

Chapter 11 Introduction to Genetics

Section Review 11-1

Reviewing Key Concepts

Short Answer *On the lines provided, answer the following questions.*

1. State Mendel's principle of dominance.

2. Which two combinations of alleles could produce a trait controlled by a dominant allele?

3. What combination of alleles could produce a trait controlled by a recessive allele?

4. Explain segregation of alleles, using pea plant traits in your example.

Reviewing Key Skills

5. **Applying Concepts** Explain how Mendel's experiments would have been different if he had not worked with true-breeding plants.

6. **Comparing and Contrasting** Explain the difference between cross-pollination and self-pollination in plants.

7. **Calculating** One fourth of the plants resulting from a certain cross are expected to show a trait controlled by a recessive allele. If 675 plants resulting from the cross display a trait controlled by a dominant allele, how many plants will show the trait controlled by the recessive allele?

8. **Applying Concepts** If one of the plants used in the F₁ cross had *TT* alleles and was combined with a plant with *Tt* alleles, would the trait controlled by the recessive allele have been produced in the resulting F₂ generation? Explain your answer.

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