

5. What is meant by an X-linked trait?

6. Duchenne's muscular dystrophy is an X-linked recessive disorder. A couple has one son who has Duchenne's muscular dystrophy. The man and woman are both normal. (Use X^D , X^d , and Y)

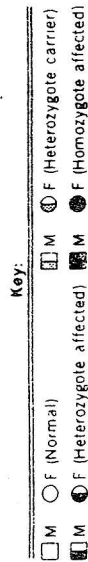
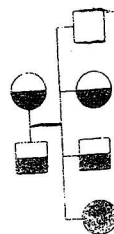
- What is the genotype of the son?
- What are the genotypes of the parents?
Father: _____ Mother: _____
- Show the cross between the man and woman in a Punnett Square.

7. What is the probability that they will have another child with muscular dystrophy?

8. Show a cross between a woman who is a carrier for hemophilia and a man who has hemophilia. Remember hemophilia is an X-linked recessive trait. (Use X^H , X^h , and Y). What are the possible genotypes and phenotypes of their offspring?

9. Name one hereditary condition that can be traced using a pedigree.

10. Study the following pedigree:



11. A child of 2 normal parents has albinism, a recessive trait.

- What is the chance a second child will be an albino?
- What is the probability that a second child will be a carrier?
- What is the probability that a second child, born normal will be a carrier?

12. Define the following terms and give an example of each:

- Dominant
- Heterozygous
- Allele
- Genotype

13. In plants, smooth leaves (S) are dominant to hairy leaves (s). A purebred smooth leaf plant is crossed with a purebred hairy leaf plant. The offspring produced (F_1 generation) all have smooth leaves.

- What are the genotypes of the two parent plants?
 - Show the cross in a Punnett Square:
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- What is the genotype of the offspring in the F_1 generation?
 - Show the cross between two of the F_1 generation offspring in the Punnett Square:
 - What is the expected phenotypic ratio of these offspring?
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