

Why Biology made me tear my hair out! Practice with Dihybrid Crosses

1. In pea plants, smooth seeds (**S**) are dominant to wrinkled seeds (**s**); yellow seeds (**Y**) are dominant to green seeds (**y**). Cross a plant that is heterozygous for smooth, yellow seeds with a plant that is homozygous for wrinkled seeds and heterozygous for yellow seeds. Give all possible genotype and phenotype ratios.

Possible Genotypes & Phenotypes:

Parental Genotype:

Possible Gametes:

Phenotype Ratios:

Genotype Ratios:

2. In Martians, the allele for three eyes (**E**) is dominant over the allele for one eye (**e**). Blue lips (**B**) is dominant over purple lips (**b**). Mate a heterozygous three-eyed, blue lipped Martian with a one eyed, purple lipped Martian. What are the phenotype and genotype frequencies that result from this cross?

Possible Genotypes & Phenotypes:

Parental Genotype:

Possible Gametes:

Phenotype Ratios:

Genotype Ratios: