Biology 1
Punnett Square
Worksheet 3

Name:
Date:
Hour:

Directions: *Read each problem carefully to make sure all questions are answered. Make a "key" for the trait, identify the parents involved in the cross and the gametes each parents produces. Show a Punnett square for each problem.*

1. Yellow seeds are dominant to green seeds in peas. Show a cross between a homozygous yellow seed with a green seed. Identify the genotypic and phenotypic ratios.

2. As in the previous problem... The offspring have self-fertilized. Show this in a Punnett square. Identify the genotypic and phenotypic ratios.

3. One pea plant is homozygous recessive for white flowers, you decided to cross it with a plant that is heterozygous red. What is the probability that the offspring will have white flowers?

4. In garden peas tall is dominant over dwarf. One homozygous dominant tall plant is crossed with a dwarf, what will be the phenotype of the offspring.

5. In a pea plant round seeds are dominant over wrinkled. A plant is homozygous dominant for round seeds is crossed with a heterozygous plant, what is the probability the offspring will have wrinkled seeds and round seeds?

6. Yellow pods are dominant to green pods in peas. What is the probability that the second generation of plants will have yellow pods, if the parental generation is homozygous dominant and homozygous recessive for the pod trait?

7. Both parents can roll their tongue, yet their child cannot. What must the parent's genotype be? (Rolling of the tongue is a dominant trait.)

8. Suzie has straight hair and both her parents have curly hair. Both of Suzie's grandparents have curly hair. What could be the possible genotypes of Suzie's grandparents is she is the only one that has straight hair. (There may be more than one possibility. Curly hair is a dominant trait.)