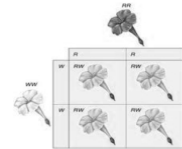


Name: _____ Date: _____ Period: _____

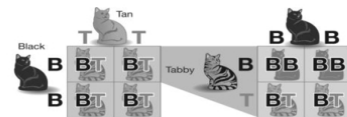
Incomplete vs. Codominance

Most genetic traits have a stronger, dominant allele and a weaker, recessive allele. In an individual with a heterozygous genotype, the dominant allele shows up in the offspring and the recessive allele gets covered up and doesn't show; we call this **complete dominance**.

However, some alleles don't completely dominate others. In fact, some heterozygous genotypes allow both alleles to partially show by blending together how they are expressed; this is called **incomplete dominance**. For example, when a red snapdragon flower (RR) is crossed with a white snapdragon flower (WW), the next generation has all pink flowers (RW)—the phenotypes of the two alleles blend like mixing paint.



Other heterozygous genotypes allow both alleles to be completely expressed and display both phenotypes at the same time; this is called **codominance**. For example, a cross between a black cat (BB) and a tan cat (TT) results in a tabby cat (BT).



Complete dominance =

Incomplete dominance =

Codominance =

Hybrid =

Purebred Line =

Practice Problems

1. Snapdragons are incompletely dominant for color; they have phenotypes red, pink, or white. The red flowers are homozygous dominant, the white flowers are homozygous recessive, and the pink flowers are heterozygous. Give the genotypes for each of the phenotypes, using the letters "R" and "W" for alleles:

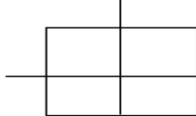
a. Red snapdragon genotype: _____

b. Pink snapdragon genotype: _____

c. White snapdragon genotype: _____

2. Show genetic crosses between the following snapdragon parents, using the punnett squares provided, and record the genotypic and phenotypic ratios below:

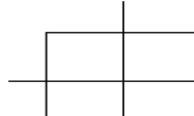
a. pink x pink



Genotypic Ratio: _____:_____:_____

Phenotypic Ratio: _____:_____:_____

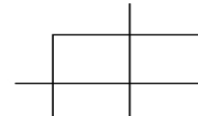
b. red x white



Genotypic Ratio: _____:_____:_____

Phenotypic Ratio: _____:_____:_____

c. pink x white



Genotypic Ratio: _____:_____:_____

Phenotypic Ratio: _____:_____:_____