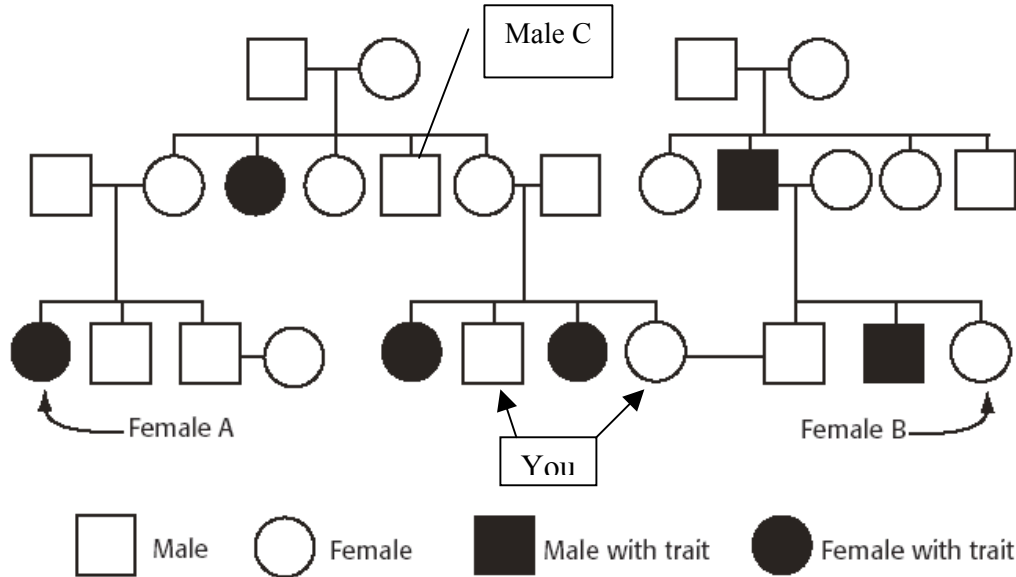


CP Practice Human Genetics Questions

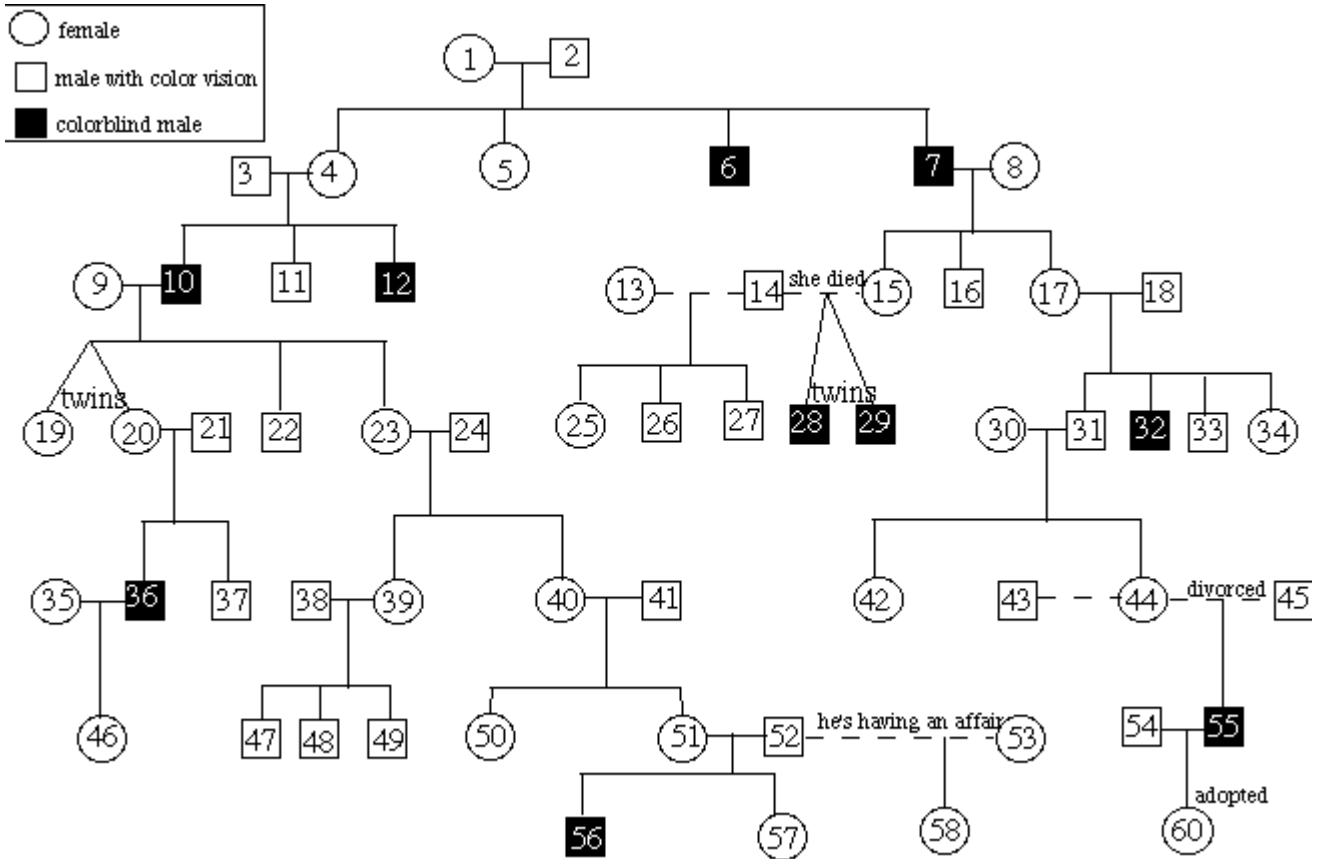
1. This human pedigree represents the inheritance of Sickle Cell Anemia, a blood disorder that causes red blood cells to deform and block circulation in the body.



- If you are one of the people indicated above, what relation would "female A" be to you?
 - Is Female A homozygous or heterozygous?
 - Is the trait for Sickle Cell Anemia recessive or dominant?
 - What are the odds that you are a carrier of the trait for Sickle Cell?
 - If Female B has children with a homozygous individual, what is the probability that the children will be heterozygous?
 - How many of the people who do not have the disease can be definitely ruled out as a carrier of the trait?
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- In a purely hypothetical situation, three women all claim that Bill Clinton is the father of their child. Bill has blue eyes. The eye-colors of the women and children are:
 - blue-eyed mother, brown-eyed child
 - brown-eyed mother, blue-eyed child
 - brown-eyed mother, brown-eyed child

Which kids could be Bill's, and which Cannot?

Use the pedigree below to track the inheritance of colorblindness.



- List all of the people who are carriers of an allele for colorblindness.
- Which person introduced a second allele for colorblindness into the family?
- Number 44, who divorced number 45, is now married to number 43. They are expecting a son. What is the probability that the son will be colorblind?
- Could # 58, a product of #52's adultery, be carrying the allele for colorblindness and give away the secret of who her father is?