

### Punnett Square Practice

Name: \_\_\_\_\_

Directions: Use the scenarios given below to complete the Punnett squares and determine the potential offspring for each set of parents. Use the lines on the right hand side to list the genotype and phenotype for each possible child.

1. A brown-eyed homozygous dominant female (**BB**) has a baby with a brown-eyed heterozygous male (**Bb**). B = brown, b = blue


Genotype

Phenotype

Possibility 1: \_\_\_\_\_

Possibility 2: \_\_\_\_\_

Possibility 3: \_\_\_\_\_

Possibility 4: \_\_\_\_\_

2. Freckles (**F**) are dominant to no freckles (**f**). A heterozygous mother (\_\_\_\_\_) and heterozygous father (\_\_\_\_\_) have a baby. F = freckles, f = no freckles


Genotype

Phenotype

Possibility 1: \_\_\_\_\_

Possibility 2: \_\_\_\_\_

Possibility 3: \_\_\_\_\_

Possibility 4: \_\_\_\_\_

3. The ability to roll your tongue (**R**) is a dominant trait. A woman who cannot roll her tongue (\_\_\_\_\_) has a baby with a man who is homozygous dominant for this trait (\_\_\_\_\_) .  
R = can roll tongue, r = cannot roll tongue


Genotype

Phenotype

Possibility 1: \_\_\_\_\_

Possibility 2: \_\_\_\_\_

Possibility 3: \_\_\_\_\_

Possibility 4: \_\_\_\_\_

**Punnett Square Practice****ANSWER KEY**

Directions: Use the scenarios given below to complete the Punnett squares and determine the potential offspring for each set of parents. Use the lines on the right hand side to list the genotype and phenotype for each possible child.

1. A brown-eyed homozygous dominant female (**BB**) has a baby with a brown-eyed heterozygous male (**Bb**). B = brown, b = blue

	B	B	Genotype	Phenotypes
B	BB	BB	Possibility 1: <u>BB</u>	<u>brown eyes</u>
B	BB	BB	Possibility 2: <u>BB</u>	<u>brown eyes</u>
b	Bb	Bb	Possibility 3: <u>Bb</u>	<u>brown eyes</u>
b	Bb	Bb	Possibility 4: <u>Bb</u>	<u>brown eyes</u>

2. Freckles (**F**) are dominant to no freckles (**f**). A heterozygous mother (Ff) and heterozygous father (Ff) have a baby. F = freckles, f = no freckles

	F	f	Genotype	Phenotype
F	FF	Ff	Possibility 1: <u>FF</u>	<u>freckles</u>
F	FF	Ff	Possibility 2: <u>Ff</u>	<u>freckles</u>
f	Ff	ff	Possibility 3: <u>ff</u>	<u>no freckles</u>
f	Ff	ff	Possibility 4: <u>Ff</u>	<u>freckles</u>

3. The ability to roll your tongue (**R**) is a dominant trait. A woman who cannot roll her tongue (rr) has a baby with a man who is homozygous dominant for this trait (RR).  
R = can roll tongue, r = cannot roll tongue

	r	r	Genotype	Phenotype
R	Rr	Rr	Possibility 1: <u>Rr</u>	<u>Can roll tongue</u>
R	Rr	Rr	Possibility 2: <u>Rr</u>	<u>Can roll tongue</u>
r	Rr	Rr	Possibility 3: <u>Rr</u>	<u>Can roll tongue</u>
r	Rr	Rr	Possibility 4: <u>Rr</u>	<u>Can roll tongue</u>