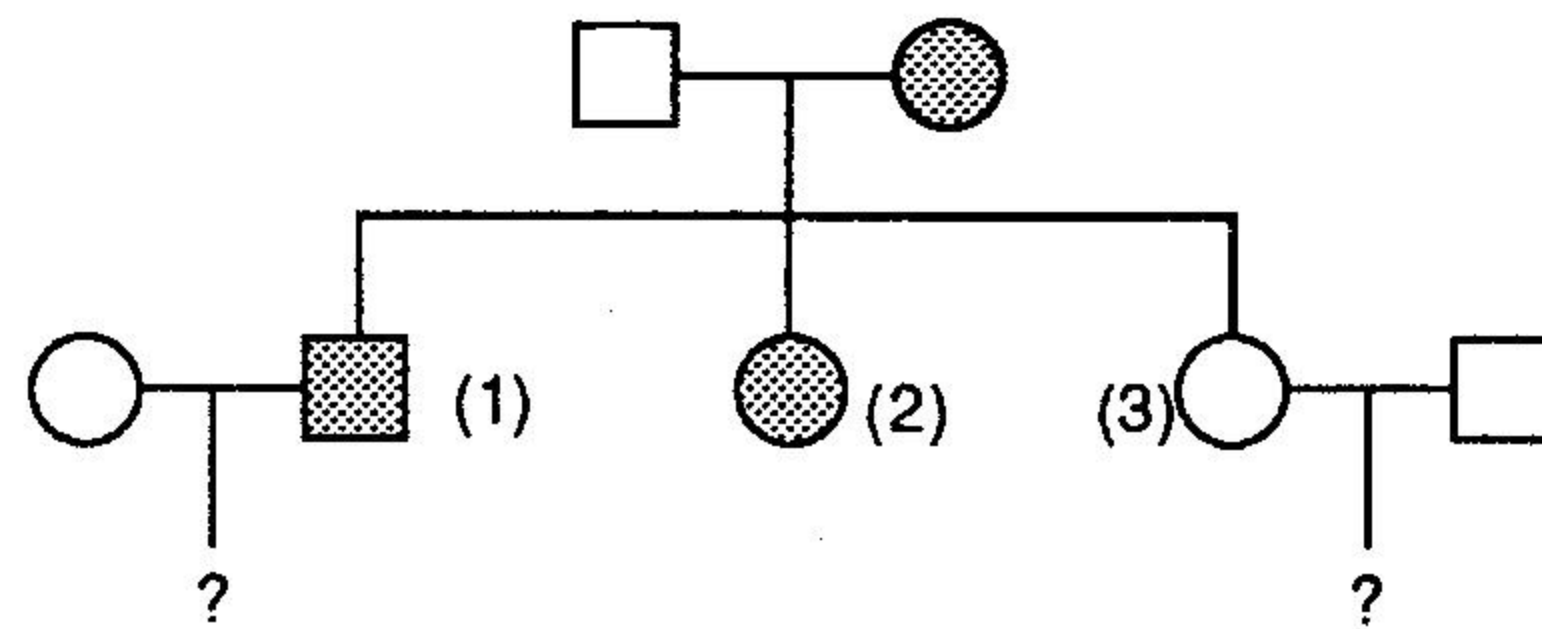


9. Answer the questions for the following pedigree:



What is the mode of inheritance shown in this pedigree? a. \_\_\_\_\_

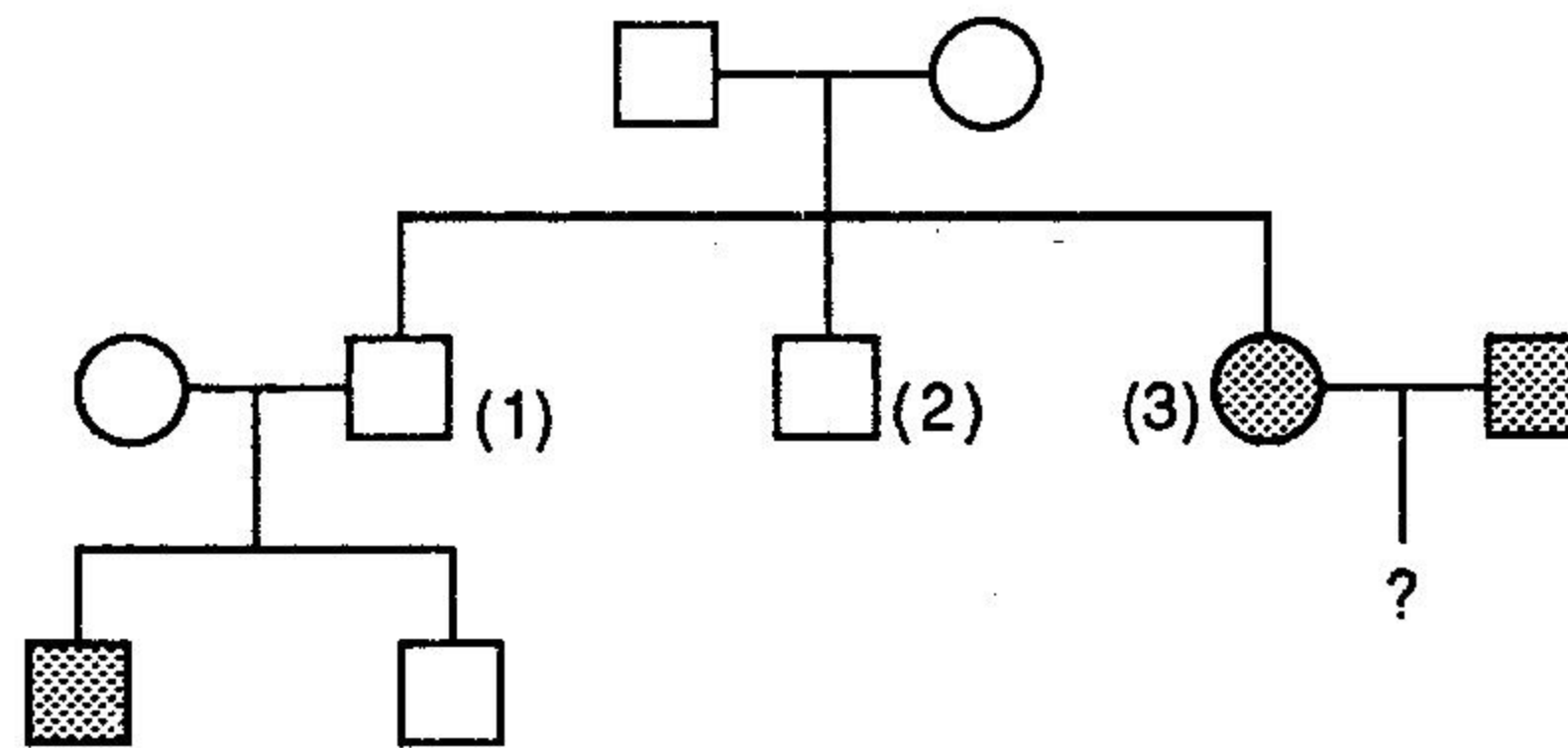
What is the genotype of person 1? b. \_\_\_\_\_

What are the chances of person 1 having normal children? c. \_\_\_\_\_

What are the chances of person 3 having normal children? d. \_\_\_\_\_

10. Answer the questions for the following pedigree:

What is the mode of inheritance in this pedigree? a. \_\_\_\_\_



For person 2, the genotype is b. \_\_\_\_\_, and the phenotype is c. \_\_\_\_\_.

For person 1, the genotype is d. \_\_\_\_\_.

How did you determine this? e. \_\_\_\_\_

What are the chances that person 3's children will be normal? f. \_\_\_\_\_

11. Consider a model in which there are three gene pairs of alleles; a dominant allele in any pair adds pigment to the skin. Use the letters *A*, *B*, *C* to indicate pigment formation and *a*, *b*, *c* to indicate lack of pigment formation.

What is the genotype for the darkest individual? a. \_\_\_\_\_

What is the genotype for the lightest individual? b. \_\_\_\_\_

What is the genotype for the offspring from a cross of the individuals from *a* and *b*? c. \_\_\_\_\_

How does the skin color of this person compare to either of the parents? d. \_\_\_\_\_

12. A man with blood type A reproduces with a woman who has blood type B. Their child has blood type O. Give the genotype of all persons involved: man a. \_\_\_\_\_, woman b. \_\_\_\_\_, and child c. \_\_\_\_\_.

13. If a child has AB blood and the father has type B blood, what could the genotype of the mother be?  
\_\_\_\_\_

14. If a child has BO blood and the father has type O blood, what could the genotype of the mother be?  
\_\_\_\_\_

15. Both a man and a woman have sickle-cell trait. List all phenotypes among the offspring, as well as the chance (percent) of each occurring. a. \_\_\_\_\_, b. \_\_\_\_\_, c. \_\_\_\_\_.