

Genetics Practice

Name: Key Hour: _____

1. For each **genotype**, indicate whether it is heterozygous (HE) or homozygous (HO)

AA <u>ho</u>	Ee <u>he</u>	li <u>he</u>	Mm <u>he</u>
Bb <u>he</u>	ff <u>ho</u>	Jj <u>he</u>	nn <u>ho</u>
Cc <u>he</u>	GG <u>ho</u>	kk <u>he</u>	OO <u>ho</u>
Dd <u>he</u>	HH <u>ho</u>	Ll <u>he</u>	Pp <u>he</u>

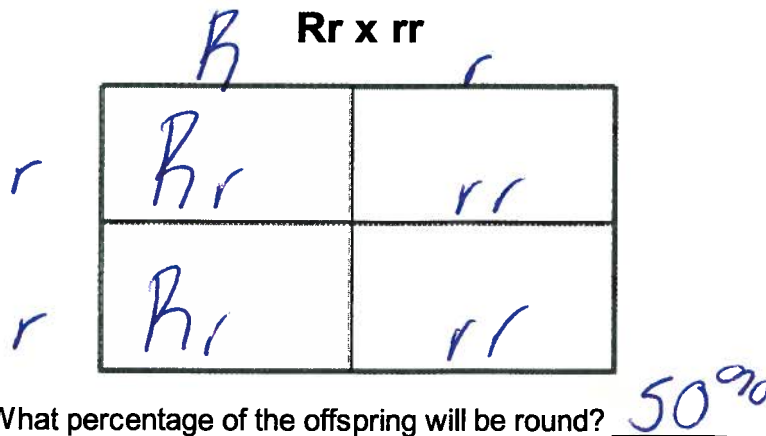
2. For each of the **genotypes** below, determine the **phenotype**.

<p>Purple flowers are dominant to white flowers</p> <p>PP <u>Purple</u></p> <p>Pp <u>purple</u></p> <p>pp <u>white</u></p>	<p>Brown eyes are dominant to blue eyes</p> <p>BB <u>Brown</u></p> <p>Bb <u>Brown</u></p> <p>bb <u>blue</u></p>
<p>Round seeds are dominant to wrinkled</p> <p>RR <u>Round</u></p> <p>Rr <u>Round</u></p> <p>rr <u>wrinkled</u></p>	<p>Bobtails are recessive (long tails dominant)</p> <p>TT <u>long tails</u></p> <p>Tt <u>long tails</u></p> <p>tt <u>Bobtails</u></p>

3. For each **phenotype**, list the genotypes. (Remember to use the letter of the dominant trait)

<p>Straight hair is dominant to curly.</p> <p><i>can use any letter</i></p> <p><u>SS</u> straight</p> <p><u>Ss</u> straight</p> <p><u>ss</u> curly</p>	<p>Pointed heads are dominant to round heads.</p> <p><u>PP</u> pointed</p> <p><u>Pp</u> pointed</p> <p><u>pp</u> round</p>
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4. Set up the square for each of the crosses listed below. The trait being studied is round seeds (dominant) and wrinkled seeds (recessive)



$Rr \times Rr$

	R	r
R	RR	Rr
r	Rr	rr

What percentage of the offspring will be round? 75%

$RR \times Rr$

	R	R
R	RR	RR
r	Rr	Rr

What percentage of the offspring will be round? 100%

Practice with Crosses. Show all work!

5. A TT (tall) plant is crossed with a tt (short plant).
 What percentage of the offspring will be tall? 100%

	T	T
T	$T+$	$T+$
t	$T+$	$T+$

6. A Tt plant is crossed with a Tt plant.
 What percentage of the offspring will be short? 25%

	T	t
T	TT	Tt
t	Tt	tt

7. A heterozygous round seeded plant (Rr) is crossed with a homozygous round seeded plant (RR).

Rr RR

	R	R
R	RR	Rr
r	Rr	Rr

What percentage of the offspring will be homozygous (RR)? 50%