

## Simple Genetics Practice Problems

1. For each genotype, indicate whether it is <sup>= different</sup> heterozygous (HE) or <sup>= same</sup> homozygous dominant (HOD) or homozygous recessive (HOR)

AA HOD      Ee \_\_\_\_\_      li \_\_\_\_\_      Mm \_\_\_\_\_  
 Bb HE      ff HOR      Jj \_\_\_\_\_      nn \_\_\_\_\_  
 Cc \_\_\_\_\_      GG \_\_\_\_\_      kk \_\_\_\_\_      Oo \_\_\_\_\_  
 Dd \_\_\_\_\_      Hh \_\_\_\_\_      Ll \_\_\_\_\_      Pp \_\_\_\_\_

2. For each of the genotypes below, determine the phenotype. <sup>= what it looks like</sup>

Purple flowers are dominant to white flowers

PP Purple flowers  
 Pp Purple flowers  
 pp white flowers

Brown eyes are dominant to blue eyes

BB \_\_\_\_\_  
 Bb \_\_\_\_\_  
 bb \_\_\_\_\_

Round seeds are dominant to wrinkled

RR \_\_\_\_\_  
 Rr \_\_\_\_\_  
 rr \_\_\_\_\_

Bobtails are recessive (long tails dominant)

TT \_\_\_\_\_  
 Tt \_\_\_\_\_  
 tt \_\_\_\_\_

3. For each phenotype, list the genotypes. <sup>= letter combos</sup>

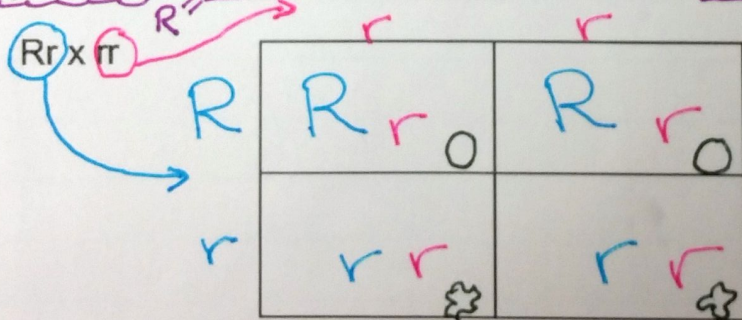
Straight hair is dominant (S) to curly (s).

SS straight  
Ss straight  
ss curly

Pointed heads are dominant (P) to round heads (p).

\_\_\_\_\_ pointed  
 \_\_\_\_\_ pointed  
 \_\_\_\_\_ round

4. Set up the square for each of the crosses listed below. The trait being studied is the shape of peas, round seeds are dominant and wrinkled seeds are recessive.



What percentage of the offspring will be round?

50%

Rr x Rr



What percentage of the offspring will be round?

\_\_\_\_\_