Lesson 35: Compound Probability

Homework

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Name _____ **Date** _____

Directions: Use the following information to answer Questions 1 – 5.

A bag of marbles contains 1 red, 1 yellow, and 2 blue marbles. Lisa is picking one marble, not replacing it, and then choosing a second marble.

1. Using a tree diagram display the sample space. (Hint: Treat any repeated color like a separate color.)

2. What is the probability of choosing a red and then a blue? Circle the successful outcomes in the tree diagram.

3. Using the multiplication method, what is the probability of choosing a red and then a blue?

4. What is the probability of choosing a blue, replacing it, and then choosing a second blue? Use the multiplication method.

5. What is the probability that Lisa will choose a blue, not replace it, and then choose a second blue marble? Use the multiplication method.

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Directions: Use the following information to answer Questions 6 – 10.

Shawn has a die labeled 1 – 8. He also has a two-color counter that has a red side and a yellow side. Finally, he has a bag of centimeter cubes. The bag contains 5 yellow, 3 blue, 6 green, and 7 red cubes.

6. What is the probability that Shawn will pick a yellow cube, not replace it, and then pick a red cube?

7. What is the probability that Shawn will roll a number 5 or greater on the die and flip a red on the counter?

8. What is the probability that Shawn will choose two green cubes without replacing the first cube chosen?

9. What is the probability that Shawn will roll a number less than 4 and then choose a red cube from the bag of centimeter cubes?

CHALLENGE:

10. What is the probability that Shawn will roll a 7 on the die, flip yellow on the two-color counter, and choose a blue cube out of the bag? (Hint: Use a separate fraction for each event.)