Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_

**#\_\_\_\_\_**

**Punnett Squares Practice – Part 1**

1. Cross a heterozygous tall pea plant (Tt) with a homozygous short pea plant (tt).

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a.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 b.) What are the possible phenotypes from this cross? What is the percent

 probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Cross a rabbit who is heterozygous for short ears (Ee) with another rabbit who is heterozygous for short

 ears (Ee).

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a.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 b.) What are the possible phenotypes from this cross? What is the percent

 probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) What is the dominant trait for rabbit ears? How do you know that? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

3. Cross a heterozygous red flower with a homozygous blue flower.

 a.) Which is the dominant trait?\_\_\_\_\_\_\_\_\_\_ The recessive one? \_\_\_\_\_\_\_\_\_\_

 b.) How do you know the answer to a)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

 c. ) Which letter will you use for this cross? Why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 b.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 c.) What are the possible phenotypes

 from this cross? What is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

4. Using the same pattern of dominance found in question #3, cross a homozygous red flower and a homozygous blue flower.

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 a) What is the resulting genotype? \_\_\_\_\_\_\_ and phenotype? \_\_\_\_\_\_\_\_\_\_\_\_

 b.) Are the resulting offspring hybrids or purebreds? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) What is another term you can use to describe these offspring? \_\_\_\_\_\_\_\_\_\_\_\_

5. Now cross two of the offspring from question #4.

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a.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 b.) What are the possible phenotypes

 from this cross? What is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 6. Cross a heterozygous purple flower with a homozygous yellow flower.

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a.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 b.) What are the possible phenotypes

 from this cross? What is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

7. Create your own cross… Cross a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

 Now complete a Punnett square to show the results of your cross.

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a.) List the possible genotypes and the \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each genotype. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 \_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 b.) What are the possible phenotypes

 from this cross? What is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%

 percent probability of each? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_%