

Genetics and Heredity Study Guide

Use pp. 114-155

Define:

1. Heredity
2. Dominant trait
3. Recessive trait
4. Gene
5. Allele
6. Phenotype
7. Genotype
8. Homozygous alleles
9. Heterozygous alleles
10. Meiosis
11. Pedigree
12. DNA
13. Nucleotide
14. RNA
15. Ribosome
16. Mutation
17. Genetic engineering

Short Answer:

18. Describe the experiments of Mendel.
19. Explain the difference between recessive and dominant traits.
20. What is the difference between a gene and an allele?
21. Explain how probability can be used to predict possible genotypes in offspring.
22. Explain incomplete dominance.
23. Explain the difference between mitosis and meiosis.
24. How do chromosomes determine sex?
25. How can a genetic counselor use a pedigree to predict the passing of genetic diseases?
26. Describe selective breeding.
27. Complete 8-9 and 20-23 On p. 137 (Punnett square practice)
28. Describe the basic structure of DNA molecule.
29. Explain the relationship between DNA, genes, and proteins.
30. Describe the three different types of mutations and provide an example of gene mutation.
31. Give three examples of how genetic engineering is used.

