Name _____ Class _____ Date _____

SECTION
1-3 Genetics and Probability

(pages 24–28)

KEY CONCEPTS

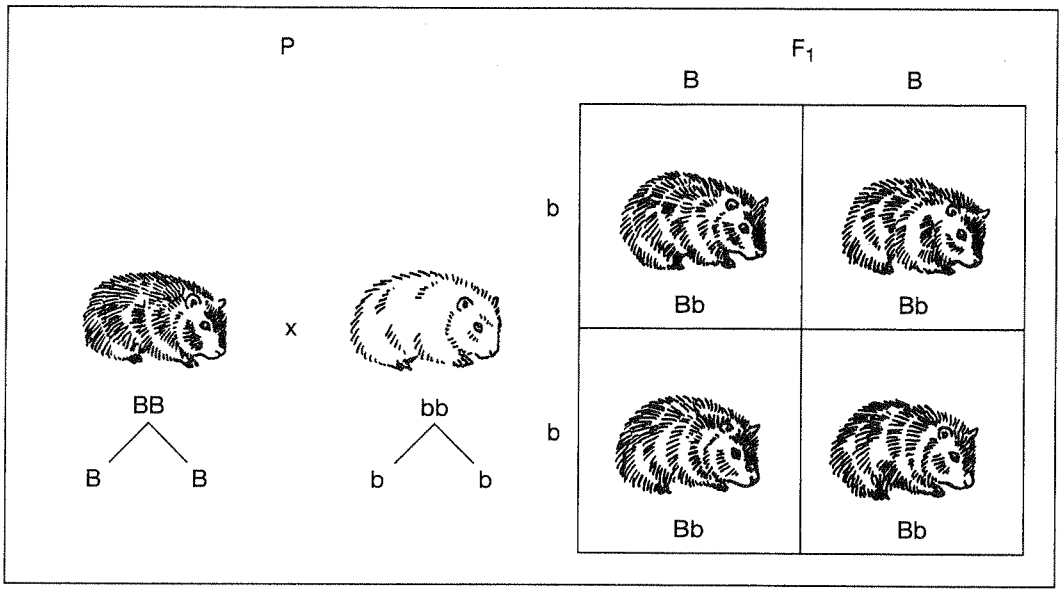
- Probability can be used to predict the results of genetic crosses.
- In addition to probability, a special chart called a Punnett square is used to show the possible gene combinations in a cross between two organisms.

Building Vocabulary Skills: Analyzing Information

A **phenotype** refers to _____.

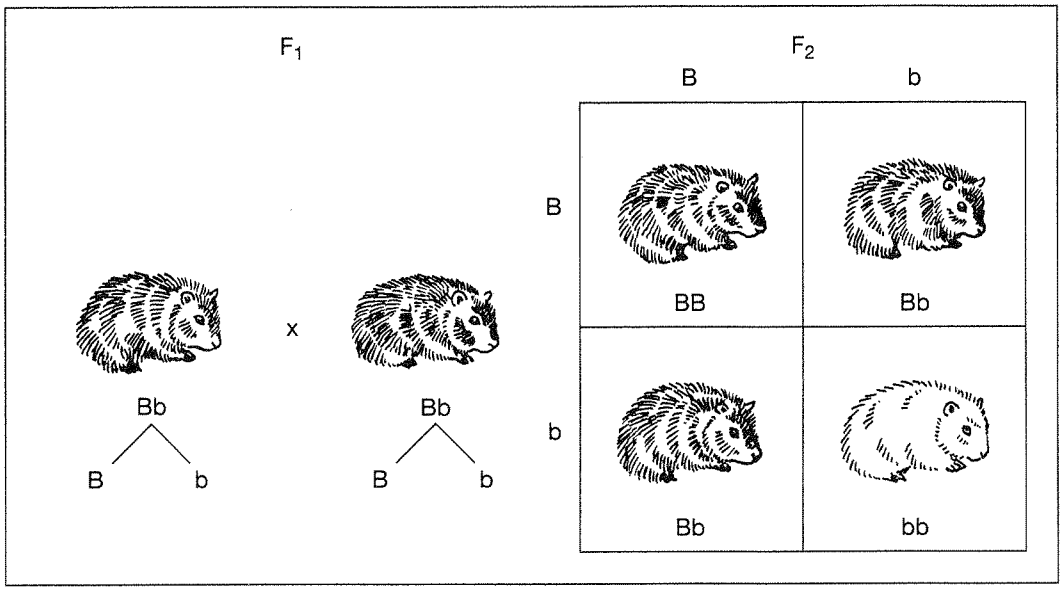
A **genotype** is the _____.

Using the definitions you stated, answer the questions about the following diagram.



1. What are the phenotypes of the parents? _____
2. What are the genotypes of the parents? _____
3. What are the phenotypes of the offspring? _____
4. What are the genotypes of the offspring? _____

© Prentice-Hall, Inc.



1. What are the phenotypes of the parents? _____

2. What are the genotypes of the parents? _____

3. What are the phenotypes of the offspring? _____

4. What are the genotypes of the offspring? _____

5. How can you explain the fact that the offspring that has a BB genotype and one that has a Bb genotype are both black? _____

_____

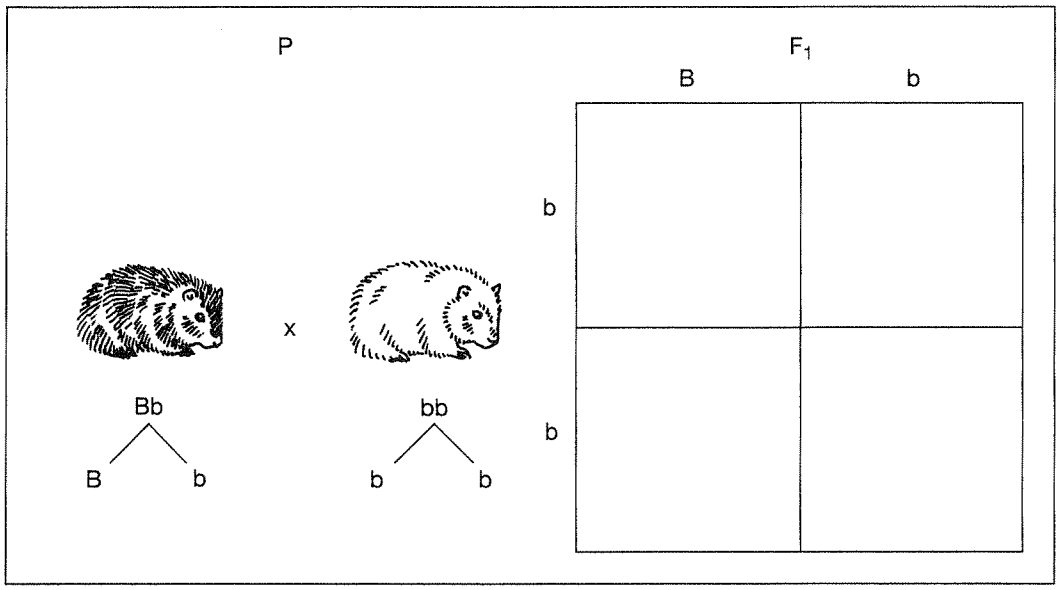
6. Can a white offspring be a hybrid? Why? _____

_____

Name _____ Class _____ Date _____

Putting It Together: Applying the Main Ideas

Demonstrate your understanding of Punnett squares and probability by completing the test cross in the Punnett square and answering the questions.



After completing the Punnett square show the relationship between the Punnett square and probability by answering these questions.

1. What is the probability of getting a white offspring from this cross?

_____

2. What is the probability of getting a black purebred offspring from this cross? Note: Read this question carefully and think about it.

_____

_____

3. Can you explain your answer?

_____

_____

© Prentice-Hall, Inc.