

SECTION 9-1 REVIEW

MENDEL'S LEGACY

VOCABULARY REVIEW Distinguish between the terms in each of the following pairs of terms.

1. F₁ generation, F₂ generation _____

2. dominant factor, recessive factor _____

3. gene, allele _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. Mendel obtained plants that were pure for particular traits by
- a. growing plants from the seeds of other plants that showed that trait.
 - b. discarding plants that showed other traits.
 - c. allowing plants to self-pollinate for several generations.
 - d. allowing plants to cross-pollinate for one generation.
- _____ 2. When Mendel crossed a strain of tall pea plants with a strain of short pea plants, he observed that all of the plants in the F₁ generation were tall. This suggests that
- a. the tall trait was controlled by a dominant factor.
 - b. the short trait was controlled by a dominant factor.
 - c. both traits were controlled by a recessive factor.
 - d. the strain of short plants was not capable of pollinating the strain of tall plants.
- _____ 3. A cross between pure green-podded pea plants and pure yellow-podded pea plants produces only green-podded plants. When the F₁ generation is allowed to self-pollinate, the F₂ generation consists of
- a. only green-podded plants.
 - b. only yellow-podded plants.
 - c. about three-quarters yellow-podded plants and one-quarter green-podded plants.
 - d. about three-quarters green-podded plants and one-quarter yellow-podded plants.
- _____ 4. When alleles for different characteristics are on separate chromosomes, they are distributed to gametes independently. This observation is summarized by the law of
- a. cross-pollination.
 - b. independent assortment.
 - c. segregation.
 - d. molecular genetics.