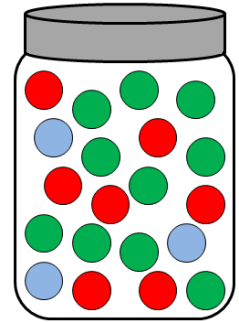# PROBABILITY STUDY GUIDE

1. There are three choices of jellybeans – grape, cherry and orange. If the probability of getting a grape is $\dfrac{3}{20}$ and the probability of getting cherry is $\dfrac{2}{5}$, what is the probability of getting orange?

2. The container below contains 7 red, 3 blue, and 10 green marbles. Without looking, if Eric chooses a marble from the container, what will the probability of getting a red marble be? A blue marble? A green marble?

3. A bag that contains 5 green marbles, 8 red marbles, and 20 blue marbles. What is the probability of pulling a green marble followed by a red marble, without replacing the first marble?

4. A bag that contains 5 green marbles, 8 red marbles, and 20 blue marbles. What is the probability of pulling a green marble followed by a red marble, with replacing the first marble?

5. A bag contains 100 marbles, some red and some purple. Suppose a student, without looking, chooses a marble out of the bag, records the color, and then places that marble back in the bag. The student has recorded 13 red marbles and 12 purple marbles. Using these results, predict the number of red marbles in the bag.

6. What is the probability of flipping a coin and having it land on heads, and then rolling a die and having it land on an even number?

7. A fair coin will be tossed three times. What is the probability that one heads and two tails in any order will results?

8. Students conduct a bag pull experiment. A bag contains 7 marbles. There is one red marble, two blue marbles and four purple marbles. Students will draw one marble without replacement and then draw another. Find the probability of drawing one purple marble followed by another purple marble.

9. A box contains 10 purple marbles, 7 green marbles and 3 orange marbles. Two consecutive draws are made from the box without replacement of the first draw.

   Find the probability of each event.

   a. P (orange first, green second)

   _____

   b. P (both marbles are purple)

   _____

   c. P (the first marble is purple, and the second is ANY color EXCEPT purple)

   _____

10. If you draw two cards from a standard deck of 52 cards without replacement, find:

    a. P (Queen first, Jack second)

       _____

    b. P (Red card first, spade second)

    _____

    c. P (2 Ace)

Answers

1. _____   7_____

2. Red _____ Blue _____ Green _____   8. _____

3. _____   9. A_____ B_____ C_____

4. _____   10. A_____ B_____ C_____

5. _____

6. _____

Name_____