000
936	936	1	0.00000	27.78387	126.32308	17.00000
937	937	1	0.00000	27.78387	126.32308	20.40000
938	938	1	0.00000	27.78387	126.32308	23.80000
939	939	1	0.00000	27.78387	126.32308	27.20000
940	940	1	0.00000	27.78387	126.32308	30.60000
941	941	1	0.00000	27.78387	126.32308	34.00000
942	942	1	0.00000	27.78387	126.32308	37.40000
943	943	1	0.00000	27.78387	126.32308	40.80000
944	944	1	0.00000	27.78387	126.32308	44.20000
945	945	1	0.00000	27.78387	126.32308	47.60000
946	946	1	0.00000	26.04738	123.31538	0.00000
947	947	1	0.00000	26.04738	123.31538	3.40000
948	948	1	0.00000	26.04738	123.31538	6.80000
949	949	1	0.00000	26.04738	123.31538	10.20000
950	950	1	0.00000	26.04738	123.31538	13.60000
951	951	1	0.00000	26.04738	123.31538	17.00000
952	952	1	0.00000	26.04738	123.31538	20.40000
953	953	1	0.00000	26.04738	123.31538	23.80000
954	954	1	0.00000	26.04738	123.31538	27.20000
955	955	1	0.00000	26.04738	123.31538	30.60000
956	956	1	0.00000	26.04738	123.31538	34.00000
957	957	1	0.00000	26.04738	123.31538	37.40000
958	958	1	0.00000	26.04738	123.31538	40.80000
959	959	1	0.00000	26.04738	123.31538	44.20000
960	960	1	0.00000	26.04738	123.31538	47.60000
961	961	1	0.00000	24.31089	120.30769	0.00000
962	962	1	0.00000	24.31089	120.30769	3.40000
963	963	1	0.00000	24.31089	120.30769	6.80000
964	964	1	0.00000	24.31089	120.30769	10.20000
965	965	1	0.00000	24.31089	120.30769	13.60000
966	966	1	0.00000	24.31089	120.30769	17.00000
967	967	1	0.00000	24.31089	120.30769	20.40000
968	968	1	0.00000	24.31089	120.30769	23.80000
969	969	1	0.00000	24.31089	120.30769	27.20000
970	970	1	0.00000	24.31089	120.30769	30.60000
971	971	1	0.00000	24.31089	120.30769	34.00000
972	972	1	0.00000	24.31089	120.30769	37.40000
973	973	1	0.00000	24.31089	120.30769	40.80000
974	974	1	0.00000	24.31089	120.30769	44.20000
975	975	1	0.00000	24.31089	120.30769	47.60000
976	976	1	0.00000	22.57440	117.30000	0.00000
977	977	1	0.00000	22.57440	117.30000	3.40000
978	978	1	0.00000	22.57440	117.30000	6.80000
979	979	1	0.00000	22.57440	117.30000	10.20000
980	980	1	0.00000	22.57440	117.30000	13.60000
981	981	1	0.00000	22.57440	117.30000	17.00000
982	982	1	0.00000	22.57440	117.30000	20.40000
983	983	1	0.00000	22.57440	117.30000	23.80000
984	984	1	0.00000	22.57440	117.30000	27.20000
985	985	1	0.00000	22.57440	117.30000	30.60000
986	986	1	0.00000	22.57440	117.30000	34.00000
987	987	1	0.00000	22.57440	117.30000	37.40000
988	988	1	0.00000	22.57440	117.30000	40.80000
989	989	1	0.00000	22.57440	117.30000	44.20000
990	990	1	0.00000	22.57440	117.30000	47.60000
991	991	1	0.00000	20.83790	114.29231	0.00000
992	992	1	0.00000	20.83790	114.29231	3.40000
993	993	1	0.00000	20.83790	114.29231	6.80000
994	994	1	0.00000	20.83790	114.29231	10.20000
995	995	1	0.00000	20.83790	114.29231	13.60000
996	996	1	0.00000	20.83790	114.29231	17.00000
997	997	1	0.00000	20.83790	114.29231	20.40000
998	998	1	0.00000	20.83790	114.29231	23.80000
999	999	1	0.00000	20.83790	114.29231	27.20000
1000	1000	1	0.00000	20.83790	114.29231	30.60000
1001	1001	1	0.00000	20.83790	114.29231	34.00000
1002	1002	1	0.00000	20.83790	114.29231	37.40000
1003	1003	1	0.00000	20.83790	114.29231	40.80000
1004	1004	1	0.00000	20.83790	114.29231	44.20000
1005	1005	1	0.00000	20.83790	114.29231	47.60000
1006	1006	1	0.00000	19.10141	111.28462	0.00000
1007	1007	1	0.00000	19.10141	111.28462	3.40000
1008	1008	1	0.00000	19.10141	111.28462	6.80000
1009	1009	1	0.00000	19.10141	111.28462	10.20000
1010	1010	1	0.00000	19.10141	111.28462	13.60000
1011	1011	1	0.00000	19.10141	111.28462	17.00000
1012	1012	1	0.00000	19.10141	111.28462	20.40000
1013	1013	1	0.00000	19.10141	111.28462	23.80000
1014	1014	1	0.00000	19.10141	111.28462	27.20000
1015	1015	1	0.00000	19.10141	111.28462	30.60000
1016	1016	1	0.00000	19.10141	111.28462	34.00000
1017	1017	1	0.00000	19.10141	111.28462	37.40000
1018	1018	1	0.00000	19.10141	111.28462	40.80000
1019	1019	1	0.00000	19.10141	111.28462	44.20000
1020	1020	1	0.00000	19.10141	111.28462	47.60000
1021	1021	1	0.00000	17.36492	108.27692	0.00000
1022	1022	1	0.00000	17.36492	108.27692	3.40000
1023	1023	1	0.00000	17.36492	108.27692	6.80000
1024	1024	1	0.00000	17.36492	108.27692	10.20000
1025	1025	1	0.00000	17.36492	108.27692	13.60000
1026	1026	1	0.00000	17.36492	108.27692	17.00000
1027	1027	1	0.00000	17.36492	108.27692	20.40000

1028	1028	1	0.00000	17.36492	108.27692	23.80000
1029	1029	1	0.00000	17.36492	108.27692	27.20000
1030	1030	1	0.00000	17.36492	108.27692	30.60000
1031	1031	1	0.00000	17.36492	108.27692	34.00000
1032	1032	1	0.00000	17.36492	108.27692	37.40000
1033	1033	1	0.00000	17.36492	108.27692	40.80000
1034	1034	1	0.00000	17.36492	108.27692	44.20000
1035	1035	1	0.00000	17.36492	108.27692	47.60000
1036	1036	1	0.00000	15.62843	105.26923	0.00000
1037	1037	1	0.00000	15.62843	105.26923	3.40000
1038	1038	1	0.00000	15.62843	105.26923	6.80000
1039	1039	1	0.00000	15.62843	105.26923	10.20000
1040	1040	1	0.00000	15.62843	105.26923	13.60000
1041	1041	1	0.00000	15.62843	105.26923	17.00000
1042	1042	1	0.00000	15.62843	105.26923	20.40000
1043	1043	1	0.00000	15.62843	105.26923	23.80000
1044	1044	1	0.00000	15.62843	105.26923	27.20000
1045	1045	1	0.00000	15.62843	105.26923	30.60000
1046	1046	1	0.00000	15.62843	105.26923	34.00000
1047	1047	1	0.00000	15.62843	105.26923	37.40000
1048	1048	1	0.00000	15.62843	105.26923	40.80000
1049	1049	1	0.00000	15.62843	105.26923	44.20000
1050	1050	1	0.00000	15.62843	105.26923	47.60000
1051	1051	1	0.00000	13.89194	102.26154	0.00000
1052	1052	1	0.00000	13.89194	102.26154	3.40000
1053	1053	1	0.00000	13.89194	102.26154	6.80000
1054	1054	1	0.00000	13.89194	102.26154	10.20000
1055	1055	1	0.00000	13.89194	102.26154	13.60000
1056	1056	1	0.00000	13.89194	102.26154	17.00000
1057	1057	1	0.00000	13.89194	102.26154	20.40000
1058	1058	1	0.00000	13.89194	102.26154	23.80000
1059	1059	1	0.00000	13.89194	102.26154	27.20000
1060	1060	1	0.00000	13.89194	102.26154	30.60000
1061	1061	1	0.00000	13.89194	102.26154	34.00000
1062	1062	1	0.00000	13.89194	102.26154	37.40000
1063	1063	1	0.00000	13.89194	102.26154	40.80000
1064	1064	1	0.00000	13.89194	102.26154	44.20000
1065	1065	1	0.00000	13.89194	102.26154	47.60000
1066	1066	1	0.00000	12.15544	99.25385	0.00000
1067	1067	1	0.00000	12.15544	99.25385	3.40000
1068	1068	1	0.00000	12.15544	99.25385	6.80000
1069	1069	1	0.00000	12.15544	99.25385	10.20000
1070	1070	1	0.00000	12.15544	99.25385	13.60000
1071	1071	1	0.00000	12.15544	99.25385	17.00000
1072	1072	1	0.00000	12.15544	99.25385	20.40000
1073	1073	1	0.00000	12.15544	99.25385	23.80000
1074	1074	1	0.00000	12.15544	99.25385	27.20000
1075	1075	1	0.00000	12.15544	99.25385	30.60000
1076	1076	1	0.00000	12.15544	99.25385	34.00000
1077	1077	1	0.00000	12.15544	99.25385	37.40000
1078	1078	1	0.00000	12.15544	99.25385	40.80000
1079	1079	1	0.00000	12.15544	99.25385	44.20000
1080	1080	1	0.00000	12.15544	99.25385	47.60000
1081	1081	1	0.00000	10.41895	96.24615	0.00000
1082	1082	1	0.00000	10.41895	96.24615	3.40000
1083	1083	1	0.00000	10.41895	96.24615	6.80000
1084	1084	1	0.00000	10.41895	96.24615	10.20000
1085	1085	1	0.00000	10.41895	96.24615	13.60000
1086	1086	1	0.00000	10.41895	96.24615	17.00000
1087	1087	1	0.00000	10.41895	96.24615	20.40000
1088	1088	1	0.00000	10.41895	96.24615	23.80000
1089	1089	1	0.00000	10.41895	96.24615	27.20000
1090	1090	1	0.00000	10.41895	96.24615	30.60000
1091	1091	1	0.00000	10.41895	96.24615	34.00000
1092	1092	1	0.00000	10.41895	96.24615	37.40000
1093	1093	1	0.00000	10.41895	96.24615	40.80000
1094	1094	1	0.00000	10.41895	96.24615	44.20000
1095	1095	1	0.00000	10.41895	96.24615	47.60000
1096	1096	1	0.00000	8.68246	93.23846	0.00000
1097	1097	1	0.00000	8.68246	93.23846	3.40000
1098	1098	1	0.00000	8.68246	93.23846	6.80000
1099	1099	1	0.00000	8.68246	93.23846	10.20000
1100	1100	1	0.00000	8.68246	93.23846	13.60000
1101	1101	1	0.00000	8.68246	93.23846	17.00000
1102	1102	1	0.00000	8.68246	93.23846	20.40000
1103	1103	1	0.00000	8.68246	93.23846	23.80000
1104	1104	1	0.00000	8.68246	93.23846	27.20000
1105	1105	1	0.00000	8.68246	93.23846	30.60000
1106	1106	1	0.00000	8.68246	93.23846	34.00000
1107	1107	1	0.00000	8.68246	93.23846	37.40000
1108	1108	1	0.00000	8.68246	93.23846	40.80000
1109	1109	1	0.00000	8.68246	93.23846	44.20000
1110	1110	1	0.00000	8.68246	93.23846	47.60000
1111	1111	1	0.00000	6.94597	90.23077	0.00000
1112	1112	1	0.00000	6.94597	90.23077	3.40000
1113	1113	1	0.00000	6.94597	90.23077	6.80000
1114	1114	1	0.00000	6.94597	90.23077	10.20000
1115	1115	1	0.00000	6.94597	90.23077	13.60000
1116	1116	1	0.00000	6.94597	90.23077	17.00000
1117	1117	1	0.00000	6.94597	90.23077	20.40000
1118	1118	1	0.00000	6.94597	90.23077	23.80000
1119	1119	1	0.00000	6.94597	90.23077	27.20000
1120	1120	1	0.00000	6.94597	90.23077	30.60000
1121	1121	1	0.00000	6.94597	90.23077	34.00000
1122	1122	1	0.00000	6.94597	90.23077	37.40000
1123	1123	1	0.00000	6.94597	90.23077	40.80000
1124	1124	1	0.00000	6.94597	90.23077	44.20000
1125	1125	1	0.00000	6.94597	90.23077	47.60000
1126	1126	1	0.00000	5.20948	87.22308	0.00000
1127	1127	1	0.00000	5.20948	87.22308	3.40000
1128	1128	1	0.00000	5.20948	87.22308	6.80000
1129	1129	1	0.00000	5.20948	87.22308	10.20000
1130	1130	1	0.00000	5.20948	87.22308	13.60000
1131	1131	1	0.00000	5.20948	87.22308	17.00000
1132	1132	1	0.00000	5.20948	87.22308	20.40000
1133	1133	1	0.00000	5.20948	87.22308	23.80000
1134	1134	1	0.00000	5.20948	87.22308	27.20000
1135	1135	1	0.00000	5.20948	87.22308	30.60000
1136	1136	1	0.00000	5.20948	87.22308	34.00000
1137	1137	1	0.00000	5.20948	87.22308	37.40000
1138	1138	1	0.00000	5.20948	87.22308	40.80000
1139	1139	1	0.00000	5.20948	87.22308	44.20000

1140	1140	1	0.00000	5.20948	87.22308	47.60000
1141	1141	1	0.00000	3.47298	84.21538	0.00000
1142	1142	1	0.00000	3.47298	84.21538	3.40000
1143	1143	1	0.00000	3.47298	84.21538	6.80000
1144	1144	1	0.00000	3.47298	84.21538	10.20000
1145	1145	1	0.00000	3.47298	84.21538	13.60000
1146	1146	1	0.00000	3.47298	84.21538	17.00000
1147	1147	1	0.00000	3.47298	84.21538	20.40000
1148	1148	1	0.00000	3.47298	84.21538	23.80000
1149	1149	1	0.00000	3.47298	84.21538	27.20000
1150	1150	1	0.00000	3.47298	84.21538	30.60000
1151	1151	1	0.00000	3.47298	84.21538	34.00000
1152	1152	1	0.00000	3.47298	84.21538	37.40000
1153	1153	1	0.00000	3.47298	84.21538	40.80000
1154	1154	1	0.00000	3.47298	84.21538	44.20000
1155	1155	1	0.00000	3.47298	84.21538	47.60000
1156	1156	1	0.00000	1.73649	81.20769	0.00000
1157	1157	1	0.00000	1.73649	81.20769	3.40000
1158	1158	1	0.00000	1.73649	81.20769	6.80000
1159	1159	1	0.00000	1.73649	81.20769	10.20000
1160	1160	1	0.00000	1.73649	81.20769	13.60000
1161	1161	1	0.00000	1.73649	81.20769	17.00000
1162	1162	1	0.00000	1.73649	81.20769	20.40000
1163	1163	1	0.00000	1.73649	81.20769	23.80000
1164	1164	1	0.00000	1.73649	81.20769	27.20000
1165	1165	1	0.00000	1.73649	81.20769	30.60000
1166	1166	1	0.00000	1.73649	81.20769	34.00000
1167	1167	1	0.00000	1.73649	81.20769	37.40000
1168	1168	1	0.00000	1.73649	81.20769	40.80000
1169	1169	1	0.00000	1.73649	81.20769	44.20000
1170	1170	1	0.00000	1.73649	81.20769	47.60000
1171	1171	1	0.00000	0.00000	78.20000	0.00000
1172	1172	1	0.00000	0.00000	78.20000	3.40000
1173	1173	1	0.00000	0.00000	78.20000	6.80000
1174	1174	1	0.00000	0.00000	78.20000	10.20000
1175	1175	1	0.00000	0.00000	78.20000	13.60000
1176	1176	1	0.00000	0.00000	78.20000	17.00000
1177	1177	1	0.00000	0.00000	78.20000	20.40000
1178	1178	1	0.00000	0.00000	78.20000	23.80000
1179	1179	1	0.00000	0.00000	78.20000	27.20000
1180	1180	1	0.00000	0.00000	78.20000	30.60000
1181	1181	1	0.00000	0.00000	78.20000	34.00000
1182	1182	1	0.00000	0.00000	78.20000	37.40000
1183	1183	1	0.00000	0.00000	78.20000	40.80000
1184	1184	1	0.00000	0.00000	78.20000	44.20000
1185	1185	1	0.00000	0.00000	78.20000	47.60000
1186	1186	1	0.00000	1.73649	75.19231	0.00000
1187	1187	1	0.00000	1.73649	75.19231	3.40000
1188	1188	1	0.00000	1.73649	75.19231	6.80000
1189	1189	1	0.00000	1.73649	75.19231	10.20000
1190	1190	1	0.00000	1.73649	75.19231	13.60000
1191	1191	1	0.00000	1.73649	75.19231	17.00000
1192	1192	1	0.00000	1.73649	75.19231	20.40000
1193	1193	1	0.00000	1.73649	75.19231	23.80000
1194	1194	1	0.00000	1.73649	75.19231	27.20000
1195	1195	1	0.00000	1.73649	75.19231	30.60000
1196	1196	1	0.00000	1.73649	75.19231	34.00000
1197	1197	1	0.00000	1.73649	75.19231	37.40000
1198	1198	1	0.00000	1.73649	75.19231	40.80000
1199	1199	1	0.00000	1.73649	75.19231	44.20000
1200	1200	1	0.00000	1.73649	75.19231	47.60000
1201	1201	1	0.00000	3.47298	72.18462	0.00000
1202	1202	1	0.00000	3.47298	72.18462	3.40000
1203	1203	1	0.00000	3.47298	72.18462	6.80000
1204	1204	1	0.00000	3.47298	72.18462	10.20000
1205	1205	1	0.00000	3.47298	72.18462	13.60000
1206	1206	1	0.00000	3.47298	72.18462	17.00000
1207	1207	1	0.00000	3.47298	72.18462	20.40000
1208	1208	1	0.00000	3.47298	72.18462	23.80000
1209	1209	1	0.00000	3.47298	72.18462	27.20000
1210	1210	1	0.00000	3.47298	72.18462	30.60000
1211	1211	1	0.00000	3.47298	72.18462	34.00000
1212	1212	1	0.00000	3.47298	72.18462	37.40000
1213	1213	1	0.00000	3.47298	72.18462	40.80000
1214	1214	1	0.00000	3.47298	72.18462	44.20000
1215	1215	1	0.00000	3.47298	72.18462	47.60000
1216	1216	1	0.00000	5.20948	69.17692	0.00000
1217	1217	1	0.00000	5.20948	69.17692	3.40000
1218	1218	1	0.00000	5.20948	69.17692	6.80000
1219	1219	1	0.00000	5.20948	69.17692	10.20000
1220	1220	1	0.00000	5.20948	69.17692	13.60000
1221	1221	1	0.00000	5.20948	69.17692	17.00000
1222	1222	1	0.00000	5.20948	69.17692	20.40000
1223	1223	1	0.00000	5.20948	69.17692	23.80000
1224	1224	1	0.00000	5.20948	69.17692	27.20000
1225	1225	1	0.00000	5.20948	69.17692	30.60000
1226	1226	1	0.00000	5.20948	69.17692	34.00000
1227	1227	1	0.00000	5.20948	69.17692	37.40000
1228	1228	1	0.00000	5.20948	69.17692	40.80000
1229	1229	1	0.00000	5.20948	69.17692	44.20000
1230	1230	1	0.00000	5.20948	69.17692	47.60000
1231	1231	1	0.00000	6.94597	66.16923	0.00000
1232	1232	1	0.00000	6.94597	66.16923	3.40000
1233	1233	1	0.00000	6.94597	66.16923	6.80000
1234	1234	1	0.00000	6.94597	66.16923	10.20000
1235	1235	1	0.00000	6.94597	66.16923	13.60000
1236	1236	1	0.00000	6.94597	66.16923	17.00000
1237	1237	1	0.00000	6.94597	66.16923	20.40000
1238	1238	1	0.00000	6.94597	66.16923	23.80000
1239	1239	1	0.00000	6.94597	66.16923	27.20000
1240	1240	1	0.00000	6.94597	66.16923	30.60000
1241	1241	1	0.00000	6.94597	66.16923	34.00000
1242	1242	1	0.00000	6.94597	66.16923	37.40000
1243	1243	1	0.00000	6.94597	66.16923	40.80000
1244	1244	1	0.00000	6.94597	66.16923	44.20000
1245	1245	1	0.00000	6.94597	66.16923	47.60000
1246	1246	1	0.00000	8.68246	63.16154	0.00000
1247	1247	1	0.00000	8.68246	63.16154	3.40000
1248	1248	1	0.00000	8.68246	63.16154	6.80000
1249	1249	1	0.00000	8.68246	63.16154	10.20000
1250	1250	1	0.00000	8.68246	63.16154	13.60000
1251	1251	1	0.00000	8.68246	63.16154	17.00000

1252	1252	1	0.00000	8.68246	63.16154	20.40000
1253	1253	1	0.00000	8.68246	63.16154	23.80000
1254	1254	1	0.00000	8.68246	63.16154	27.20000
1255	1255	1	0.00000	8.68246	63.16154	30.60000
1256	1256	1	0.00000	8.68246	63.16154	34.00000
1257	1257	1	0.00000	8.68246	63.16154	37.40000
1258	1258	1	0.00000	8.68246	63.16154	40.80000
1259	1259	1	0.00000	8.68246	63.16154	44.20000
1260	1260	1	0.00000	8.68246	63.16154	47.60000
1261	1261	1	0.00000	10.41895	60.15385	0.00000
1262	1262	1	0.00000	10.41895	60.15385	3.40000
1263	1263	1	0.00000	10.41895	60.15385	6.80000
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1265	1265	1	0.00000	10.41895	60.15385	13.60000
1266	1266	1	0.00000	10.41895	60.15385	17.00000
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1270	1270	1	0.00000	10.41895	60.15385	30.60000
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1272	1272	1	0.00000	10.41895	60.15385	37.40000
1273	1273	1	0.00000	10.41895	60.15385	40.80000
1274	1274	1	0.00000	10.41895	60.15385	44.20000
1275	1275	1	0.00000	10.41895	60.15385	47.60000
1276	1276	1	0.00000	12.15544	57.14615	0.00000
1277	1277	1	0.00000	12.15544	57.14615	3.40000
1278	1278	1	0.00000	12.15544	57.14615	6.80000
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1281	1281	1	0.00000	12.15544	57.14615	17.00000
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1286	1286	1	0.00000	12.15544	57.14615	34.00000
1287	1287	1	0.00000	12.15544	57.14615	37.40000
1288	1288	1	0.00000	12.15544	57.14615	40.80000
1289	1289	1	0.00000	12.15544	57.14615	44.20000
1290	1290	1	0.00000	12.15544	57.14615	47.60000
1291	1291	1	0.00000	13.89194	54.13846	0.00000
1292	1292	1	0.00000	13.89194	54.13846	3.40000
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1295	1295	1	0.00000	13.89194	54.13846	13.60000
1296	1296	1	0.00000	13.89194	54.13846	17.00000
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1298	1298	1	0.00000	13.89194	54.13846	23.80000
1299	1299	1	0.00000	13.89194	54.13846	27.20000
1300	1300	1	0.00000	13.89194	54.13846	30.60000
1301	1301	1	0.00000	13.89194	54.13846	34.00000
1302	1302	1	0.00000	13.89194	54.13846	37.40000
1303	1303	1	0.00000	13.89194	54.13846	40.80000
1304	1304	1	0.00000	13.89194	54.13846	44.20000
1305	1305	1	0.00000	13.89194	54.13846	47.60000
1306	1306	1	0.00000	15.62843	51.13077	0.00000
1307	1307	1	0.00000	15.62843	51.13077	3.40000
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1309	1309	1	0.00000	15.62843	51.13077	10.20000
1310	1310	1	0.00000	15.62843	51.13077	13.60000
1311	1311	1	0.00000	15.62843	51.13077	17.00000
1312	1312	1	0.00000	15.62843	51.13077	20.40000
1313	1313	1	0.00000	15.62843	51.13077	23.80000
1314	1314	1	0.00000	15.62843	51.13077	27.20000
1315	1315	1	0.00000	15.62843	51.13077	30.60000
1316	1316	1	0.00000	15.62843	51.13077	34.00000
1317	1317	1	0.00000	15.62843	51.13077	37.40000
1318	1318	1	0.00000	15.62843	51.13077	40.80000
1319	1319	1	0.00000	15.62843	51.13077	44.20000
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1321	1321	1	0.00000	17.36492	48.12308	0.00000
1322	1322	1	0.00000	17.36492	48.12308	3.40000
1323	1323	1	0.00000	17.36492	48.12308	6.80000
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1327	1327	1	0.00000	17.36492	48.12308	20.40000
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1333	1333	1	0.00000	17.36492	48.12308	40.80000
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1336	1336	1	0.00000	19.10141	45.11538	0.00000
1337	1337	1	0.00000	19.10141	45.11538	3.40000
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1341	1341	1	0.00000	19.10141	45.11538	17.00000
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1343	1343	1	0.00000	19.10141	45.11538	23.80000
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1348	1348	1	0.00000	19.10141	45.11538	40.80000
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1350	1350	1	0.00000	19.10141	45.11538	47.60000
1351	1351	1	0.00000	20.83790	42.10769	0.00000
1352	1352	1	0.00000	20.83790	42.10769	3.40000
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1362	1362	1	0.00000	20.83790	42.10769	37.40000
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1364	1364	1	0.00000	20.83790	42.10769	44.20000
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1366	1366	1	0.00000	22.57440	39.10000	0.00000
1367	1367	1	0.00000	22.57440	39.10000	3.40000
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1372	1372	1	0.00000	22.57440	39.10000	20.40000
1373	1373	1	0.00000	22.57440	39.10000	23.80000
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1377	1377	1	0.00000	22.57440	39.10000	37.40000
1378	1378	1	0.00000	22.57440	39.10000	40.80000
1379	1379	1	0.00000	22.57440	39.10000	44.20000
1380	1380	1	0.00000	22.57440	39.10000	47.60000
1381	1381	1	0.00000	24.31089	36.09231	0.00000
1382	1382	1	0.00000	24.31089	36.09231	3.40000
1383	1383	1	0.00000	24.31089	36.09231	6.80000
1384	1384	1	0.00000	24.31089	36.09231	10.20000
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1392	1392	1	0.00000	24.31089	36.09231	37.40000
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1396	1396	1	0.00000	26.04738	33.08462	0.00000
1397	1397	1	0.00000	26.04738	33.08462	3.40000
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1426	1426	1	0.00000	29.52036	27.06923	0.00000
1427	1427	1	0.00000	29.52036	27.06923	3.40000
1428	1428	1	0.00000	29.52036	27.06923	6.80000
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1432	1432	1	0.00000	29.52036	27.06923	20.40000
1433	1433	1	0.00000	29.52036	27.06923	23.80000
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1441	1441	1	0.00000	31.25686	24.06154	0.00000
1442	1442	1	0.00000	31.25686	24.06154	3.40000
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1456	1456	1	0.00000	32.99335	21.05385	0.00000
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1462	1462	1	0.00000	32.99335	21.05385	20.40000
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1467	1467	1	0.00000	32.99335	21.05385	37.40000
1468	1468	1	0.00000	32.99335	21.05385	40.80000
1469	1469	1	0.00000	32.99335	21.05385	44.20000
1470	1470	1	0.00000	32.99335	21.05385	47.60000
1471	1471	1	0.00000	34.72984	18.04615	0.00000
1472	1472	1	0.00000	34.72984	18.04615	3.40000
1473	1473	1	0.00000	34.72984	18.04615	6.80000
1474	1474	1	0.00000	34.72984	18.04615	10.20000
1475	1475	1	0.00000	34.72984	18.04615	13.60000

1476	1476	1	0.00000	34.72984	18.04615	17.00000
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1478	1478	1	0.00000	34.72984	18.04615	23.80000
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1481	1481	1	0.00000	34.72984	18.04615	34.00000
1482	1482	1	0.00000	34.72984	18.04615	37.40000
1483	1483	1	0.00000	34.72984	18.04615	40.80000
1484	1484	1	0.00000	34.72984	18.04615	44.20000
1485	1485	1	0.00000	34.72984	18.04615	47.60000
1486	1486	1	0.00000	36.46633	15.03846	0.00000
1487	1487	1	0.00000	36.46633	15.03846	3.40000
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1490	1490	1	0.00000	36.46633	15.03846	13.60000
1491	1491	1	0.00000	36.46633	15.03846	17.00000
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1495	1495	1	0.00000	36.46633	15.03846	30.60000
1496	1496	1	0.00000	36.46633	15.03846	34.00000
1497	1497	1	0.00000	36.46633	15.03846	37.40000
1498	1498	1	0.00000	36.46633	15.03846	40.80000
1499	1499	1	0.00000	36.46633	15.03846	44.20000
1500	1500	1	0.00000	36.46633	15.03846	47.60000
1501	1501	1	0.00000	38.20282	12.03077	0.00000
1502	1502	1	0.00000	38.20282	12.03077	3.40000
1503	1503	1	0.00000	38.20282	12.03077	6.80000
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1506	1506	1	0.00000	38.20282	12.03077	17.00000
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1508	1508	1	0.00000	38.20282	12.03077	23.80000
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1510	1510	1	0.00000	38.20282	12.03077	30.60000
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1512	1512	1	0.00000	38.20282	12.03077	37.40000
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1516	1516	1	0.00000	39.93932	9.02308	0.00000
1517	1517	1	0.00000	39.93932	9.02308	3.40000
1518	1518	1	0.00000	39.93932	9.02308	6.80000
1519	1519	1	0.00000	39.93932	9.02308	10.20000
1520	1520	1	0.00000	39.93932	9.02308	13.60000
1521	1521	1	0.00000	39.93932	9.02308	17.00000
1522	1522	1	0.00000	39.93932	9.02308	20.40000
1523	1523	1	0.00000	39.93932	9.02308	23.80000
1524	1524	1	0.00000	39.93932	9.02308	27.20000
1525	1525	1	0.00000	39.93932	9.02308	30.60000
1526	1526	1	0.00000	39.93932	9.02308	34.00000
1527	1527	1	0.00000	39.93932	9.02308	37.40000
1528	1528	1	0.00000	39.93932	9.02308	40.80000
1529	1529	1	0.00000	39.93932	9.02308	44.20000
1530	1530	1	0.00000	39.93932	9.02308	47.60000
1531	1531	1	0.00000	41.67581	6.01538	0.00000
1532	1532	1	0.00000	41.67581	6.01538	3.40000
1533	1533	1	0.00000	41.67581	6.01538	6.80000
1534	1534	1	0.00000	41.67581	6.01538	10.20000
1535	1535	1	0.00000	41.67581	6.01538	13.60000
1536	1536	1	0.00000	41.67581	6.01538	17.00000
1537	1537	1	0.00000	41.67581	6.01538	20.40000
1538	1538	1	0.00000	41.67581	6.01538	23.80000
1539	1539	1	0.00000	41.67581	6.01538	27.20000
1540	1540	1	0.00000	41.67581	6.01538	30.60000
1541	1541	1	0.00000	41.67581	6.01538	34.00000
1542	1542	1	0.00000	41.67581	6.01538	37.40000
1543	1543	1	0.00000	41.67581	6.01538	40.80000
1544	1544	1	0.00000	41.67581	6.01538	44.20000
1545	1545	1	0.00000	41.67581	6.01538	47.60000
1546	1546	1	0.00000	43.41230	3.00769	0.00000
1547	1547	1	0.00000	43.41230	3.00769	3.40000
1548	1548	1	0.00000	43.41230	3.00769	6.80000
1549	1549	1	0.00000	43.41230	3.00769	10.20000
1550	1550	1	0.00000	43.41230	3.00769	13.60000
1551	1551	1	0.00000	43.41230	3.00769	17.00000
1552	1552	1	0.00000	43.41230	3.00769	20.40000
1553	1553	1	0.00000	43.41230	3.00769	23.80000
1554	1554	1	0.00000	43.41230	3.00769	27.20000
1555	1555	1	0.00000	43.41230	3.00769	30.60000
1556	1556	1	0.00000	43.41230	3.00769	34.00000
1557	1557	1	0.00000	43.41230	3.00769	37.40000
1558	1558	1	0.00000	43.41230	3.00769	40.80000
1559	1559	1	0.00000	43.41230	3.00769	44.20000
1560	1560	1	0.00000	43.41230	3.00769	47.60000
1561	1561	1	0.00000	45.14879	0.00000	0.00000
1562	1562	1	0.00000	45.14879	0.00000	3.40000
1563	1563	1	0.00000	45.14879	0.00000	6.80000
1564	1564	1	0.00000	45.14879	0.00000	10.20000
1565	1565	1	0.00000	45.14879	0.00000	13.60000
1566	1566	1	0.00000	45.14879	0.00000	17.00000
1567	1567	1	0.00000	45.14879	0.00000	20.40000
1568	1568	1	0.00000	45.14879	0.00000	23.80000
1569	1569	1	0.00000	45.14879	0.00000	27.20000
1570	1570	1	0.00000	45.14879	0.00000	30.60000
1571	1571	1	0.00000	45.14879	0.00000	34.00000
1572	1572	1	0.00000	45.14879	0.00000	37.40000
1573	1573	1	0.00000	45.14879	0.00000	40.80000
1574	1574	1	0.00000	45.14879	0.00000	44.20000
1575	1575	1	0.00000	45.14879	0.00000	47.60000
1576	1576	1	0.00000	48.62177	0.00000	0.00000
1577	1577	1	0.00000	48.62177	0.00000	3.40000
1578	1578	1	0.00000	48.62177	0.00000	6.80000
1579	1579	1	0.00000	48.62177	0.00000	10.20000
1580	1580	1	0.00000	48.62177	0.00000	13.60000
1581	1581	1	0.00000	48.62177	0.00000	17.00000
1582	1582	1	0.00000	48.62177	0.00000	20.40000
1583	1583	1	0.00000	48.62177	0.00000	23.80000
1584	1584	1	0.00000	48.62177	0.00000	27.20000
1585	1585	1	0.00000	48.62177	0.00000	30.60000
1586	1586	1	0.00000	48.62177	0.00000	34.00000
1587	1587	1	0.00000	48.62177	0.00000	37.40000

1588	1588	1	0.00000	48.62177	0.00000	40.80000
1589	1589	1	0.00000	48.62177	0.00000	44.20000
1590	1590	1	0.00000	48.62177	0.00000	47.60000
1591	1591	1	0.00000	52.09476	0.00000	0.00000
1592	1592	1	0.00000	52.09476	0.00000	3.40000
1593	1593	1	0.00000	52.09476	0.00000	6.80000
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1595	1595	1	0.00000	52.09476	0.00000	13.60000
1596	1596	1	0.00000	52.09476	0.00000	17.00000
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1598	1598	1	0.00000	52.09476	0.00000	23.80000
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1600	1600	1	0.00000	52.09476	0.00000	30.60000
1601	1601	1	0.00000	52.09476	0.00000	34.00000
1602	1602	1	0.00000	52.09476	0.00000	37.40000
1603	1603	1	0.00000	52.09476	0.00000	40.80000
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1606	1606	1	0.00000	55.56774	0.00000	0.00000
1607	1607	1	0.00000	55.56774	0.00000	3.40000
1608	1608	1	0.00000	55.56774	0.00000	6.80000
1609	1609	1	0.00000	55.56774	0.00000	10.20000
1610	1610	1	0.00000	55.56774	0.00000	13.60000
1611	1611	1	0.00000	55.56774	0.00000	17.00000
1612	1612	1	0.00000	55.56774	0.00000	20.40000
1613	1613	1	0.00000	55.56774	0.00000	23.80000
1614	1614	1	0.00000	55.56774	0.00000	27.20000
1615	1615	1	0.00000	55.56774	0.00000	30.60000
1616	1616	1	0.00000	55.56774	0.00000	34.00000
1617	1617	1	0.00000	55.56774	0.00000	37.40000
1618	1618	1	0.00000	55.56774	0.00000	40.80000
1619	1619	1	0.00000	55.56774	0.00000	44.20000
1620	1620	1	0.00000	55.56774	0.00000	47.60000
1621	1621	1	0.00000	59.04073	0.00000	0.00000
1622	1622	1	0.00000	59.04073	0.00000	3.40000
1623	1623	1	0.00000	59.04073	0.00000	6.80000
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1625	1625	1	0.00000	59.04073	0.00000	13.60000
1626	1626	1	0.00000	59.04073	0.00000	17.00000
1627	1627	1	0.00000	59.04073	0.00000	20.40000
1628	1628	1	0.00000	59.04073	0.00000	23.80000
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1630	1630	1	0.00000	59.04073	0.00000	30.60000
1631	1631	1	0.00000	59.04073	0.00000	34.00000
1632	1632	1	0.00000	59.04073	0.00000	37.40000
1633	1633	1	0.00000	59.04073	0.00000	40.80000
1634	1634	1	0.00000	59.04073	0.00000	44.20000
1635	1635	1	0.00000	59.04073	0.00000	47.60000
1636	1636	1	0.00000	62.51371	0.00000	0.00000
1637	1637	1	0.00000	62.51371	0.00000	3.40000
1638	1638	1	0.00000	62.51371	0.00000	6.80000
1639	1639	1	0.00000	62.51371	0.00000	10.20000
1640	1640	1	0.00000	62.51371	0.00000	13.60000
1641	1641	1	0.00000	62.51371	0.00000	17.00000
1642	1642	1	0.00000	62.51371	0.00000	20.40000
1643	1643	1	0.00000	62.51371	0.00000	23.80000
1644	1644	1	0.00000	62.51371	0.00000	27.20000
1645	1645	1	0.00000	62.51371	0.00000	30.60000
1646	1646	1	0.00000	62.51371	0.00000	34.00000
1647	1647	1	0.00000	62.51371	0.00000	37.40000
1648	1648	1	0.00000	62.51371	0.00000	40.80000
1649	1649	1	0.00000	62.51371	0.00000	44.20000
1650	1650	1	0.00000	62.51371	0.00000	47.60000
1651	1651	1	0.00000	65.98669	0.00000	0.00000
1652	1652	1	0.00000	65.98669	0.00000	3.40000
1653	1653	1	0.00000	65.98669	0.00000	6.80000
1654	1654	1	0.00000	65.98669	0.00000	10.20000
1655	1655	1	0.00000	65.98669	0.00000	13.60000
1656	1656	1	0.00000	65.98669	0.00000	17.00000
1657	1657	1	0.00000	65.98669	0.00000	20.40000
1658	1658	1	0.00000	65.98669	0.00000	23.80000
1659	1659	1	0.00000	65.98669	0.00000	27.20000
1660	1660	1	0.00000	65.98669	0.00000	30.60000
1661	1661	1	0.00000	65.98669	0.00000	34.00000
1662	1662	1	0.00000	65.98669	0.00000	37.40000
1663	1663	1	0.00000	65.98669	0.00000	40.80000
1664	1664	1	0.00000	65.98669	0.00000	44.20000
1665	1665	1	0.00000	65.98669	0.00000	47.60000
1666	1666	1	0.00000	69.45968	0.00000	0.00000
1667	1667	1	0.00000	69.45968	0.00000	3.40000
1668	1668	1	0.00000	69.45968	0.00000	6.80000
1669	1669	1	0.00000	69.45968	0.00000	10.20000
1670	1670	1	0.00000	69.45968	0.00000	13.60000
1671	1671	1	0.00000	69.45968	0.00000	17.00000
1672	1672	1	0.00000	69.45968	0.00000	20.40000
1673	1673	1	0.00000	69.45968	0.00000	23.80000
1674	1674	1	0.00000	69.45968	0.00000	27.20000
1675	1675	1	0.00000	69.45968	0.00000	30.60000
1676	1676	1	0.00000	69.45968	0.00000	34.00000
1677	1677	1	0.00000	69.45968	0.00000	37.40000
1678	1678	1	0.00000	69.45968	0.00000	40.80000
1679	1679	1	0.00000	69.45968	0.00000	44.20000
1680	1680	1	0.00000	69.45968	0.00000	47.60000
1681	1681	1	0.00000	72.93266	0.00000	0.00000
1682	1682	1	0.00000	72.93266	0.00000	3.40000
1683	1683	1	0.00000	72.93266	0.00000	6.80000
1684	1684	1	0.00000	72.93266	0.00000	10.20000
1685	1685	1	0.00000	72.93266	0.00000	13.60000
1686	1686	1	0.00000	72.93266	0.00000	17.00000
1687	1687	1	0.00000	72.93266	0.00000	20.40000
1688	1688	1	0.00000	72.93266	0.00000	23.80000
1689	1689	1	0.00000	72.93266	0.00000	27.20000
1690	1690	1	0.00000	72.93266	0.00000	30.60000
1691	1691	1	0.00000	72.93266	0.00000	34.00000
1692	1692	1	0.00000	72.93266	0.00000	37.40000
1693	1693	1	0.00000	72.93266	0.00000	40.80000
1694	1694	1	0.00000	72.93266	0.00000	44.20000
1695	1695	1	0.00000	72.93266	0.00000	47.60000
1696	1696	1	0.00000	76.40565	0.00000	0.00000
1697	1697	1	0.00000	76.40565	0.00000	3.40000
1698	1698	1	0.00000	76.40565	0.00000	6.80000
1699	1699	1	0.00000	76.40565	0.00000	10.20000

1700	1700	1	0.00000	76.40565	0.00000	13.60000
1701	1701	1	0.00000	76.40565	0.00000	17.00000
1702	1702	1	0.00000	76.40565	0.00000	20.40000
1703	1703	1	0.00000	76.40565	0.00000	23.80000
1704	1704	1	0.00000	76.40565	0.00000	27.20000
1705	1705	1	0.00000	76.40565	0.00000	30.60000
1706	1706	1	0.00000	76.40565	0.00000	34.00000
1707	1707	1	0.00000	76.40565	0.00000	37.40000
1708	1708	1	0.00000	76.40565	0.00000	40.80000
1709	1709	1	0.00000	76.40565	0.00000	44.20000
1710	1710	1	0.00000	76.40565	0.00000	47.60000
1711	1711	1	0.00000	79.87863	0.00000	0.00000
1712	1712	1	0.00000	79.87863	0.00000	3.40000
1713	1713	1	0.00000	79.87863	0.00000	6.80000
1714	1714	1	0.00000	79.87863	0.00000	10.20000
1715	1715	1	0.00000	79.87863	0.00000	13.60000
1716	1716	1	0.00000	79.87863	0.00000	17.00000
1717	1717	1	0.00000	79.87863	0.00000	20.40000
1718	1718	1	0.00000	79.87863	0.00000	23.80000
1719	1719	1	0.00000	79.87863	0.00000	27.20000
1720	1720	1	0.00000	79.87863	0.00000	30.60000
1721	1721	1	0.00000	79.87863	0.00000	34.00000
1722	1722	1	0.00000	79.87863	0.00000	37.40000
1723	1723	1	0.00000	79.87863	0.00000	40.80000
1724	1724	1	0.00000	79.87863	0.00000	44.20000
1725	1725	1	0.00000	79.87863	0.00000	47.60000
1726	1726	1	0.00000	83.35161	0.00000	0.00000
1727	1727	1	0.00000	83.35161	0.00000	3.40000
1728	1728	1	0.00000	83.35161	0.00000	6.80000
1729	1729	1	0.00000	83.35161	0.00000	10.20000
1730	1730	1	0.00000	83.35161	0.00000	13.60000
1731	1731	1	0.00000	83.35161	0.00000	17.00000
1732	1732	1	0.00000	83.35161	0.00000	20.40000
1733	1733	1	0.00000	83.35161	0.00000	23.80000
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1735	1735	1	0.00000	83.35161	0.00000	30.60000
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1737	1737	1	0.00000	83.35161	0.00000	37.40000
1738	1738	1	0.00000	83.35161	0.00000	40.80000
1739	1739	1	0.00000	83.35161	0.00000	44.20000
1740	1740	1	0.00000	83.35161	0.00000	47.60000
1741	1741	1	0.00000	86.82460	0.00000	0.00000
1742	1742	1	0.00000	86.82460	0.00000	3.40000
1743	1743	1	0.00000	86.82460	0.00000	6.80000
1744	1744	1	0.00000	86.82460	0.00000	10.20000
1745	1745	1	0.00000	86.82460	0.00000	13.60000
1746	1746	1	0.00000	86.82460	0.00000	17.00000
1747	1747	1	0.00000	86.82460	0.00000	20.40000
1748	1748	1	0.00000	86.82460	0.00000	23.80000
1749	1749	1	0.00000	86.82460	0.00000	27.20000
1750	1750	1	0.00000	86.82460	0.00000	30.60000
1751	1751	1	0.00000	86.82460	0.00000	34.00000
1752	1752	1	0.00000	86.82460	0.00000	37.40000
1753	1753	1	0.00000	86.82460	0.00000	40.80000
1754	1754	1	0.00000	86.82460	0.00000	44.20000
1755	1755	1	0.00000	86.82460	0.00000	47.60000
1756	1756	1	0.00000	90.29758	0.00000	0.00000
1757	1757	1	0.00000	90.29758	0.00000	3.40000
1758	1758	1	0.00000	90.29758	0.00000	6.80000
1759	1759	1	0.00000	90.29758	0.00000	10.20000
1760	1760	1	0.00000	90.29758	0.00000	13.60000
1761	1761	1	0.00000	90.29758	0.00000	17.00000
1762	1762	1	0.00000	90.29758	0.00000	20.40000
1763	1763	1	0.00000	90.29758	0.00000	23.80000
1764	1764	1	0.00000	90.29758	0.00000	27.20000
1765	1765	1	0.00000	90.29758	0.00000	30.60000
1766	1766	1	0.00000	90.29758	0.00000	34.00000
1767	1767	1	0.00000	90.29758	0.00000	37.40000
1768	1768	1	0.00000	90.29758	0.00000	40.80000
1769	1769	1	0.00000	90.29758	0.00000	44.20000
1770	1770	1	0.00000	90.29758	0.00000	47.60000
1771	1771	1	0.00000	93.77057	0.00000	0.00000
1772	1772	1	0.00000	93.77057	0.00000	3.40000
1773	1773	1	0.00000	93.77057	0.00000	6.80000
1774	1774	1	0.00000	93.77057	0.00000	10.20000
1775	1775	1	0.00000	93.77057	0.00000	13.60000
1776	1776	1	0.00000	93.77057	0.00000	17.00000
1777	1777	1	0.00000	93.77057	0.00000	20.40000
1778	1778	1	0.00000	93.77057	0.00000	23.80000
1779	1779	1	0.00000	93.77057	0.00000	27.20000
1780	1780	1	0.00000	93.77057	0.00000	30.60000
1781	1781	1	0.00000	93.77057	0.00000	34.00000
1782	1782	1	0.00000	93.77057	0.00000	37.40000
1783	1783	1	0.00000	93.77057	0.00000	40.80000
1784	1784	1	0.00000	93.77057	0.00000	44.20000
1785	1785	1	0.00000	93.77057	0.00000	47.60000
1786	1786	1	0.00000	97.24355	0.00000	0.00000
1787	1787	1	0.00000	97.24355	0.00000	3.40000
1788	1788	1	0.00000	97.24355	0.00000	6.80000
1789	1789	1	0.00000	97.24355	0.00000	10.20000
1790	1790	1	0.00000	97.24355	0.00000	13.60000
1791	1791	1	0.00000	97.24355	0.00000	17.00000
1792	1792	1	0.00000	97.24355	0.00000	20.40000
1793	1793	1	0.00000	97.24355	0.00000	23.80000
1794	1794	1	0.00000	97.24355	0.00000	27.20000
1795	1795	1	0.00000	97.24355	0.00000	30.60000
1796	1796	1	0.00000	97.24355	0.00000	34.00000
1797	1797	1	0.00000	97.24355	0.00000	37.40000
1798	1798	1	0.00000	97.24355	0.00000	40.80000
1799	1799	1	0.00000	97.24355	0.00000	44.20000
1800	1800	1	0.00000	97.24355	0.00000	47.60000
1801	1801	1	0.00000	100.71653	0.00000	0.00000
1802	1802	1	0.00000	100.71653	0.00000	3.40000
1803	1803	1	0.00000	100.71653	0.00000	6.80000
1804	1804	1	0.00000	100.71653	0.00000	10.20000
1805	1805	1	0.00000	100.71653	0.00000	13.60000
1806	1806	1	0.00000	100.71653	0.00000	17.00000
1807	1807	1	0.00000	100.71653	0.00000	20.40000
1808	1808	1	0.00000	100.71653	0.00000	23.80000
1809	1809	1	0.00000	100.71653	0.00000	27.20000
1810	1810	1	0.00000	100.71653	0.00000	30.60000
1811	1811	1	0.00000	100.71653	0.00000	34.00000

1812	1812	1	0.00000	100.71653	0.00000	37.40000
1813	1813	1	0.00000	100.71653	0.00000	40.80000
1814	1814	1	0.00000	100.71653	0.00000	44.20000
1815	1815	1	0.00000	100.71653	0.00000	47.60000
1816	1816	1	0.00000	104.18952	0.00000	0.00000
1817	1817	1	0.00000	104.18952	0.00000	3.40000
1818	1818	1	0.00000	104.18952	0.00000	6.80000
1819	1819	1	0.00000	104.18952	0.00000	10.20000
1820	1820	1	0.00000	104.18952	0.00000	13.60000
1821	1821	1	0.00000	104.18952	0.00000	17.00000
1822	1822	1	0.00000	104.18952	0.00000	20.40000
1823	1823	1	0.00000	104.18952	0.00000	23.80000
1824	1824	1	0.00000	104.18952	0.00000	27.20000
1825	1825	1	0.00000	104.18952	0.00000	30.60000
1826	1826	1	0.00000	104.18952	0.00000	34.00000
1827	1827	1	0.00000	104.18952	0.00000	37.40000
1828	1828	1	0.00000	104.18952	0.00000	40.80000
1829	1829	1	0.00000	104.18952	0.00000	44.20000
1830	1830	1	0.00000	104.18952	0.00000	47.60000
1831	1831	1	0.00000	107.66250	0.00000	0.00000
1832	1832	1	0.00000	107.66250	0.00000	3.40000
1833	1833	1	0.00000	107.66250	0.00000	6.80000
1834	1834	1	0.00000	107.66250	0.00000	10.20000
1835	1835	1	0.00000	107.66250	0.00000	13.60000
1836	1836	1	0.00000	107.66250	0.00000	17.00000
1837	1837	1	0.00000	107.66250	0.00000	20.40000
1838	1838	1	0.00000	107.66250	0.00000	23.80000
1839	1839	1	0.00000	107.66250	0.00000	27.20000
1840	1840	1	0.00000	107.66250	0.00000	30.60000
1841	1841	1	0.00000	107.66250	0.00000	34.00000
1842	1842	1	0.00000	107.66250	0.00000	37.40000
1843	1843	1	0.00000	107.66250	0.00000	40.80000
1844	1844	1	0.00000	107.66250	0.00000	44.20000
1845	1845	1	0.00000	107.66250	0.00000	47.60000
1846	1846	1	0.00000	111.13549	0.00000	0.00000
1847	1847	1	0.00000	111.13549	0.00000	3.40000
1848	1848	1	0.00000	111.13549	0.00000	6.80000
1849	1849	1	0.00000	111.13549	0.00000	10.20000
1850	1850	1	0.00000	111.13549	0.00000	13.60000
1851	1851	1	0.00000	111.13549	0.00000	17.00000
1852	1852	1	0.00000	111.13549	0.00000	20.40000
1853	1853	1	0.00000	111.13549	0.00000	23.80000
1854	1854	1	0.00000	111.13549	0.00000	27.20000
1855	1855	1	0.00000	111.13549	0.00000	30.60000
1856	1856	1	0.00000	111.13549	0.00000	34.00000
1857	1857	1	0.00000	111.13549	0.00000	37.40000
1858	1858	1	0.00000	111.13549	0.00000	40.80000
1859	1859	1	0.00000	111.13549	0.00000	44.20000
1860	1860	1	0.00000	111.13549	0.00000	47.60000
1861	1861	1	0.00000	114.60847	0.00000	0.00000
1862	1862	1	0.00000	114.60847	0.00000	3.40000
1863	1863	1	0.00000	114.60847	0.00000	6.80000
1864	1864	1	0.00000	114.60847	0.00000	10.20000
1865	1865	1	0.00000	114.60847	0.00000	13.60000
1866	1866	1	0.00000	114.60847	0.00000	17.00000
1867	1867	1	0.00000	114.60847	0.00000	20.40000
1868	1868	1	0.00000	114.60847	0.00000	23.80000
1869	1869	1	0.00000	114.60847	0.00000	27.20000
1870	1870	1	0.00000	114.60847	0.00000	30.60000
1871	1871	1	0.00000	114.60847	0.00000	34.00000
1872	1872	1	0.00000	114.60847	0.00000	37.40000
1873	1873	1	0.00000	114.60847	0.00000	40.80000
1874	1874	1	0.00000	114.60847	0.00000	44.20000
1875	1875	1	0.00000	114.60847	0.00000	47.60000
1876	1876	1	0.00000	118.08145	0.00000	0.00000
1877	1877	1	0.00000	118.08145	0.00000	3.40000
1878	1878	1	0.00000	118.08145	0.00000	6.80000
1879	1879	1	0.00000	118.08145	0.00000	10.20000
1880	1880	1	0.00000	118.08145	0.00000	13.60000
1881	1881	1	0.00000	118.08145	0.00000	17.00000
1882	1882	1	0.00000	118.08145	0.00000	20.40000
1883	1883	1	0.00000	118.08145	0.00000	23.80000
1884	1884	1	0.00000	118.08145	0.00000	27.20000
1885	1885	1	0.00000	118.08145	0.00000	30.60000
1886	1886	1	0.00000	118.08145	0.00000	34.00000
1887	1887	1	0.00000	118.08145	0.00000	37.40000
1888	1888	1	0.00000	118.08145	0.00000	40.80000
1889	1889	1	0.00000	118.08145	0.00000	44.20000
1890	1890	1	0.00000	118.08145	0.00000	47.60000
1891	1891	1	0.00000	121.55444	0.00000	0.00000
1892	1892	1	0.00000	121.55444	0.00000	3.40000
1893	1893	1	0.00000	121.55444	0.00000	6.80000
1894	1894	1	0.00000	121.55444	0.00000	10.20000
1895	1895	1	0.00000	121.55444	0.00000	13.60000
1896	1896	1	0.00000	121.55444	0.00000	17.00000
1897	1897	1	0.00000	121.55444	0.00000	20.40000
1898	1898	1	0.00000	121.55444	0.00000	23.80000
1899	1899	1	0.00000	121.55444	0.00000	27.20000
1900	1900	1	0.00000	121.55444	0.00000	30.60000
1901	1901	1	0.00000	121.55444	0.00000	34.00000
1902	1902	1	0.00000	121.55444	0.00000	37.40000
1903	1903	1	0.00000	121.55444	0.00000	40.80000
1904	1904	1	0.00000	121.55444	0.00000	44.20000
1905	1905	1	0.00000	121.55444	0.00000	47.60000
1906	1906	1	0.00000	125.02742	0.00000	0.00000
1907	1907	1	0.00000	125.02742	0.00000	3.40000
1908	1908	1	0.00000	125.02742	0.00000	6.80000
1909	1909	1	0.00000	125.02742	0.00000	10.20000
1910	1910	1	0.00000	125.02742	0.00000	13.60000
1911	1911	1	0.00000	125.02742	0.00000	17.00000
1912	1912	1	0.00000	125.02742	0.00000	20.40000
1913	1913	1	0.00000	125.02742	0.00000	23.80000
1914	1914	1	0.00000	125.02742	0.00000	27.20000
1915	1915	1	0.00000	125.02742	0.00000	30.60000
1916	1916	1	0.00000	125.02742	0.00000	34.00000
1917	1917	1	0.00000	125.02742	0.00000	37.40000
1918	1918	1	0.00000	125.02742	0.00000	40.80000
1919	1919	1	0.00000	125.02742	0.00000	44.20000
1920	1920	1	0.00000	125.02742	0.00000	47.60000
1921	1921	1	0.00000	128.50041	0.00000	0.00000
1922	1922	1	0.00000	128.50041	0.00000	3.40000
1923	1923	1	0.00000	128.50041	0.00000	6.80000

1924	1924	1	0.00000	128.50041	0.00000	10.20000
1925	1925	1	0.00000	128.50041	0.00000	13.60000
1926	1926	1	0.00000	128.50041	0.00000	17.00000
1927	1927	1	0.00000	128.50041	0.00000	20.40000
1928	1928	1	0.00000	128.50041	0.00000	23.80000
1929	1929	1	0.00000	128.50041	0.00000	27.20000
1930	1930	1	0.00000	128.50041	0.00000	30.60000
1931	1931	1	0.00000	128.50041	0.00000	34.00000
1932	1932	1	0.00000	128.50041	0.00000	37.40000
1933	1933	1	0.00000	128.50041	0.00000	40.80000
1934	1934	1	0.00000	128.50041	0.00000	44.20000
1935	1935	1	0.00000	128.50041	0.00000	47.60000
1936	1936	1	0.00000	131.97339	0.00000	0.00000
1937	1937	1	0.00000	131.97339	0.00000	3.40000
1938	1938	1	0.00000	131.97339	0.00000	6.80000
1939	1939	1	0.00000	131.97339	0.00000	10.20000
1940	1940	1	0.00000	131.97339	0.00000	13.60000
1941	1941	1	0.00000	131.97339	0.00000	17.00000
1942	1942	1	0.00000	131.97339	0.00000	20.40000
1943	1943	1	0.00000	131.97339	0.00000	23.80000
1944	1944	1	0.00000	131.97339	0.00000	27.20000
1945	1945	1	0.00000	131.97339	0.00000	30.60000
1946	1946	1	0.00000	131.97339	0.00000	34.00000
1947	1947	1	0.00000	131.97339	0.00000	37.40000
1948	1948	1	0.00000	131.97339	0.00000	40.80000
1949	1949	1	0.00000	131.97339	0.00000	44.20000
1950	1950	1	0.00000	131.97339	0.00000	47.60000
1951	1951	1	0.00000	135.44637	0.00000	0.00000
1952	1952	1	0.00000	135.44637	0.00000	3.40000
1953	1953	1	0.00000	135.44637	0.00000	6.80000
1954	1954	1	0.00000	135.44637	0.00000	10.20000
1955	1955	1	0.00000	135.44637	0.00000	13.60000
1956	1956	1	0.00000	135.44637	0.00000	17.00000
1957	1957	1	0.00000	135.44637	0.00000	20.40000
1958	1958	1	0.00000	135.44637	0.00000	23.80000
1959	1959	1	0.00000	135.44637	0.00000	27.20000
1960	1960	1	0.00000	135.44637	0.00000	30.60000
1961	1961	1	0.00000	135.44637	0.00000	34.00000
1962	1962	1	0.00000	135.44637	0.00000	37.40000
1963	1963	1	0.00000	135.44637	0.00000	40.80000
1964	1964	1	0.00000	135.44637	0.00000	44.20000
1965	1965	1	0.00000	135.44637	0.00000	47.60000
1966	1966	1	0.00000	137.18287	3.00769	0.00000
1967	1967	1	0.00000	137.18287	3.00769	3.40000
1968	1968	1	0.00000	137.18287	3.00769	6.80000
1969	1969	1	0.00000	137.18287	3.00769	10.20000
1970	1970	1	0.00000	137.18287	3.00769	13.60000
1971	1971	1	0.00000	137.18287	3.00769	17.00000
1972	1972	1	0.00000	137.18287	3.00769	20.40000
1973	1973	1	0.00000	137.18287	3.00769	23.80000
1974	1974	1	0.00000	137.18287	3.00769	27.20000
1975	1975	1	0.00000	137.18287	3.00769	30.60000
1976	1976	1	0.00000	137.18287	3.00769	34.00000
1977	1977	1	0.00000	137.18287	3.00769	37.40000
1978	1978	1	0.00000	137.18287	3.00769	40.80000
1979	1979	1	0.00000	137.18287	3.00769	44.20000
1980	1980	1	0.00000	137.18287	3.00769	47.60000
1981	1981	1	0.00000	138.91936	6.01538	0.00000
1982	1982	1	0.00000	138.91936	6.01538	3.40000
1983	1983	1	0.00000	138.91936	6.01538	6.80000
1984	1984	1	0.00000	138.91936	6.01538	10.20000
1985	1985	1	0.00000	138.91936	6.01538	13.60000
1986	1986	1	0.00000	138.91936	6.01538	17.00000
1987	1987	1	0.00000	138.91936	6.01538	20.40000
1988	1988	1	0.00000	138.91936	6.01538	23.80000
1989	1989	1	0.00000	138.91936	6.01538	27.20000
1990	1990	1	0.00000	138.91936	6.01538	30.60000
1991	1991	1	0.00000	138.91936	6.01538	34.00000
1992	1992	1	0.00000	138.91936	6.01538	37.40000
1993	1993	1	0.00000	138.91936	6.01538	40.80000
1994	1994	1	0.00000	138.91936	6.01538	44.20000
1995	1995	1	0.00000	138.91936	6.01538	47.60000
1996	1996	1	0.00000	140.65585	9.02308	0.00000
1997	1997	1	0.00000	140.65585	9.02308	3.40000
1998	1998	1	0.00000	140.65585	9.02308	6.80000
1999	1999	1	0.00000	140.65585	9.02308	10.20000
2000	2000	1	0.00000	140.65585	9.02308	13.60000
2001	2001	1	0.00000	140.65585	9.02308	17.00000
2002	2002	1	0.00000	140.65585	9.02308	20.40000
2003	2003	1	0.00000	140.65585	9.02308	23.80000
2004	2004	1	0.00000	140.65585	9.02308	27.20000
2005	2005	1	0.00000	140.65585	9.02308	30.60000
2006	2006	1	0.00000	140.65585	9.02308	34.00000
2007	2007	1	0.00000	140.65585	9.02308	37.40000
2008	2008	1	0.00000	140.65585	9.02308	40.80000
2009	2009	1	0.00000	140.65585	9.02308	44.20000
2010	2010	1	0.00000	140.65585	9.02308	47.60000
2011	2011	1	0.00000	142.39234	12.03077	0.00000
2012	2012	1	0.00000	142.39234	12.03077	3.40000
2013	2013	1	0.00000	142.39234	12.03077	6.80000
2014	2014	1	0.00000	142.39234	12.03077	10.20000
2015	2015	1	0.00000	142.39234	12.03077	13.60000
2016	2016	1	0.00000	142.39234	12.03077	17.00000
2017	2017	1	0.00000	142.39234	12.03077	20.40000
2018	2018	1	0.00000	142.39234	12.03077	23.80000
2019	2019	1	0.00000	142.39234	12.03077	27.20000
2020	2020	1	0.00000	142.39234	12.03077	30.60000
2021	2021	1	0.00000	142.39234	12.03077	34.00000
2022	2022	1	0.00000	142.39234	12.03077	37.40000
2023	2023	1	0.00000	142.39234	12.03077	40.80000
2024	2024	1	0.00000	142.39234	12.03077	44.20000
2025	2025	1	0.00000	142.39234	12.03077	47.60000
2026	2026	1	0.00000	144.12883	15.03846	0.00000
2027	2027	1	0.00000	144.12883	15.03846	3.40000
2028	2028	1	0.00000	144.12883	15.03846	6.80000
2029	2029	1	0.00000	144.12883	15.03846	10.20000
2030	2030	1	0.00000	144.12883	15.03846	13.60000
2031	2031	1	0.00000	144.12883	15.03846	17.00000
2032	2032	1	0.00000	144.12883	15.03846	20.40000
2033	2033	1	0.00000	144.12883	15.03846	23.80000
2034	2034	1	0.00000	144.12883	15.03846	27.20000
2035	2035	1	0.00000	144.12883	15.03846	30.60000

2036	2036	1	0.00000	144.12883	15.03846	34.00000
2037	2037	1	0.00000	144.12883	15.03846	37.40000
2038	2038	1	0.00000	144.12883	15.03846	40.80000
2039	2039	1	0.00000	144.12883	15.03846	44.20000
2040	2040	1	0.00000	144.12883	15.03846	47.60000
2041	2041	1	0.00000	145.86532	18.04615	0.00000
2042	2042	1	0.00000	145.86532	18.04615	3.40000
2043	2043	1	0.00000	145.86532	18.04615	6.80000
2044	2044	1	0.00000	145.86532	18.04615	10.20000
2045	2045	1	0.00000	145.86532	18.04615	13.60000
2046	2046	1	0.00000	145.86532	18.04615	17.00000
2047	2047	1	0.00000	145.86532	18.04615	20.40000
2048	2048	1	0.00000	145.86532	18.04615	23.80000
2049	2049	1	0.00000	145.86532	18.04615	27.20000
2050	2050	1	0.00000	145.86532	18.04615	30.60000
2051	2051	1	0.00000	145.86532	18.04615	34.00000
2052	2052	1	0.00000	145.86532	18.04615	37.40000
2053	2053	1	0.00000	145.86532	18.04615	40.80000
2054	2054	1	0.00000	145.86532	18.04615	44.20000
2055	2055	1	0.00000	145.86532	18.04615	47.60000
2056	2056	1	0.00000	147.60182	21.05385	0.00000
2057	2057	1	0.00000	147.60182	21.05385	3.40000
2058	2058	1	0.00000	147.60182	21.05385	6.80000
2059	2059	1	0.00000	147.60182	21.05385	10.20000
2060	2060	1	0.00000	147.60182	21.05385	13.60000
2061	2061	1	0.00000	147.60182	21.05385	17.00000
2062	2062	1	0.00000	147.60182	21.05385	20.40000
2063	2063	1	0.00000	147.60182	21.05385	23.80000
2064	2064	1	0.00000	147.60182	21.05385	27.20000
2065	2065	1	0.00000	147.60182	21.05385	30.60000
2066	2066	1	0.00000	147.60182	21.05385	34.00000
2067	2067	1	0.00000	147.60182	21.05385	37.40000
2068	2068	1	0.00000	147.60182	21.05385	40.80000
2069	2069	1	0.00000	147.60182	21.05385	44.20000
2070	2070	1	0.00000	147.60182	21.05385	47.60000
2071	2071	1	0.00000	149.33831	24.06154	0.00000
2072	2072	1	0.00000	149.33831	24.06154	3.40000
2073	2073	1	0.00000	149.33831	24.06154	6.80000
2074	2074	1	0.00000	149.33831	24.06154	10.20000
2075	2075	1	0.00000	149.33831	24.06154	13.60000
2076	2076	1	0.00000	149.33831	24.06154	17.00000
2077	2077	1	0.00000	149.33831	24.06154	20.40000
2078	2078	1	0.00000	149.33831	24.06154	23.80000
2079	2079	1	0.00000	149.33831	24.06154	27.20000
2080	2080	1	0.00000	149.33831	24.06154	30.60000
2081	2081	1	0.00000	149.33831	24.06154	34.00000
2082	2082	1	0.00000	149.33831	24.06154	37.40000
2083	2083	1	0.00000	149.33831	24.06154	40.80000
2084	2084	1	0.00000	149.33831	24.06154	44.20000
2085	2085	1	0.00000	149.33831	24.06154	47.60000
2086	2086	1	0.00000	151.07480	27.06923	0.00000
2087	2087	1	0.00000	151.07480	27.06923	3.40000
2088	2088	1	0.00000	151.07480	27.06923	6.80000
2089	2089	1	0.00000	151.07480	27.06923	10.20000
2090	2090	1	0.00000	151.07480	27.06923	13.60000
2091	2091	1	0.00000	151.07480	27.06923	17.00000
2092	2092	1	0.00000	151.07480	27.06923	20.40000
2093	2093	1	0.00000	151.07480	27.06923	23.80000
2094	2094	1	0.00000	151.07480	27.06923	27.20000
2095	2095	1	0.00000	151.07480	27.06923	30.60000
2096	2096	1	0.00000	151.07480	27.06923	34.00000
2097	2097	1	0.00000	151.07480	27.06923	37.40000
2098	2098	1	0.00000	151.07480	27.06923	40.80000
2099	2099	1	0.00000	151.07480	27.06923	44.20000
2100	2100	1	0.00000	151.07480	27.06923	47.60000
2101	2101	1	0.00000	152.81129	30.07692	0.00000
2102	2102	1	0.00000	152.81129	30.07692	3.40000
2103	2103	1	0.00000	152.81129	30.07692	6.80000
2104	2104	1	0.00000	152.81129	30.07692	10.20000
2105	2105	1	0.00000	152.81129	30.07692	13.60000
2106	2106	1	0.00000	152.81129	30.07692	17.00000
2107	2107	1	0.00000	152.81129	30.07692	20.40000
2108	2108	1	0.00000	152.81129	30.07692	23.80000
2109	2109	1	0.00000	152.81129	30.07692	27.20000
2110	2110	1	0.00000	152.81129	30.07692	30.60000
2111	2111	1	0.00000	152.81129	30.07692	34.00000
2112	2112	1	0.00000	152.81129	30.07692	37.40000
2113	2113	1	0.00000	152.81129	30.07692	40.80000
2114	2114	1	0.00000	152.81129	30.07692	44.20000
2115	2115	1	0.00000	152.81129	30.07692	47.60000
2116	2116	1	0.00000	154.54778	33.08462	0.00000
2117	2117	1	0.00000	154.54778	33.08462	3.40000
2118	2118	1	0.00000	154.54778	33.08462	6.80000
2119	2119	1	0.00000	154.54778	33.08462	10.20000
2120	2120	1	0.00000	154.54778	33.08462	13.60000
2121	2121	1	0.00000	154.54778	33.08462	17.00000
2122	2122	1	0.00000	154.54778	33.08462	20.40000
2123	2123	1	0.00000	154.54778	33.08462	23.80000
2124	2124	1	0.00000	154.54778	33.08462	27.20000
2125	2125	1	0.00000	154.54778	33.08462	30.60000
2126	2126	1	0.00000	154.54778	33.08462	34.00000
2127	2127	1	0.00000	154.54778	33.08462	37.40000
2128	2128	1	0.00000	154.54778	33.08462	40.80000
2129	2129	1	0.00000	154.54778	33.08462	44.20000
2130	2130	1	0.00000	154.54778	33.08462	47.60000
2131	2131	1	0.00000	156.28428	36.09231	0.00000
2132	2132	1	0.00000	156.28428	36.09231	3.40000
2133	2133	1	0.00000	156.28428	36.09231	6.80000
2134	2134	1	0.00000	156.28428	36.09231	10.20000
2135	2135	1	0.00000	156.28428	36.09231	13.60000
2136	2136	1	0.00000	156.28428	36.09231	17.00000
2137	2137	1	0.00000	156.28428	36.09231	20.40000
2138	2138	1	0.00000	156.28428	36.09231	23.80000
2139	2139	1	0.00000	156.28428	36.09231	27.20000
2140	2140	1	0.00000	156.28428	36.09231	30.60000
2141	2141	1	0.00000	156.28428	36.09231	34.00000
2142	2142	1	0.00000	156.28428	36.09231	37.40000
2143	2143	1	0.00000	156.28428	36.09231	40.80000
2144	2144	1	0.00000	156.28428	36.09231	44.20000
2145	2145	1	0.00000	156.28428	36.09231	47.60000
2146	2146	1	0.00000	158.02077	39.10000	0.00000
2147	2147	1	0.00000	158.02077	39.10000	3.40000

2148	2148	1	0.00000	158.02077	39.10000	6.80000
2149	2149	1	0.00000	158.02077	39.10000	10.20000
2150	2150	1	0.00000	158.02077	39.10000	13.60000
2151	2151	1	0.00000	158.02077	39.10000	17.00000
2152	2152	1	0.00000	158.02077	39.10000	20.40000
2153	2153	1	0.00000	158.02077	39.10000	23.80000
2154	2154	1	0.00000	158.02077	39.10000	27.20000
2155	2155	1	0.00000	158.02077	39.10000	30.60000
2156	2156	1	0.00000	158.02077	39.10000	34.00000
2157	2157	1	0.00000	158.02077	39.10000	37.40000
2158	2158	1	0.00000	158.02077	39.10000	40.80000
2159	2159	1	0.00000	158.02077	39.10000	44.20000
2160	2160	1	0.00000	158.02077	39.10000	47.60000
2161	2161	1	0.00000	159.75726	42.10769	0.00000
2162	2162	1	0.00000	159.75726	42.10769	3.40000
2163	2163	1	0.00000	159.75726	42.10769	6.80000
2164	2164	1	0.00000	159.75726	42.10769	10.20000
2165	2165	1	0.00000	159.75726	42.10769	13.60000
2166	2166	1	0.00000	159.75726	42.10769	17.00000
2167	2167	1	0.00000	159.75726	42.10769	20.40000
2168	2168	1	0.00000	159.75726	42.10769	23.80000
2169	2169	1	0.00000	159.75726	42.10769	27.20000
2170	2170	1	0.00000	159.75726	42.10769	30.60000
2171	2171	1	0.00000	159.75726	42.10769	34.00000
2172	2172	1	0.00000	159.75726	42.10769	37.40000
2173	2173	1	0.00000	159.75726	42.10769	40.80000
2174	2174	1	0.00000	159.75726	42.10769	44.20000
2175	2175	1	0.00000	159.75726	42.10769	47.60000
2176	2176	1	0.00000	161.49375	45.11538	0.00000
2177	2177	1	0.00000	161.49375	45.11538	3.40000
2178	2178	1	0.00000	161.49375	45.11538	6.80000
2179	2179	1	0.00000	161.49375	45.11538	10.20000
2180	2180	1	0.00000	161.49375	45.11538	13.60000
2181	2181	1	0.00000	161.49375	45.11538	17.00000
2182	2182	1	0.00000	161.49375	45.11538	20.40000
2183	2183	1	0.00000	161.49375	45.11538	23.80000
2184	2184	1	0.00000	161.49375	45.11538	27.20000
2185	2185	1	0.00000	161.49375	45.11538	30.60000
2186	2186	1	0.00000	161.49375	45.11538	34.00000
2187	2187	1	0.00000	161.49375	45.11538	37.40000
2188	2188	1	0.00000	161.49375	45.11538	40.80000
2189	2189	1	0.00000	161.49375	45.11538	44.20000
2190	2190	1	0.00000	161.49375	45.11538	47.60000
2191	2191	1	0.00000	163.23024	48.12308	0.00000
2192	2192	1	0.00000	163.23024	48.12308	3.40000
2193	2193	1	0.00000	163.23024	48.12308	6.80000
2194	2194	1	0.00000	163.23024	48.12308	10.20000
2195	2195	1	0.00000	163.23024	48.12308	13.60000
2196	2196	1	0.00000	163.23024	48.12308	17.00000
2197	2197	1	0.00000	163.23024	48.12308	20.40000
2198	2198	1	0.00000	163.23024	48.12308	23.80000
2199	2199	1	0.00000	163.23024	48.12308	27.20000
2200	2200	1	0.00000	163.23024	48.12308	30.60000
2201	2201	1	0.00000	163.23024	48.12308	34.00000
2202	2202	1	0.00000	163.23024	48.12308	37.40000
2203	2203	1	0.00000	163.23024	48.12308	40.80000
2204	2204	1	0.00000	163.23024	48.12308	44.20000
2205	2205	1	0.00000	163.23024	48.12308	47.60000
2206	2206	1	0.00000	164.96674	51.13077	0.00000
2207	2207	1	0.00000	164.96674	51.13077	3.40000
2208	2208	1	0.00000	164.96674	51.13077	6.80000
2209	2209	1	0.00000	164.96674	51.13077	10.20000
2210	2210	1	0.00000	164.96674	51.13077	13.60000
2211	2211	1	0.00000	164.96674	51.13077	17.00000
2212	2212	1	0.00000	164.96674	51.13077	20.40000
2213	2213	1	0.00000	164.96674	51.13077	23.80000
2214	2214	1	0.00000	164.96674	51.13077	27.20000
2215	2215	1	0.00000	164.96674	51.13077	30.60000
2216	2216	1	0.00000	164.96674	51.13077	34.00000
2217	2217	1	0.00000	164.96674	51.13077	37.40000
2218	2218	1	0.00000	164.96674	51.13077	40.80000
2219	2219	1	0.00000	164.96674	51.13077	44.20000
2220	2220	1	0.00000	164.96674	51.13077	47.60000
2221	2221	1	0.00000	166.70323	54.13846	0.00000
2222	2222	1	0.00000	166.70323	54.13846	3.40000
2223	2223	1	0.00000	166.70323	54.13846	6.80000
2224	2224	1	0.00000	166.70323	54.13846	10.20000
2225	2225	1	0.00000	166.70323	54.13846	13.60000
2226	2226	1	0.00000	166.70323	54.13846	17.00000
2227	2227	1	0.00000	166.70323	54.13846	20.40000
2228	2228	1	0.00000	166.70323	54.13846	23.80000
2229	2229	1	0.00000	166.70323	54.13846	27.20000
2230	2230	1	0.00000	166.70323	54.13846	30.60000
2231	2231	1	0.00000	166.70323	54.13846	34.00000
2232	2232	1	0.00000	166.70323	54.13846	37.40000
2233	2233	1	0.00000	166.70323	54.13846	40.80000
2234	2234	1	0.00000	166.70323	54.13846	44.20000
2235	2235	1	0.00000	166.70323	54.13846	47.60000
2236	2236	1	0.00000	168.43972	57.14615	0.00000
2237	2237	1	0.00000	168.43972	57.14615	3.40000
2238	2238	1	0.00000	168.43972	57.14615	6.80000
2239	2239	1	0.00000	168.43972	57.14615	10.20000
2240	2240	1	0.00000	168.43972	57.14615	13.60000
2241	2241	1	0.00000	168.43972	57.14615	17.00000
2242	2242	1	0.00000	168.43972	57.14615	20.40000
2243	2243	1	0.00000	168.43972	57.14615	23.80000
2244	2244	1	0.00000	168.43972	57.14615	27.20000
2245	2245	1	0.00000	168.43972	57.14615	30.60000
2246	2246	1	0.00000	168.43972	57.14615	34.00000
2247	2247	1	0.00000	168.43972	57.14615	37.40000
2248	2248	1	0.00000	168.43972	57.14615	40.80000
2249	2249	1	0.00000	168.43972	57.14615	44.20000
2250	2250	1	0.00000	168.43972	57.14615	47.60000
2251	2251	1	0.00000	170.17621	60.15385	0.00000
2252	2252	1	0.00000	170.17621	60.15385	3.40000
2253	2253	1	0.00000	170.17621	60.15385	6.80000
2254	2254	1	0.00000	170.17621	60.15385	10.20000
2255	2255	1	0.00000	170.17621	60.15385	13.60000
2256	2256	1	0.00000	170.17621	60.15385	17.00000
2257	2257	1	0.00000	170.17621	60.15385	20.40000
2258	2258	1	0.00000	170.17621	60.15385	23.80000
2259	2259	1	0.00000	170.17621	60.15385	27.20000

2260	2260	1	0.00000	170.17621	60.15385	30.60000
2261	2261	1	0.00000	170.17621	60.15385	34.00000
2262	2262	1	0.00000	170.17621	60.15385	37.40000
2263	2263	1	0.00000	170.17621	60.15385	40.80000
2264	2264	1	0.00000	170.17621	60.15385	44.20000
2265	2265	1	0.00000	170.17621	60.15385	47.60000
2266	2266	1	0.00000	171.91270	63.16154	0.00000
2267	2267	1	0.00000	171.91270	63.16154	3.40000
2268	2268	1	0.00000	171.91270	63.16154	6.80000
2269	2269	1	0.00000	171.91270	63.16154	10.20000
2270	2270	1	0.00000	171.91270	63.16154	13.60000
2271	2271	1	0.00000	171.91270	63.16154	17.00000
2272	2272	1	0.00000	171.91270	63.16154	20.40000
2273	2273	1	0.00000	171.91270	63.16154	23.80000
2274	2274	1	0.00000	171.91270	63.16154	27.20000
2275	2275	1	0.00000	171.91270	63.16154	30.60000
2276	2276	1	0.00000	171.91270	63.16154	34.00000
2277	2277	1	0.00000	171.91270	63.16154	37.40000
2278	2278	1	0.00000	171.91270	63.16154	40.80000
2279	2279	1	0.00000	171.91270	63.16154	44.20000
2280	2280	1	0.00000	171.91270	63.16154	47.60000
2281	2281	1	0.00000	173.64920	66.16923	0.00000
2282	2282	1	0.00000	173.64920	66.16923	3.40000
2283	2283	1	0.00000	173.64920	66.16923	6.80000
2284	2284	1	0.00000	173.64920	66.16923	10.20000
2285	2285	1	0.00000	173.64920	66.16923	13.60000
2286	2286	1	0.00000	173.64920	66.16923	17.00000
2287	2287	1	0.00000	173.64920	66.16923	20.40000
2288	2288	1	0.00000	173.64920	66.16923	23.80000
2289	2289	1	0.00000	173.64920	66.16923	27.20000
2290	2290	1	0.00000	173.64920	66.16923	30.60000
2291	2291	1	0.00000	173.64920	66.16923	34.00000
2292	2292	1	0.00000	173.64920	66.16923	37.40000
2293	2293	1	0.00000	173.64920	66.16923	40.80000
2294	2294	1	0.00000	173.64920	66.16923	44.20000
2295	2295	1	0.00000	173.64920	66.16923	47.60000
2296	2296	1	0.00000	175.38569	69.17692	0.00000
2297	2297	1	0.00000	175.38569	69.17692	3.40000
2298	2298	1	0.00000	175.38569	69.17692	6.80000
2299	2299	1	0.00000	175.38569	69.17692	10.20000
2300	2300	1	0.00000	175.38569	69.17692	13.60000
2301	2301	1	0.00000	175.38569	69.17692	17.00000
2302	2302	1	0.00000	175.38569	69.17692	20.40000
2303	2303	1	0.00000	175.38569	69.17692	23.80000
2304	2304	1	0.00000	175.38569	69.17692	27.20000
2305	2305	1	0.00000	175.38569	69.17692	30.60000
2306	2306	1	0.00000	175.38569	69.17692	34.00000
2307	2307	1	0.00000	175.38569	69.17692	37.40000
2308	2308	1	0.00000	175.38569	69.17692	40.80000
2309	2309	1	0.00000	175.38569	69.17692	44.20000
2310	2310	1	0.00000	175.38569	69.17692	47.60000
2311	2311	1	0.00000	177.12218	72.18462	0.00000
2312	2312	1	0.00000	177.12218	72.18462	3.40000
2313	2313	1	0.00000	177.12218	72.18462	6.80000
2314	2314	1	0.00000	177.12218	72.18462	10.20000
2315	2315	1	0.00000	177.12218	72.18462	13.60000
2316	2316	1	0.00000	177.12218	72.18462	17.00000
2317	2317	1	0.00000	177.12218	72.18462	20.40000
2318	2318	1	0.00000	177.12218	72.18462	23.80000
2319	2319	1	0.00000	177.12218	72.18462	27.20000
2320	2320	1	0.00000	177.12218	72.18462	30.60000
2321	2321	1	0.00000	177.12218	72.18462	34.00000
2322	2322	1	0.00000	177.12218	72.18462	37.40000
2323	2323	1	0.00000	177.12218	72.18462	40.80000
2324	2324	1	0.00000	177.12218	72.18462	44.20000
2325	2325	1	0.00000	177.12218	72.18462	47.60000
2326	2326	1	0.00000	178.85867	75.19231	0.00000
2327	2327	1	0.00000	178.85867	75.19231	3.40000
2328	2328	1	0.00000	178.85867	75.19231	6.80000
2329	2329	1	0.00000	178.85867	75.19231	10.20000
2330	2330	1	0.00000	178.85867	75.19231	13.60000
2331	2331	1	0.00000	178.85867	75.19231	17.00000
2332	2332	1	0.00000	178.85867	75.19231	20.40000
2333	2333	1	0.00000	178.85867	75.19231	23.80000
2334	2334	1	0.00000	178.85867	75.19231	27.20000
2335	2335	1	0.00000	178.85867	75.19231	30.60000
2336	2336	1	0.00000	178.85867	75.19231	34.00000
2337	2337	1	0.00000	178.85867	75.19231	37.40000
2338	2338	1	0.00000	178.85867	75.19231	40.80000
2339	2339	1	0.00000	178.85867	75.19231	44.20000
2340	2340	1	0.00000	178.85867	75.19231	47.60000