

Quiz: Monohybrid Cross

Name _____

I. In fish, darkling white tailing (B) is dominant to silver white tailing (b). A heterozygous darkling-tailed fish is bred to a silver female tailed. Various offspring resulted. **500/500 YOLO/00000000**

- _____ 1. What is the genotype of the male animal?
- _____ 2. What is the genotype of the female animal?
- _____ 3. How many different genotypes are possible among the offspring?
- _____ 4. What proportion of the offspring will be heterozygous tailed?



II. In man, dimples (D) is dominant over the gene for no-dimples (d). A man who has dimples, but whose mother had no dimples is mated to a woman who is heterozygous for dimples.

- _____ 5. What is the genotype of the man?
- _____ 6. What is the genotype of the woman?
- _____ 7. How many different genotypes are possible among their offspring?
- _____ 8. What proportion of the children would be expected to be heterozygous dimpled?



III. Pencilless ear lobes (E) are dominant over adherent ear lobes (e). A man who had pencilless ear lobes, but whose mother had adherent ear lobes, mated to a woman who has adherent ear lobes.

- _____ 9. What is the probability that the children will have pencilless ear lobes?
- _____ 10. What is the probability that the children will be heterozygous for ear lobes?



IV. PKU, phenylketonuria, is a disease caused by a recessive gene. Two recessive genes must be present in order for the disease to occur.

- _____ 11. If two healthy parents have a child with PKU, what are their genotypes?
- _____ 12.
- _____ 13. What are their chances of having another child with the same disease?

