

DIHYBRID PUNNETT SQUARE PRACTICE PROBLEMS

Problem A: Suppose that black hair (B) is dominant over blonde hair (b) and brown eyes (E) are dominant over blue eyes (e).

The father has black hair (heterozygous) and brown eyes (heterozygous) and the mother has blonde hair and blue eyes.

Genotype of father - BbEe Genotype of mother - bbee

1. What percent of the offspring will be totally heterozygous?
2. What is the phenotype ratio?
3. What percent of the offspring will have blonde hair and blue eyes?

Problem B: Using the same traits as above, cross a completely recessive person with a blonde hair and homozygous brown eyed person.

1. What percent of the offspring will be totally heterozygous?
2. What is the phenotype ratio?
3. What percent of the offspring will have blonde hair and blue eyes?

Problem C: Yellow fruit and dwarf vines are recessive traits in tomatoes. Red fruit and tall vines are dominant. Complete a punnett square and answer the questions for a completely dominant red and tall plant crossed with a heterozygous red and dwarf plant. (You chose the letters you want to use)

1. What percent of the offspring will be totally heterozygous?
2. What is the phenotype ratio?
3. What percent of the offspring will have yellow fruit and dwarf vines?

Problem D: Using the same traits as above, cross a dwarf and homozygous red plant with a yellow and heterozygous tall plant. (You chose the letters you want to use)

1. What percent of the offspring will be totally heterozygous?
2. What is the phenotype ratio?
3. What percent of the offspring will have red fruit and dwarf vines?