

## Practice with Crosses. Show all work!

In cows, red and white coloration alleles are **codominant**. A cow that has both alleles will be ROAN (spotted with red and white).

RR= red      WW= white      RW= roan

1. A roan cow is crossed with a red cow. What percent of the offspring will be red? \_\_\_\_\_

2. A red cow is crossed with a white cow. What percent of the offspring will be roan? \_\_\_\_\_

3. A roan cow is crossed with a white cow?
- What % of the offspring will be roan?  
\_\_\_\_\_
  - What percent will be red? \_\_\_\_\_
  - What percent will be white? \_\_\_\_\_

In snapdragons flowers, the allele for flower color shows incomplete dominance. Flowers can be red (RR), white (WW), or pink (RW).

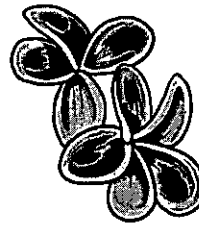
4. Two pink flowers are crossed, what percent of offspring are:

- Red \_\_\_\_\_
- White \_\_\_\_\_
- Pink \_\_\_\_\_

5. A red flower is crossed with a pink flower, what percent of offspring are:

- Red \_\_\_\_\_
- White \_\_\_\_\_
- Pink \_\_\_\_\_

6. Blood typing is controlled by multiple alleles. List the possible genotypes for each blood type:



Type A: \_\_\_\_\_  
Type B: \_\_\_\_\_  
Type AB: \_\_\_\_\_  
Type O: \_\_\_\_\_

7. A man with type AB blood is married to a woman with AB blood.

What is the probability of each blood type in their offspring?

Type A: \_\_\_\_\_  
Type B: \_\_\_\_\_  
Type AB: \_\_\_\_\_  
Type O: \_\_\_\_\_

8. A woman with type A blood is claiming that a man with type AB blood is the father of her child, who is also type AB. Could this man be the father? Show the possible crosses; remember the woman can have AA or AO.



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

9. What are the sexes and eye colors of the following genotypes:

- $X^R X^r$  \_\_\_\_\_
- $X^R X^R$  \_\_\_\_\_
- $X^r Y$  \_\_\_\_\_

10. Show the cross of a white-eyed female and a red-eyed male. How many are:

- White-eyed male \_\_\_\_\_
- White-eyed, female \_\_\_\_\_
- Red-eyed, male \_\_\_\_\_
- Red-eyed, female \_\_\_\_\_

11. Show a cross of a red-eyed female (heterozygous), and a red-eyed male. What are the genotypes of the parents?

\_\_\_\_\_ x \_\_\_\_\_

How many are:

- White-eyed male \_\_\_\_\_
- White-eyed, female \_\_\_\_\_
- Red-eyed, male \_\_\_\_\_
- Red-eyed, female \_\_\_\_\_