

Name \_\_\_\_\_

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

## Punnett Square Practice

Adapted from <http://www.usoe.k12.ut.us/curr/science/sciber00/7th/genetics/sciber/punnett.htm>

1. Cross a homozygous short pea plant with a heterozygous tall pea plant. (tt x Tt) What will the Genotype and Phenotype of the offspring be?

	T	t
t		
t		

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

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

2. Cross a homozygous tall pea plant with a heterozygous tall pea plant. (TT x Tt) What will the Genotype and Phenotype of the offspring be?

	T	t
T		
T		

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

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

3. Cross a heterozygous tall pea plant with another heterozygous tall. (Tt x Tt) What will the Genotype and Phenotype be and what percent will carry the recessive gene for short?


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

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

% Short: \_\_\_\_\_

4. Cross a homozygous tall with a homozygous short. (TT x tt) % Tall? % Short?  
Genotype: \_\_\_\_\_ Phenotype: \_\_\_\_\_


% Tall: \_\_\_\_\_

% Short: \_\_\_\_\_

5. Cross homozygous Black fur with heterozygous Black fur. (BB x Bb) What % will be Black? % Hybrid? Genotype: \_\_\_\_\_ Phenotype: \_\_\_\_\_

% Black: \_\_\_\_\_ % Hybrid: \_\_\_\_\_


## Punnett Square Practice

- A. There are 2 homozygous cats, one with long hair (HH) and one with short-hair (hh).

First Generation

	H	H
h		
h		

	H	h
H		
h		

Second Generation

1. What are the possible genotypes for the first cross? \_\_\_\_\_
2. Is this heterozygous or homozygous? \_\_\_\_\_
3. What are the possible phenotypes for the first cross? \_\_\_\_\_
4. What are the possible genotypes for the cats in the second generation? \_\_\_\_\_
5. What are the possible phenotypes for the second cross? \_\_\_\_\_

- B. In horses the allele for black coat (B) is dominant over the allele for a brown coat. A cross between a black horse and a brown horse produces a brown foal. Use the 2 Punnett squares below to find out if the black horse is a heterozygous or a homozygous? \_\_\_\_\_

	B	B
b		
b		

	B	b
b		
b		

- C. In guinea pigs, the allele for a smooth coat (S) is dominant over the allele for a rough coat (s). A cross between a smooth guinea pig and a rough guinea pig produces a smooth guinea pig. Use the 2 Punnett squares below to find out if the smooth guinea pig is a heterozygous or a homozygous? \_\_\_\_\_

	S	S
s		
s		

	S	s
s		
s		