

Target Practice, Unit 7 Test, Topic #2 – Variations of Dominance

1. Complete dominance = If a Red (RR) and White flower (rr) were crossbred, resulting in 100% Rr, what phenotype would be seen according to the rules of COMPLETE dominance?

2. Incomplete dominance = If a Red (RR) and White flower (rr) were crossbred, resulting in 100% Rr, what phenotype(s) would be seen according to the rules of IN-complete dominance?

3. Codominance = If a Red (RR) and White flower (WW) were crossbred, resulting in 100% RW, what phenotype(s) would be seen according to the rules of CO-dominance?

4-6. 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 “r” for alleles:

- a. Red snapdragon genotype: _____ b. Pink snapdragon genotype: _____ c. White snapdragon genotype: _____

Show genetic crosses between the following snapdragon parents, using the punnett squares provided, and record the genotypic and phenotypic %s below:

a. pink x pink

Genotypic
%: _____
Phenotypic
%: _____

b. red x white

Genotypic
%: _____
Phenotypic
%: _____

c. pink x white

Genotypic
%: _____
Phenotypic
%: _____

12. In Smileys, eye shape can be starred (SS), circular (CC), or a circle with a star (CS). Write the genotypes for the pictured phenotypes







13. Show the cross between a star-eyed and a circle eyed.

What are the phenotypes of the offspring? _____

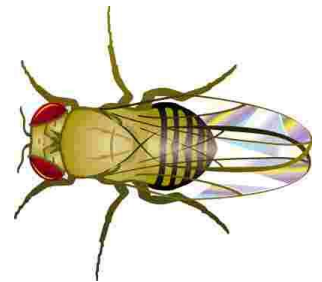
What are the genotypes? _____

In fruit flies, eye color is a sex linked trait. Red is dominant to white.

14. What are the sexes and eye colors of flies with the following genotypes:

$X^R X^r$ _____
 $X^R X^R$ _____

$X^R Y$ _____
 $X^r Y$ _____



15. What are the genotypes of these flies:

white eyed, male _____

white eyed, female _____

red eyed female (heterozygous) _____

red eyed, male _____

16. Show a cross between a pure red eyed female and a white eyed male.

What are the genotypes of the parents:

_____ & _____

How many are:

white eyed, male _____

white eyed, female _____

red eyed, male _____

red eyed, female _____

17. John Doe and Jane Doe want to have children and are thinking about how their childrens' hands might look. What would their children look like if they are both heterozygous for straight pinky and hitchhikers thumb? (Fill in the Punnett Square and the blanks).

Parents' genotypes _____ X _____

- a. Straight pinky, hitchhikers thumb _____
- b. Straight pinky, Straight thumbs _____
- c. bent pinky, hitchhikers thumb _____
- d. bent pinky, Straight thumbs _____
