

Genetics Review

If you can answer these, you'll be ready for the test...

1. What is a trait?
 2. Who is the father of Genetics?
 3. What is heredity?
 4. What kind of plants did Mendel study?
 5. What is the name for the 1st parents of a generation?
 6. How do you describe each additional generation after the first?
 7. What does Mendel's law of Dominance state?
 8. When you have a dominant and a recessive trait paired together, which one wins?
 9. What does Mendel's law of Segregation state? How does this relate to meiosis?
 10. What is an allele?
 11. What is a phenotype?
 12. What is a genotype?
 13. Give an example of a heterozygous genotype?
 14. Give an example of a homozygous dominant genotype?
 15. Give an example of a homozygous recessive genotype?
 16. What is a Punnett square used for?
 17. What is incomplete dominance? Give an example.
 18. What is co-dominance? Give an example.
 19. What are multiple alleles? Give an example.
 20. What are the four types of blood a person can have?
 21. Which blood type is known as the universal donor?
 22. Which blood type is known as the universal acceptor?
 23. How many chromosomes does a healthy person have?
 24. What sex chromosomes does a male have? A female?
 25. What are x-linked traits? How are they special?
 26. What does it mean to be a carrier for an x-linked trait?
 27. Why can't a male be a carrier for an x-linked trait?
 28. Complete the example Punnett square problems below and on the back of this page...
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1. Normal Punnett square problems like...
 - a. One Tail = T / Two tails = t
 - i. Mother = Homozygous dominant
 - ii. Father = Heterozygous
 1. Complete a Punnett Square
 2. What % of children are one tail or two tail?

- b. Blue = B / Red = b
 - i. Mother = Heterozygous
 - ii. Father = Homozygous recessive
 - 1. Complete a Punnett Square
 - 2. What % of children are blue or red?

2. Blood Type Punnett square problems like...

- a. A woman with Type O blood and a man who is Type AB are expecting a child. What are the possible percentages of the blood types of the child?

- b. A man with heterozygous A blood has a child with a woman with homozygous B blood. What are the possible percentages of the blood type for the child?

3. X-linked Punnett square problems like...

- a. H = Normal Blood / h = Hemophilia
 - i. A Woman is diagnosed with hemophilia.
 - ii. She marries and has children with a man who has normal blood.
 - 1. Complete a Punnett Square
 - 2. Give % of male and female children that either have or do not have hemophilia

- b. B = Normal Vision / b = Color Blind

- i. A man is color blind
- ii. The woman is a carrier for the colorblind trait
 - 1. Complete an x-linked Punnett square
 - 2. Give % of male and female children that have normal vision or are born colorblind.