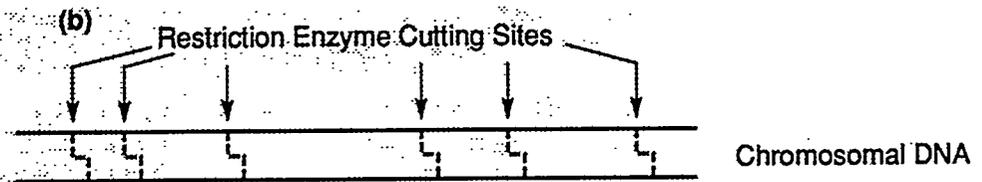
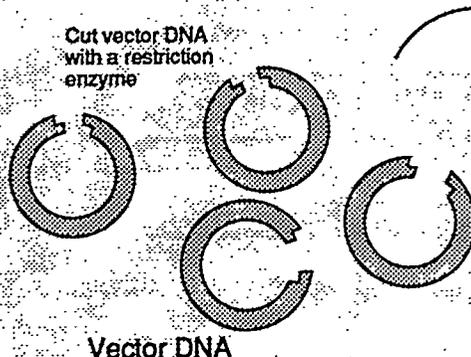
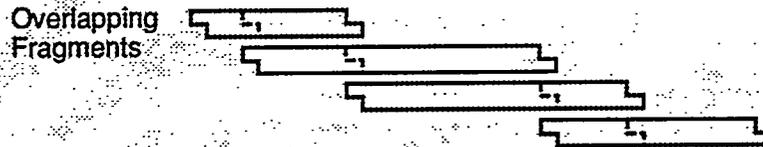


**(b) Constructing an Overlapping Clone Library.**

A collection of clones of chromosomal DNA, called a library, has no obvious order indicating the original positions of the cloned pieces on the uncut chromosome. To establish that two particular clones are adjacent to each other in the genome, libraries of clones containing partly overlapping regions must be constructed. These clone libraries are ordered by dividing the inserts into smaller fragments and determining which clones share common DNA sequences.



Partially cut chromosomal DNA with a frequent-cutter restriction enzyme (controlling the conditions so that not all possible sites are cut on every copy of a specific sequence) to generate a series of overlapping fragments representing every cutting site in the original sample



Join chromosomal fragments to vector, using the enzyme DNA ligase

