Non-Mendelian Inheritance
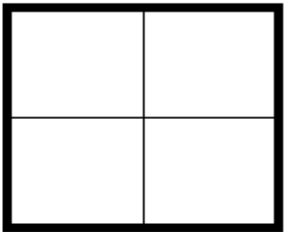
1. Define Mendelian Trait (p. 198):

Not all traits are considered Mendelian. Some Non-Mendelian types of inheritance are Polygenic traits, Co-Dominance, and Incomplete Dominance. _POLYGENIC TRAITS_ are traits that are inherited on more _than one gene._

Co-Dominance (p. 202)

2. Define Co-Dominance:

3. Example: In cows, a white cow is WW, a black cow is BB, and the heterozygous condition produces a black and white spotted cow.

a. Show a cross between a black cow and spotted cow.

b. _____% of the offspring should be White
_____% of the offspring should be Black
_____% of the offspring should be Spotted

Incomplete Dominance (p. 202)

4. Define Incomplete Dominance:

5. Example: In snapdragons, red-flowered plants are (RR), pink-flowered plants are (RW), and white flowered plants are (WW).

a. Show a cross between a red-flowered plant and a pink flowered plant.

b. _____% of the offspring should be Red
_____% of the offspring should be Pink
_____% of the offspring should be White

Sex-Linked Traits (p. 200)

6. What are the SEX CHROMOSOMES?

7. Male Genotype _____   Female Genotype _____

8. Define SEX-LINKED TRAITS -

9. In Humans, color-blindness is a _recessive_ sex linked trait (X^b). The dominant trait (X^B) is no color blindness.

   a. Show a cross between a mother that is a carrier for the color-blind trait and a father that is not color-blind.

   b. What chance do their sons have of being color-blind?

   c. What chance do their daughters have of being color-blind?

Selective Breeding
Farmers and Ranchers use a process called **SELECTIVE BREEDING** to improve their crops and herds. Using a chromebook, do a quick search and answer the following.

10. Define selective breeding.

11. Dog breeders use selective breeding to get desired traits in dogs. Describe how this is done: