

Dihybrid Cross Problem Set

See pg. 150-154 in Nelson Biology 11 to review how to do these problems.

1. In pea plants, tall is dominant over short and green is dominant over yellow. Give the phenotypes and genotypes of the F1 generation of a cross between 2 pea plants TtGG and TtGg.

2. Black hair is dominant to brown hair in humans, and long fingers are dominant to short fingers. Cross a homozygous black haired person with long fingers with a heterozygous black haired person with short fingers. What are the phenotypic ratios of the offspring?

3. In summer squash, white fruit color is dominant over yellow fruit color and disk-shaped fruit is dominant over sphere-shaped fruit. If a squash plant true-breeding for white, disk-shaped fruit is crossed with a plant true-breeding for yellow, sphere-shaped fruit, what will the phenotypic and genotypic ratios be for:

- a. the F1 generation?
- b. the F2 generation

4. A pea plant that is heterozygous for both spherical seed shape and yellow seed color is crossed with a pea plant that is recessive for both seed shape (dented) and seed colour (green). What are the phenotypic and genotypic ratios for the offspring.