

**SCIENCE 7**  
**GENETICS PRACTICE PROBLEMS II**

Directions: Use your own paper and put a VMS heading on it. Use the four steps to solving Punnett Squares for each problem.

1. This is a sex linked trait problem with **“Complete Dominance”**. A female carrier of the colorblind gene is crossed with a male that has normal vision. Normal vision is dominant. Determine the following probabilities:
  - A. Percent colorblind children \_\_\_\_\_
  - B. Percent children with normal vision \_\_\_\_\_
  - C. Percent children that will be girls and carriers of colorblind gene \_\_\_\_\_
  - D. Percent children that will be boys \_\_\_\_\_
  
2. This is a sex linked trait problem with **“Complete Dominance”**. A female carrier of the hemophilia gene is crossed with a male that is a hemophiliac. Normal blood clotting is dominant and the hemophilia gene is recessive. Determine the following probabilities:
  - A. Percent children with hemophilia \_\_\_\_\_
  - B. Percent children with normal blood clotting \_\_\_\_\_
  - C. Percent children that will be girls with hemophilia \_\_\_\_\_
  - D. Percent children that will be boys with hemophilia \_\_\_\_\_
  
3. This is a **“Complete Dominance”** problem. A tall hybrid plant is crossed with another tall hybrid plant. Tall is dominant Find the following:
  - A. What percent of the offspring will be tall? \_\_\_\_\_
  - B. What percent of the offspring will be short? \_\_\_\_\_
  - C. What percent of the offspring will be tall purebred? \_\_\_\_\_
  - D. What percent of the offspring will be tall hybrid? \_\_\_\_\_
  
4. This is a **“Complete Dominance”** problem. A purebred pea plant with round seeds is crossed with one having wrinkled seeds. Round is dominant. Find the following:
  - A. What percent of the offspring will have round seeds? \_\_\_\_\_
  - B. What percent of the offspring will have wrinkled seeds? \_\_\_\_\_
  - C. What percent of the offspring will be purebred with round seeds? \_\_\_\_\_
  - D. What percent of the offspring will be hybrid with round seeds? \_\_\_\_\_
  
5. This is an **“Incomplete Dominance”** problem. Neither red nor white alleles are dominant. A red flower is crossed with a pink hybrid. Find the following:
  - A. What percent of the offspring will be red? \_\_\_\_\_
  - B. What percent of the offspring will be white? \_\_\_\_\_
  - C. What percent of the offspring will be pink? \_\_\_\_\_
  - D. What percent of the offspring will be hybrid? \_\_\_\_\_