**Name: Period: Date:**

**Focus Questions for Chapter 14.2 (Mendelian Genetics) due Friday, 1/24**

# Questions to answer as you read about Mendelian genetics. You will not be asked to turn these in, but Ms. Ransom may check to make sure you have completed them through a clicker quiz or short written response. You should be ready to discuss the answers during class.

1. If asked to calculate the **probability** of an event, the answer should fall between \_\_\_\_\_\_\_ and \_ \_\_\_\_\_\_\_.
2. How is probability calculated?
3. How is the probability of one event (such as a coin toss) affected by an event that comes before it (a previous coin toss)?
4. What is the **multiplication rule**? Why would we need to use it in biology?

1. What is the **addition rule**? Why would we need to use it in biology?

1. Two organisms, with genotypes *BbDD* and *BBDd*, are mated. Assuming independent assortment of the *B/b* and *D/d* genes, write the genotypes of all possible offspring from this cross and use the rules of probability to calculate the chance of each genotype occurring.

1. Three characters (flower color, seed color, and pod shape) are considered in a cross between two pea plants (*PpYyIi* × *ppYyii*). What fraction of offspring are predicted to be homozygous recessive for at least two of the characters?

**Questions I have that I plan to ask about in class:**