

Chapter 16

Use with Section 2

REINFORCEMENT**● 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. What 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? _____
