**Incomplete Dominance and Codominance Problems**

1. Define incomplete dominance -
2. Define codominance -
3. Which of the letters represent incomplete dominance and which represent codominance?
4. *Birds can be blue, white, or white with blue-tipped feathers.*
5. *Flowers can be white, pink, or red*
6. *A Hoo can have curly hair, spiked hair, or a mix of both curly and spiked*
7. *A Sneech can be tall, medium, or short*
8. *A Bleexo can be spotted, black, or white.*

Incomplete dominance: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
Codominance: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Incomplete Dominance**

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***In snapdragons, flower color is controlled by incomplete dominance. The two alleles are red (R) and white (W). The heterozygous genotype is expressed as pink.***

1. Using the information above:  
   1. What is the genotype for a red flower? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What is the genotype for a white flower? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. What is the genotype for a pink flower? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. If a red flower is crossed with a white flower, what is the probability that:  
   1. The offspring will be red? \_\_\_\_\_\_\_\_\_\_\_%
   2. The offspring will be pink? \_\_\_\_\_\_\_\_\_\_\_%
   3. The offspring will be white? \_\_\_\_\_\_\_\_\_\_\_%

***SpongeBob and his pal Patrick love to go jellyfishing at Jellyfish Fields! The fields are home to a special type of green jellyfish known as Goobers and only really great jellyfisherman are lucky enough to catch some on every trip. Many of the jellyfish are yellow (YY) or blue (BB), but some end up green as a result of incomplete dominance.***

1. What would happen if SpongeBob and Patrick crossed two “Goobers” (green jellyfish)?  
   1. What are the possible genotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What are the possible phenotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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* 1. What percentage would be yellow? \_\_\_\_\_\_\_\_\_\_\_%

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* 1. What percentage would be blue? \_\_\_\_\_\_\_\_\_\_\_%
  2. What percentage would be “Goobers”? \_\_\_\_\_\_\_\_\_\_%

1. What would happen if they crossed a yellow jellyfish with a Goober?

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* 1. What are the possible genotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  2. What are the possible phenotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  3. What percentage would be yellow? \_\_\_\_\_\_\_\_\_\_\_%
  4. What percentage would be blue? \_\_\_\_\_\_\_\_\_\_\_%
  5. What percentage would be “Goobers”? \_\_\_\_\_\_\_\_\_\_%

1. What would happen if they crossed a blue jellyfish with a yellow jellyfish?  
   1. What are the possible genotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What are the possible phenotypes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. What percentage would be yellow? \_\_\_\_\_\_\_\_\_\_\_%
   4. What percentage would be blue? \_\_\_\_\_\_\_\_\_\_\_%
   5. What percentage would be “Goobers”? \_\_\_\_\_\_\_\_\_\_%

**Codominance**

1. In some chickens, the gene for feather color is controlled by codominance. The allele for black is B and the allele for white is W. The heterozygous phenotype is known as erminette.  
   1. What is the genotype for black chickens? \_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What is the genotype for white chickens? \_\_\_\_\_\_\_\_\_\_\_\_
   3. What is the genotype for erminette chickens? \_\_\_\_\_\_\_\_\_\_
2. If two erminette chickens were crossed, what is the probability that:  
   1. They would have a black chick? \_\_\_\_\_\_\_\_\_\_%
   2. They would have a white chick? \_\_\_\_\_\_\_\_\_\_%
   3. They would have an erminette chick? \_\_\_\_\_\_\_\_\_\_\_%
3. If an erminette chicken is crossed with a black chicken, what is the probability that:

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* 1. They would have black chick? \_\_\_\_\_\_\_\_\_\_\_%
  2. They would have a white chick? \_\_\_\_\_\_\_\_\_\_%
  3. They would have an erminette chick? \_\_\_\_\_\_\_\_\_\_%