## **Punnett Squares and Probability**

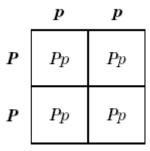
Period:

Use Chapter 6. Section 2 of your textbook to answer the guestions below.

**Punnett Squares (p.181)** 

- 1. A Punnett square is used to predict possible \_\_\_\_\_\_ for a particular cross.
- 2. Offspring get one \_\_\_\_\_\_ from each parent.

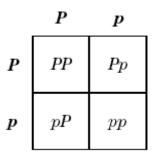
Use the Punnett square below to answer questions 3 and 4.



- \_\_\_\_\_ 3. Look at the Punnett square above. What color will the offspring of the purple (PP) and white (pp) flowers be?
  - a. purple
- b. white
- c. same number of purple and white
- d. a blend of white and purple
- \_\_\_\_\_ 4. Look at the Punnett square above. How many of the offspring from this cross will have the same genotype?
  - a. all the offspring
- c. one-fourth of the offspring
- b. half of the offspring
- d. none of the offspring

## More Evidence for Inheritance (p.182)

Use the Punnett square below to answer questions 5 and 6.



- \_\_\_\_\_ 5. Look at the Punnett square above. What are the possible genotypes of the offspring of this cross?
  - a. PP, Pp, PP, pp
- b. Pp, pp, PP, pp
- c. pp, Pp, pP, pp
- d. PP, Pp, pP, pp
- \_\_\_\_ 6. Look at the Punnett square above. Which two genotypes are exactly the same?
  - a. PP and Pp
- b. Pp and pP
- c. pp and Pp
- d. PP and pp

turn over the page for more questions

## Genetics

Name:

## **Punnett Squares and Probability**

Period:

What Are the Chances? (p.182)

- 7. How many alleles does each parent have for a gene? \_\_\_\_\_
- 8. The chance of an offspring getting one allele or another is \_\_\_\_\_\_

Probability (p.182)

- 9. \_\_\_\_\_\_ is the mathematical chance that something will happen.
- \_\_\_\_\_ 10. When you toss a coin, what is the probability of tossing tails? b. 1/4 c. 1/2 a. 1/1 d. 2/1

Calculating Probabilities (p.183)

- \_ 11. How would you calculate the probability of tossing a coin and having the coin land heads up twice in a row?
  - a.  $2 \times 2 = 4$
- b.  $1 \times 2 = 2$
- c.  $1/2 \times 2 = 1$  d.  $1/2 \times 1/2 = 1/4$

Genotype Probability (p.183)

- 12. In a pea plant, what chance does offspring of a Pp x Pp cross have to receive two p alleles?
  - a.  $1/2 \times 1/4 = 1/8$
- b.  $1/2 \times 1/2 = 1/4$
- c.  $1 \times 2 = 2$
- d.  $1/2 \times 1 = 1/2$
- \_\_ 13. How many choices were there for each pea plant trait Mendel examined?
  - a. 1
- b. 2
- c. 3
- d. 4

