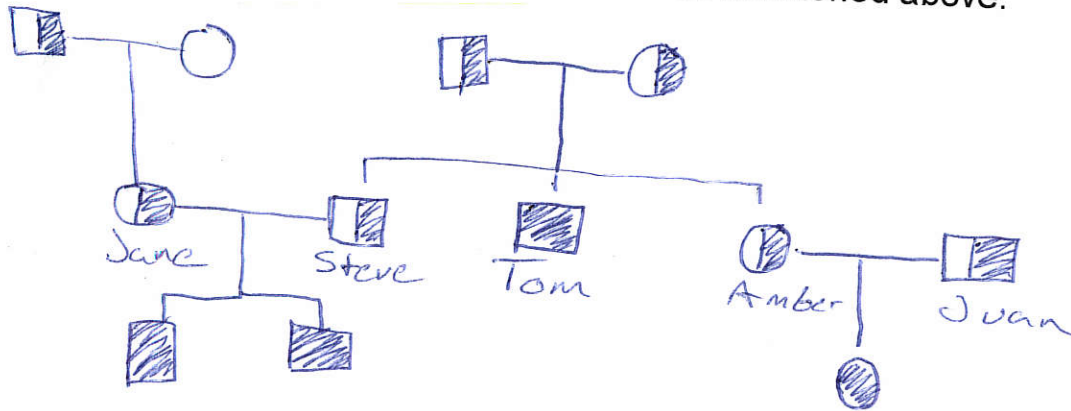


Genetics Exam Review Packet

Pedigrees

Use the following two pedigrees and associated questions in the space provided. You will see answer keys at station to check your work. Upon completion, try to create your own pedigree in your notebook following the last pedigree worksheet.

Pointed teeth is a recessive trait. Tom's father, mother and sister all have normal teeth. Tom's brother Steve also has normal teeth as does his wife Jane. However, Steve and Jane's two sons both have pointed teeth. Jane's father and mother have normal teeth. In fact, Jane's mother's family does not possess the gene at all! Tom's sister Amber is married to a man named Juan and they have a daughter with pointed teeth. Draw a pedigree showing pointed teeth for the family. Show all individuals mentioned above.



1 Do you know Tom's parents genotypes? What are they and how do you know?

Yes, Both Tt because if Tom has pointed teeth, which is recessive, his genotype is tt . You need two Tt 's to make a tt .

2 Are there any individuals that are not shaded in at all? What does that tell us about that individual?

Jane's mother - She is TT
Not a carrier

3 Tom's sister (normal teeth) married a man and they have a pointed toothed daughter. What could we infer about the husband and his parents?

Juan must be a carrier and at least one of his parents must also be a carrier.