

Genetics Practice Problems: Pedigree Tables

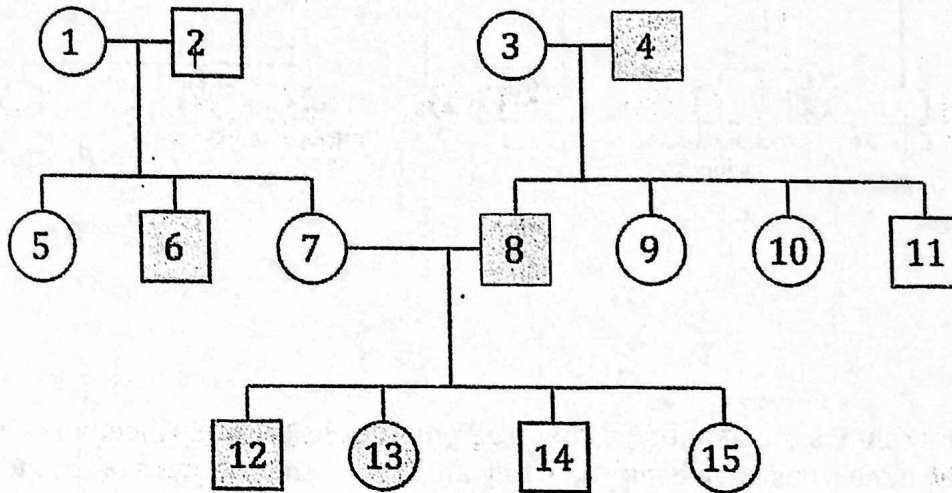
Remember the following when working pedigree tables:

1) Circles are females and squares are males.

2) A shaded circle or square indicates that a person has the trait.

Hint Colorblindness is a sex linked trait.

The pedigree seen below is for colorblindness. Shaded individuals are colorblind. First, determine the probable genotype of persons 1 - 15; then, answer the questions below the table.



How did you determine the genotype of the mother at 3?

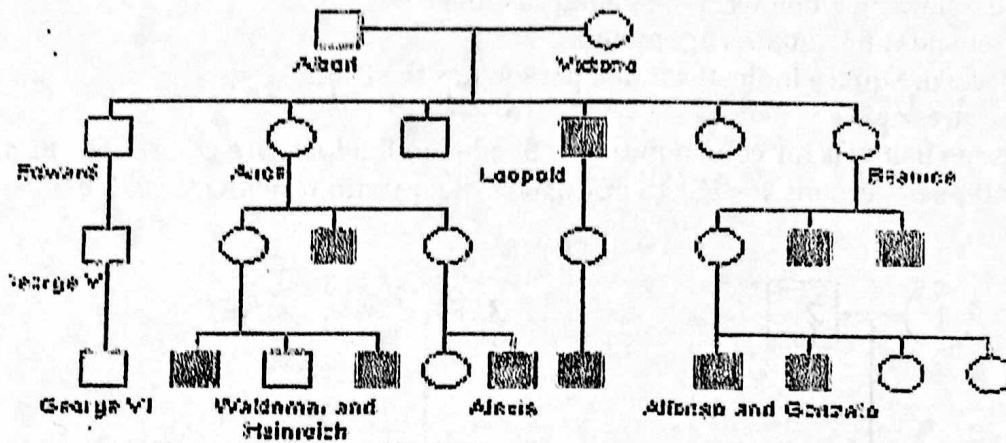
Number 8 was colorblind just like his father. Where did the son at 8 get his allele for colorblindness?

Neither numbers 1 nor 2 were colorblind. How did they have a colorblind son (6)?

What must be the genotypes of the parents of a colorblind daughter? Explain.

If number 13 marries a normal man, what is the probability that their sons will be colorblind?

Queen Victoria was the world's most famous carrier of hemophilia. Her son, Leopold, and two carrier daughters, Alice and Beatrice, spread the gene fairly widely through the royal families of Europe, Prussia and Russia. Fortunately, no modern monarchs have inherited the allele. Indicate the probably genotype of each of the people below. Remember, hemophilia is a sex-linked trait and shaded individuals have the disease.



The pedigree table below shows the blood types of three generations of family members. Notice that some of the blood type phenotypes have been given to you. What is the genotype of the individuals 1 - 6? Give the probable genotype of all other family members.

