Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Answer Key**



**Independent Practice: Punnett Squares**

**Complete the Punnett squares for each question, then use the table to the**

**right to answer the questions:**

**T t**

**T TT Tt**

**t Tt tt**

**t t**

**T Tt Tt**

**T Tt Tt**

**S S**

**S SS SS**

**s Ss Ss**

8. **A plant which is heterozygous for flower color is crossed with a plant that is homozygous for white flowers.** What will be the ratio of purple flowers

to white flowers?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. **A plant which is homozygous for wrinkled peas is crossed with a plant that is homozygous for smooth peas.** What percentage of offspring will

have wrinkled peas?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. **PP (**♂**) x Pp (**♀**)**

What percentage of offspring will have white flowers?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. **Tt (**♂**) x tt (**♀**)**

What percentage of

offspring will be short?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. **Ss (**♂**) x Ss (**♀**)**

What percentage of offspring will have wrinkled peas?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. **Two plants which are heterozygous for height are crossed.** What will be the ratio of tall plants to short

plants in the offspring?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. **A plant which is homozygous short is crossed with a plant that is homozygous tall.** What percentage of plants will have a heterozygous genotype?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **A plant which is homozygous for smooth peas is crossed with a plant that is heterozygous for pea shape.** What percentage of offspring will

have smooth peas?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3:1**

**100%**

**100%**

**P P**

**P PP PP**

**p Pp Pp**

**T t**

**t Tt tt**

**t Tt tt**

**S s**

**S SS Ss**

**s Ss ss**

**0%**

**50%**

**25%**

**s s**

**S Ss Ss**

**S Ss Ss**

**T t**

**t Tt tt**

**t Tt tt**

**P p**

**p Pp pp**

**p Pp pp**

9. **A plant which is heterozygous for height is crossed with a plant that has a short phenotype.** What percentage of plants

will be tall?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**50%**

**0%**

**1:1**

**b b**

**B Bb Bb**

**b bb bb**

**F f**

**f Ff ff**

**f Ff ff**

**Use this information for the questions on this page.**

11. **bb (**♂**) x Bb(**♀**)**

What will be the ratio of

brown eyes to blue eyes?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. **Ff (**♂**) x ff(**♀**)**

What percentage of offspring will have spotted fur?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. **An animal which is homozygous for short tails is crossed with an animal that is heterozygous for tail length.** What percentage of offspring will have long tails?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. **Two animals which are heterozygous for fur pattern are mated.** What will be the ratio of solid gray fur to spotted fur in the

offspring?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. **Ff (**♂**) x Ff (**♀**)**

What percentage of offspring will have spotted fur?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. **Bb (**♂**) x bb (**♀**)**

What percentage of offspring

will have blue eyes?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17.**Tt (**♂**) x Tt (**♀**)**

What will be the ratio of long tails to short tails in the

offspring?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**1:1**

**50%**

**t t**

**T Tt Tt**

**t tt tt**

**B B**

**b Bb Bb**

**b Bb Bb**

**F f**

**F FF Ff**

**f Ff ff**

13. **An animal which is homozygous for brown eyes is crossed with an animal that is homozygous for blue eyes.** What percentage of

animals will have blue eyes?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**50%**

**3:1**

**0%**

**F f**

**F FF Ff**

**f Ff ff**

**T t**

**T TT Tt**

**t Tt tt**

**B b**

**b Bb bb**

**b Bb bb**

**50%**

**25%**

**3:1**

**f f**

**F Ff Ff**

**F Ff Ff**

**T t**

**t Tt tt**

**t Tt tt**

**B b**

**b Bb bb**

**b Bb bb**

19. **An animal which is heterozygous for eye color is crossed with an animal that is homozygous for blue eyes.** What will be the ratio of brown eyes to blue eyes

in the offspring?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. **An animal that has spotted fur is crossed with an animal that is homozygous for solid gray fur.** What percentage of offspring will

have spotted fur?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. **An animal which is heterozygous for tail length is crossed with an animal that has a short tail.** What percentage of offspring will have short tails?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**50%**

**1:1**

**0%**

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