Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_ Block \_\_\_\_\_\_\_\_\_

**Punnett Square Practice**

**Vocabulary**:

1. Homozygous = same (TT or tt)
2. Heterozygous = different (Tt)
3. Phenotype = physical appearance (TT, Tt or tt)
4. Genotype = gene combinations (Tall or short)
5. **Monohybrid Crosses**
6. Homozygous Black fur X Homozygous Black fur

(Black = B, white = b) Genotype:

 \_\_\_\_% - BB

\_\_\_\_\_ X \_\_\_\_\_ Phenotype:

 \_\_\_\_% - Black fur

1. Homozygous Greed pod X Heterozygous Green pod

(Greed = G, yellow = g) Genotype:

 \_\_\_\_% - GG

\_\_\_\_\_ X \_\_\_\_\_ \_\_\_\_% - Gg

Phenotype:

 \_\_\_\_% - Green pod

1. Heterozygous Tall X Heterozygous Tall

(Tall = T, short = t) Genotype:

 \_\_\_\_% -

\_\_\_\_\_ X \_\_\_\_\_ \_\_\_\_% -

 \_\_\_\_% -

Phenotype:

 \_\_\_\_% - Tall

 \_\_\_\_% - short

1. A homozygous bushy tailed squirrel is crossed with a homozygous non-bushy tailed squirrel. What are the genotypes and phenotypes of the offspring?

(Bushy tail = B, non-bushy tail = b)

\_\_\_\_\_ X \_\_\_\_\_ Genotype:

\_\_\_\_% - Phenotype:

 \_\_\_\_% -

1. A rat with red eyes is crossed with a heterozygous rat with black eyes. What are the genotypes and phenotypes of the offspring?

(Black eyes = B, red eyes = b)

\_\_\_\_\_ X \_\_\_\_\_ Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

 Phenotype:

 \_\_\_\_% -

 \_\_\_\_% -

1. A gray mouse crosses with a white mouse and has **100% gray babies**. What are the genotypes of the parents and offspring?

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

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

1. **Incomplete Dominance**
2. Homozygous Red flower X Homozygous White flower

(Red = R, White = W, Pink = RW)

\_\_\_\_\_ X \_\_\_\_\_ Genotype:

 \_\_\_\_% - **RW**

 Phenotype:

 **100**% -

1. Heterozygous Pink flower X Homozygous Red flower

(Red = R, White = W, Pink = RW)

\_\_\_\_\_ X \_\_\_\_\_ Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

 Phenotype:

 \_\_\_\_% -

 \_\_\_\_% -

1. Heterozygous Pink flower X Heterozygous Pink flower

(Red = R, White = W, Pink = RW)

\_\_\_\_\_ X \_\_\_\_\_ Genotype:

 \_\_\_\_% -

 \_\_\_\_% -

 \_\_\_\_% -

 Phenotype:

 \_\_\_\_% -

 \_\_\_\_% -

 \_\_\_\_% -

Use the chart, Determination of Blood Types, to answer the following questions.



1. What genotype combinations will produce an offspring with:
* Blood type A?
* Blood type B?
* Blood type AB?
* Blood type O?
1. Which blood type is:
	* Dominant -
	* Recessive -
2. A person with blood type **AB** is crossed with a person with blood type **AB**. What percentage of the offspring will have the listed blood types?

(A = dominant, B = dominant, o = recessive)

\_\_\_\_\_ X \_\_\_\_\_ Blood Type A: \_\_\_\_%

 Blood Type AB: \_\_\_\_%

 Blood Type B: \_\_\_\_%

 Blood Type O: **0**%

1. A person with blood type **Bo** is crossed with a person with **oo** blood type. What percentage of their offspring will have the listed blood types?

(A = dominant, B = dominant, o = recessive)

\_\_\_\_\_ X \_\_\_\_\_ Blood Type A: \_\_\_\_%

 Blood Type AB: \_\_\_\_%

 Blood Type B: \_\_\_\_%

 Blood Type O: \_\_\_\_%

1. A person with blood type **Ao** is crossed with a person with **Bo** blood type. What percentage of their offspring will have the listed blood types?

(A = dominant, B = dominant, o = recessive)

\_\_\_\_\_ X \_\_\_\_\_ Blood Type A: \_\_\_\_%

 Blood Type AB: \_\_\_\_%

 Blood Type B: \_\_\_\_%

 Blood Type O: \_\_\_\_%