

## Non-Mendelian Genetics Practice Problems

### Incomplete Dominance

1. A cross between a blue blahblah bird & a white blahblah bird produces offspring that are silver. The color of blahblah birds is determined by just two alleles.

Blue Allele: \_\_\_\_\_

White Allele: \_\_\_\_\_

- a. What are the genotypes of the parent blahblah birds in the original cross?

- b. What is/are the genotype(s) of the silver offspring?



- c. What would be the phenotypic ratios of offspring produced by two silver blahblah birds?


\_\_\_\_\_ % Blue

\_\_\_\_\_ % White

\_\_\_\_\_ % Silver

### Codominance

2. Red and white hair color in cows can exhibit codominance. This means some hairs are red colored and other hairs are white colored. This sometimes gives the look of a mixture, but if individual hairs are analyzed they are only red or white, not pink. When a cow has both red and white hairs its color is referred to as roan.

White Allele: \_\_\_\_\_

Red Allele: \_\_\_\_\_

- a. If a roan colored cow is crossed with a white cow, what genotypic ratios are possible for the offspring?


\_\_\_\_\_ % Ww

\_\_\_\_\_ % WW

\_\_\_\_\_ % ww

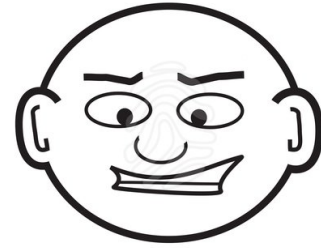


- b. For the same cross what phenotypes are possible for the offspring?

**Sex-linked**

3. Male pattern baldness is a recessive gene located on the X chromosome. If your mother is a carrier and your father does not have baldness (normal), determine your chances of developing male pattern baldness.

First, write the genotypes of your parents: \_\_\_\_\_ x \_\_\_\_\_

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