Chromosome Mapping in Drosophila

The following data were collected from repeated matings of fruit flies (*D. melanogaster*). The data show the recombination frequency (in percent) for pairs of genes in the matings. In other words, the percent of offspring that had phenotypes different from the parents. The eight genes are located on the same side of the centromere on chromosome 3. The veinlet gene is located one mapping unit from the centromere and acts as a good starting point.

Draw a scaled chromosome map for chromosome 3 of *D. melanogaster*. A suggested scale is 1 mapping unit = 1 mm. Show the locations of the eight genes including the veinlet gene.

	Scarlet eyes	Cardinal eyes	Javelin bristles	Stripe body	Minute bristles	Hairy body	Hairless bristles
Scarlet eyes			24.8	18.0			
Cardinal eyes				12.7	31.5		
Javelin bristles						7.3	50.3
Stripe body						35.5	
Minute bristles							36.7
Veinlet veins		74.6				26.4	
Hairy body							43.0