

Name: _____ Period: __ Date: _____

Worksheet #2 – Genetics Practice Problem (monohybrid and dihybrids)

1. A blue-eyed child has a brown-eyed mother and a brown-eyed father. Is this child thinks that he is adopted? Show how it is possible for him to have blue eyes. Does blue eyes gene recessive or dominant? Develop a key and explain your answer.

2. Albinism (lack of pigment) in man is caused by a recessive gene. If normal parents have an albino child, what is the probability that their next child will be normal for color? Develop a key and show the genotypes of each parent and the results of the mating.

3. In tomatoes, yellow fruit and dwarf vine are due to recessive genes. The dominant genes are for red fruit and tall vines.
 - A. Make a separate key for each trait

 - B. If pollen (male) from a pure dwarf plant bearing red fruit is placed on the pistil (female) of a pure tall plant bearing yellow fruit, what types of offspring would be expected in the F_1 's?

 - C. Of the F_1 generations are crossed among themselves, what would be expected in the F_2 's?

4. Some dogs bark when trailing; others are silent. The barking trait is due to a dominant gene. Erect ears are dominant to drooping ears.
 - A. Make a separate key for each trait.

 - B. What kind of pups would be expected from a heterozygous erect-eared barker mated to a droop eared, silent trailer?