

**DOMINANT TRAITS**

In crocus flowers, white (W) and purple (P) colors are co-dominant, and result in a purple and white striped flower when both genes are present.

- 1) What are the possible results from the cross-pollination of a striped crocus with a white crocus?

Cattle can be red (RR = all red hairs), White (WW = all white hairs), or Roan (RW = red & white hairs together).

- 2) Predict the phenotypic ratios of offspring when a homozygous white cow is crossed with a roan bull.
- 3) What should the genotypes & phenotypes for parent cattle be if a farmer wanted only cattle with red fur?
- 4) What are the possible results if a white male mates with a roan female?

A cross between a black cat & a tan cat produces a tabby pattern (black & tan fur together).

- 5) What pattern of inheritance does this illustrate?
- 6) What percent of kittens would have tan fur if a tabby cat is crossed with a black cat?

**INCOMPLETE DOMINANCE**

Cross between a blue blahblah bird (I made this bird up) & a white blahblah bird produces offspring that are silver. The color of blahblah birds is determined by just two alleles.

- 7) What are the genotypes of the parent blahblah birds in the original cross?
- 8) What is/are the genotype(s) of the silver offspring?
- 9) What would be the phenotypic ratios of offspring produced by two silver blahblah birds?

In humans, wavy hair (CS) results by the cross of curly hair (C) and straight hair (S).

- 10) What are the possible results if a curly-haired man and wavy-haired woman have children?

When two plants with orange fruits are crossed the following phenotypic ratios are present in the offspring: 25% red fruit, 50% orange fruit, 25% yellow fruit.

- 11) What are the genotypes of the parent orange-fruited plants?
- 12) What percent of fruit would be red if you cross a Red fruit with an Orange fruit?