HW: 7.2 Probability with Multiple Events Algebra 2 Kitt

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_

**Directions**: *For each problem, determine the probability.*

One of these names is to be drawn from a hat. Determine each probability below:

*Mary Jenny Bob Marilyn Bill Jack Jerry Tina Connie Joe*

1. P(3-letter name) = \_\_\_\_\_\_\_\_\_\_\_\_\_ 2. P(4-letter name) = \_\_\_\_\_\_\_\_\_\_\_\_\_

3. P(name starting with B) = \_\_\_\_\_\_\_\_\_\_\_\_ 4. P(name starting with T) = \_\_\_\_\_\_\_\_\_\_

5. P(7-letter name) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. P(name starting with S) = \_\_\_\_\_\_\_\_\_\_

One of these cards will be drawn without looking.

J

4

5

M

2

10

9

S

J

7

4

10

7. P(2) = 8. P(J) = \_\_\_\_\_\_\_\_\_ 9. P(a number) = \_\_\_\_\_\_\_\_\_

10. P(4) = \_\_\_\_\_\_\_\_ 11. P(T) = \_\_\_\_\_\_\_\_\_ 12. P(a letter) = \_\_\_\_\_\_\_\_\_\_

**Independent and Dependent Events**

1. A bag contains eight red marbles and four blue marbles. You randomly pick a marble and then pick a second marble *without* returning the marbles to the bag. What is the probability if the first marble is red and the second marble is blue?
2. A cooler contains ten bottles of sports drink: four lemon-lime flavored, three orange flavored, and three fruit-punch flavored. Three times, you randomly grab a bottle, return the bottle to the cooler, and then mix up the bottles. What is the probability that the first time, you get a lemon-lime drink, and the second and third times, you get fruit-punch?
3. You roll a fair six-sided die twice. What is the probability that you first roll a five, and second time roll shows a six?
4. A basket contains five apples and seven peaches. You randomly select one piece of fruit and eat it. Then you randomly select another piece of fruit. What is the probably that the first piece of fruit is an apple, and the second piece is a peach?
5. All of the letters that spell MISSSISSIPPI are put into a bag. What is the probability of selecting a vowel, and then after replacing the letter, also drawing an S?
6. What is the probability of rolling a dice and getting an even number 3 times in a row?