

## Chapter 17

Use with Section 1

## REINFORCEMENT

## ● What is genetics?

## Part A

One of the traits of pea plants that Mendel observed was seed shape. The seeds were either round or wrinkled. Mendel observed that round seed shape (R) dominated over the wrinkled shape (r).

Complete the Punnett square to show the possible offspring of two heterozygous pea plants. Then answer the questions that follow.

	R	r
R		
r		

1. What two forms of the trait for seed shape did Mendel observe? \_\_\_\_\_
2. What was the phenotype for seed shape of both parent plants? \_\_\_\_\_
3. What percentage of the possible types of offspring had the same genotype as the parents? \_\_\_\_\_
4. What percentage of the possible types of offspring were homozygous? \_\_\_\_\_
5. What percentage of the possible types of offspring had the same phenotype as the parents? \_\_\_\_\_
6. What was the genotype of the offspring that did not share the parents' phenotype? \_\_\_\_\_
7. What is the probability that two heterozygous parents would have an offspring that produced round seeds? (Express your answer as a ratio.) \_\_\_\_\_

## Part B

Answer the following questions.

1. What role do genes play? \_\_\_\_\_  
\_\_\_\_\_
2. What are alleles? \_\_\_\_\_  
\_\_\_\_\_
3. What is genetics? \_\_\_\_\_  
\_\_\_\_\_
4. Why is Mendel known as the Father of Genetics? \_\_\_\_\_  
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