Secondary II Name_____
9-5 General Multiplication Rule Period_____

Events A, B, C and D are independent, and P(A) = 0.5, P(B)=0.25, P(C)=0.75, and P(D)=0.1. Find each probability.

1. P(A and B)

2. P(A and C)

3. P(C and B)

4. P(C and D)

5. P(A and D)

6. P(B and D)

Refer to the spinner shown below in which each numbered section is exactly $\frac{1}{8}$ of the circle. Find the probability of each event in three spins of the spinner.

7. All three numbers are 3 or greater than 5.

8. All three numbers are 4 or less than 6.

9. All three numbers are 7's.

10. All three numbers are even.

11. Suppose that the probability of Kevin coming to a party is 80% and the probability of Judy coming to a party is 95%. Assuming that these events are independent, what is the probability that they both will come to a party?

12. The integers 1 through 15 are written on slips of paper and placed into a box. One slip is selected at random and put back into the box, and then another slip is chosen at random.

a. What is the probability that the number 8 is selected both times?

b. What is the probability that the number 8 is selected exactly once? (Hint: Find the probability that an 8 is selected on the first or second draw, but not on both draws.)

13. An airline's records show that its flights from Los Angeles to Dallas arrive on schedule 92% of the time. They also show that its flights from Dallas to Miami leave on schedule 97% of the time. If you fly from Los Angels to Miami with a connection through Dallas, what is the probability that you will arrive at Dallas and leave from Dallas at your scheduled times?

Answer Key

1. .125

3. .1875

5. .05

7. $\frac{1}{8}$

9. $\frac{1}{512}$

11. 76%

13. 89.24%