

Punnett's Squares

These show the 2 alleles of each parent plant crossed with each other and the resulting 4 possible offspring with T = tall, t = short.

TT = dominant tall, tt = recessive short, Tt = mixed hybrid

TT = dominant tall (genotype tall, phenotype tall)

Tt = mixed hybrid (genotype hybrid, phenotype tall)

tt = recessive short (genotype short, phenotype short)

Using the Punnett's Squares below, name the offspring of all possible parent combinations.

	T	T
T		
T		

Both parents are dominant tall, name the 4 possible offspring.

1. _____ 2. _____

3. _____ 4. _____

	T	t
T		
t		

Both parents are mixed hybrids, name the 4 possible offspring and the expected ratio.

1. _____ 2. _____

3. _____ 4. _____

	T	T
T		
t		

One parents is dominant tall, one is mixed hybrid, name the 4 possible offspring.

1. _____ 2. _____

3. _____ 4. _____

	t	t
t		
t		

Both parents are recessive short, name the 4 possible offspring.

1. _____ 2. _____

3. _____ 4. _____

Name: _____

Period: _____

Genotype Practice

With the gene and/or genotype information given, fill in the missing (or probable) genes or genotypes that result (or could result) for children and/or parents. Remember: Uppercase letters represent dominant genes and lower case letters represent recessive genes. Uppercase letters are always placed before lowercase.

	B	B
B		
b		

	B	B
B		
B		

	b	b
B		
b		

	B	b
B		
b		

	B	B
b		
b		

	b	b
b		
b		

	E	e
E		
e		

	A	a
A		
A		

	D	d
d		
d		

	H	H
H		
h		

	B	
B		
b		Bb

		B
b	Bb	

	B	
B		
		Bb

		d
D	Dd	
d		

	N	n
	Nn	
		nn

	E	
	Ee	
		Ee

R	Rr	
		rr

	FF	Ff
	FF	

	BB	
		Bb

		tt
	Tt	

	N	
N		
n		Nn

	B	B
b		
	Bb	

		d
	Dd	Dd
d		

	D	
d		
	Dd	dd

	Ee	Ee
		ee

	Bb	Bb

	Bb	Bb

		bb
	Bb	

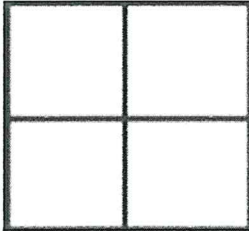
	Bb	
		Bb

	bb	

Punnett Square Practice

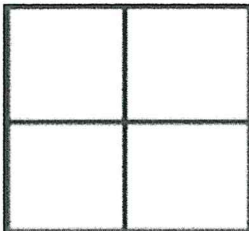
Part I: Make a Punnett Square for each cross below. Black fur (B) is dominant to gray fur(b).

Directions: Highlight all words that are in bold – these are the genotypes of your parents!
Be sure to list the potential genotypes and phenotypes of the offspring with percents!



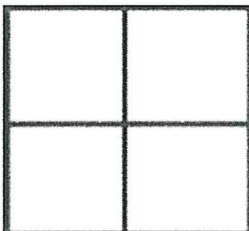
1. If the mother is **homozygous recessive** and the father is **homozygous dominant**.

- What are the genotypes of the parents?
- Write the genotype probabilities.
- Write the phenotype probabilities.



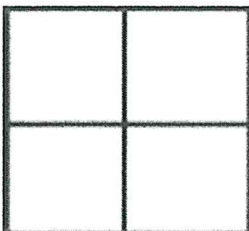
2. If the mother is **heterozygous**, and the father is **heterozygous**.

- What are the genotypes of the parents?
- Write the genotype probabilities.
- Write the phenotype probabilities



3. If the mother is **heterozygous**, and the father is **homozygous dominant**.

- What are the genotypes of the parents?
- Write the genotype probabilities.
- Write the phenotype probabilities



4. If the mother is **homozygous recessive**, and the father is **heterozygous**.

- What are the genotypes of the parents?
- Write the genotype probabilities.
- Write the phenotype probabilities

