#56

Name: _____ Date: _____ Hour: _____

"Number of trials in which each event occurs"
"The total number of trials"

If you want to find the probability of an event that occurs more than one time, you need to find the probability of each event and multiply them together. **EXAMPLE #1:** There are 6 sides on a die and you want to roll two "3's" in a row. [Sometimes written as P(3, 3)]

	1	2	3	4	5	6
1						
2			x			
3						
4						
5						
6						

- There is only one chance out of 36 where you will roll a 3 and then another 3.
- If you look at is as two individual events, the probability of rolling a 3 on the first roll is 1/6. The probability of rolling a 3 on the second roll is 1/6. In order to calculate the probability of both events occurring, you must multiply the probabilities of each individual event. $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$

EXAMPLE #2: There are 8 crayons in a bag, three crayons are yellow and five crayons are black. Find the probability of reaching in the bag and grabbing a yellow crayon, placing it back in the bag, and grabbing a black crayon. [Sometimes written as P(yellow, black)] $\frac{3}{8} \times \frac{5}{8} = \frac{15}{64}$

There are 10 marbles in a bag. Five marbles are blue, three are red and two are green.

1.) Find the probability of reaching in the bag and grabbing a green marble, placing it back in the bag, and grabbing a green marble again.

2.) Find the probability of reaching in the bag and grabbing a red marble, placing it back in the bag, and grabbing a blue marble.

3.) Find the probability of drawing two marbles in a row, with replacement, that are NOT green.

There are 16 markers in a box. Six markers are orange, six markers are purple and four markers are brown.

4.) Find the probability of grabbing a purple marker and then a brown marker with replacement.

5.) Find the probability of grabbing two orange markers in a row with replacement.

6.) Find the probability of grabbing two brown markers in a row with replacement.

There are 52 cards in a standard deck of cards. Thirteen cards are in each suit (Hearts, Diamonds, Clubs and Spades) and there are four face cards in each suit (Jack, Queen, King and Ace).

7.) Find the probability of taking two Clubs in a row with replacement.

8.) Find the probability of taking a 10 and then a 7 with replacement.

9.) Find the probability of taking an Ace and then a Diamond with replacement.

A box contains 7 watermelon, 3 cherry, and 2 banana Laffy Taffy's. If you draw a Laffy Taffy, replace it, and then draw another Laffy Taffy, what is the probability that:

10.) P(cherry, cherry) =

11.) P(watermelon, banana) =

12.) P(watermelon, not watermelon) =

A coin purse has 5 nickels, 3 dimes and 2 quarters in it. If you pick a coin, replace it, and then pick another coin, what is the probability that:

13.) P(dime, dime) =

14.) P(nickel, quarter) =

15.) P(quarter, not dime) =

Student Name: _____ Score:

Independent and Dependent

A box contains 2 red marbles, 3 white marbles, 4 green marbles and 1 blue marble. Two marbles are drawn at random without replacement. Find the probability of

	Problems	Work Space
16)	Selecting a green marble on the second draw if the first marble is blue. Answer: _____	
17)	Selecting a white marble on the first draw and red marble on the second draw. Answer: _____	
18)	Selecting a red marbles on both draws. Answer: _____	
19)	Selecting a red or white on the first draw and green or blue on the second draw. Answer: _____	
20)	Selecting a white marble on the first draw and a white or blue on the second draw. Answer: _____	