Genetics Review - Mendelian inheritance:

Monohybrid: one trait

2 alleles One allele is dominant and one allele is recessive
3 genotypes and 2 phenotypes

A flower either is red in color or white in color. The heterozygote is red.

What is the dominant phenotype? What is the recessive phenotype?

What is the allele for the red? What is the allele for the white?

What is the genotype for a homozygous dominant flower?

What is the genotype for the heterozygote flower?

What is the genotype for a homozygous recessive flower?

Cross a heterozygous flower with another heterozygous flower.

What is the genotype ratio of the offspring? _____: _____: _____

What is the phenotype ratio of the offspring? _____: _____

If the offspring that are produced consists of 5 plants with red flowers and five plants with white flowers, what are the genotypes of the parents? _____

Dihybrid: two traits

2 alleles for each trait For each trait, one allele is dominant and one allele is recessive
9 genotypes and 4 phenotypes

Phenotypes are written in the following order:

# of individuals with Trait 1 dominant phenotype / Trait 2 dominant phenotype

# of individuals with Trait 1 dominant phenotype / Trait 2 recessive phenotype

# of individuals with Trait 1 recessive phenotype / Trait 2 dominant phenotype

# of individuals with Trait 1 recessive phenotype / Trait 2 recessive phenotype

A pea is either colored yellow or green. Yellow is dominant to green. 

The pea shape is wither wrinkled or smooth. Wrinkled is dominant to smooth.

Cross a pea heterozygous for both traits with another pea that is heterozygous for both traits.

What is the genotype of the two parents?

What is the phenotype ratio for the offspring?

_____ yellow/wrinkled:_____ yellow/smooth:_____ green/wrinkled:_____ green/smooth

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