SECTION 3-2

REVIEW AND REINFORCE

Probability and Genetics

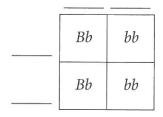
♦ Understanding Main Ideas

Complete the two Punnett squares below, and then answer the questions on a separate sheet of paper.

1. Punnett Square A:

| | В | ь |
|---|---|-----|
| В | | 211 |
| | | |
| b | | |

2. Punnett Square B:



- **3.** In the cross between two black guinea pigs shown in Punnett Square A, what is the probability that an offspring will be black? White?
- **4.** Is it possible that the cross between two black guinea pigs in Punnett Square A would not produce a white guinea pig? Explain.
- 5. What color are the guinea pig parents in the cross shown in Punnett Square B?
- **6.** Which guinea pig parent(s) in Punnett Square B is homozygous? Which is heterozygous? Explain how you know.
- **7.** Calculate the probability that an offspring will be black in the cross in Punnett Square B. What is the probability that an offspring will be white?

♦ Building Vocabulary

Match each term with its definition by writing the letter of the correct definition on the line beside the term.

_____ **8.** heterozygous

_____ **9.** Punnett square

_____ **10.** genotype

____11. codominance

_____**12.** probability

_____13. homozygous

_____**14.** phenotype

- **a.** a chart that shows all the possible combinations of alleles that can result from a genetic cross
- b. the likelihood that a particular event will occur
- c. an organism that has two identical alleles for a trait
- d. an organism's physical appearance
- e. an organism's genetic makeup, or allele combinations
- f. an organism that has two different alleles for a trait
- **g.** inheritance pattern in which the alleles are neither dominant nor recessive

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