

Name \_\_\_\_\_

Date \_\_\_\_\_

## PROBABILITY AND HEREDITY -Activity 1

### Sample Problems:

1. For each genotype below, indicate whether it is **heterozygous (He)** or **homozygous (Ho)**.

AA _____	Ee _____	Ii _____	Mm _____
Bb _____	ff _____	Jj _____	nn _____
Cc _____	Gg _____	kk _____	oo _____
DD _____	HH _____	LL _____	Pp _____

2. For each of the **genotypes** below determine what **phenotypes** would be possible.

*Purple flowers are dominant to white flowers.*

PP \_\_\_\_\_

Pp \_\_\_\_\_

pp \_\_\_\_\_

*Bobtails in cats are recessive.*

TT \_\_\_\_\_

Tt \_\_\_\_\_

tt \_\_\_\_\_

*Brown eyes are dominant to blue eyes*

BB \_\_\_\_\_

Bb \_\_\_\_\_

bb \_\_\_\_\_

*Round seeds are dominant to wrinkled seeds*

RR \_\_\_\_\_

Rr \_\_\_\_\_

rr \_\_\_\_\_

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

*Straight hair is dominant to curly.*

\_\_\_\_\_ straight

\_\_\_\_\_ curly



*Pointed heads are dominant to round heads.*

\_\_\_\_\_ pointed

\_\_\_\_\_ round



Round face is dominant to square face.

\_\_\_ round face

\_\_\_ square face



Long eyelashes are dominant to short eyelashes.

\_\_\_ long

\_\_\_ short



4. Set up the Punnet squares for each of the crosses listed below.

*Round seeds are dominant to wrinkled seeds.*

***RR*** x ***rr***


What percentage of the offspring will be round?  
\_\_\_\_\_

***Rr*** x ***rr***


What percent of the offspring will be round?  
\_\_\_\_\_

***RR*** x ***Rr***


What percent of the offspring will be round?  
\_\_\_\_\_

***Rr*** x ***Rr***


What percent of the offspring will be round? \_\_\_\_\_