

Chapter 5

REINFORCEMENT

Use with Text Pages 132–136

● Genetics Since Mendel

Answer the following questions.

1. Long radishes were crossed with round radishes and produced all oval radishes. In the next generation, all three phenotypes of radishes—long, round, and oval—were present.
 - a. What evidence is there that the long and round alleles did not become blended: _____

 - b. How many alleles are there for radish shape? _____
 - c. What evidence is there that the round and long alleles are both inherited by incomplete dominance? _____
 - d. What evidence is there that both the long and the round radishes are homozygous? _____

2. There are four phenotypes of human blood.
 - a. Is it possible for two alleles to produce four phenotypes? _____
 - b. Which phenotype is produced by each of the following genotypes?
AA _____ AO _____ OO _____
BB _____ BO _____ AB _____
 - c. How many alleles are there for blood type? _____
 - d. When a trait has more than two alleles, how is that trait inherited? _____
 - e. Which blood type is inherited by incomplete dominance? Explain your answer. _____

3. All of the children of brown-eyed parents have brown eyes, but the shade of each child's eyes is different.
 - a. What evidence is there that more than one pair of genes affects eye color? _____

 - b. What is polygenic inheritance? _____

 - c. What other traits are examples of polygenic inheritance? _____
