

**Chapter 6**

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? \_\_\_\_\_  
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