WORKSHEET 4-4
Stretch Algebra

Name _____   Block _____

Directions: Match the word with the definition

1. _____ Combination

A. An arrangement of things where order matters.

2. _____ Event

B. All possible ways a series of events CAN happen

3. _____ Fundamental Counting Principle

C. One individual outcome from a given sample space.

4. _____ Outcomes

D. An organizational tool used for listing all possible outcomes of a series of events

5. _____ Permutation

E. an arrangement of things where order DOES NOT matter.

6. _____ Sample Space

F. The number of ways 2 independent events can occur use the formula: m*n

7. _____ Tree Diagram

G. Each way a series of events can happen

Directions: Determine if each is a series of events (FCP), a Permutation ($_nP_r$) or a Combination ($_nC_r$). Then solve using the appropriate formula.

8. Mrs. Denzin needs an outfit for school. She needs to choose a bottom, a top, and shoes for a complete outfit. She decides to choose from her long black skirt or her black pants for the bottom, a white dress shirt, red sweater, or gray tank for her top and her red leopard heels, black rhinestone high heels, red go-go boots or black low heels to choose from for shoes. How many different outfits can Mrs. Denzin make with those choices?

   a. Fundamental Counting Principle? Permutation? Combination?

   b. Solve

9. The Kaferly family will visit a complex of theme parks during their summer vacation. They have a four-day pass good for one park per day. They can choose from seven parks. How many different ways can they arrange their vacation schedule?

   a. Fundamental Counting Principle? Permutation? Combination?

   b. Solve

Directions: Determine if each is a series of events (FCP), a Permutation ($_nP_r$) or a Combination ($_nC_r$). Then solve using the appropriate formula.

10. The math team wants to have practice two different days next week from Monday through Friday. How many schedules can be made?

    a. Fundamental Counting Principle? Permutation? Combination?

    b. Solve

11. How many sandwiches are possible if a restaurant lets you build your own sandwich by choosing any 4 of 10 sandwich ingredients?

    a. Fundamental Counting Principle? Permutation? Combination?

    b. Solve

12. Mike wants to order Beth a sweater for Christmas. He goes on-line and finds that the sweater he wants to get her comes in 8 sizes, 3 colors and 2 delivery methods. What are the number of possible sweater orders that could be made?

    a. Fundamental Counting Principle? Permutation? Combination?

    b. Solve

Directions: Simplilfy Completely. NO DECIMALS!!!

13. $-2 \bullet \left(\dfrac{-2}{5} \right)$

14. $-2 \div \left(\dfrac{-2}{5} \right)$

15. $\left(\dfrac{-6}{7} \right) \bullet \left(\dfrac{1}{3} \right)$

16. $\left(\dfrac{5}{6} \right) \bullet \left(\dfrac{7}{9} \right)$

17. $\left(\dfrac{5}{6} \right) \div \left(\dfrac{-2}{3} \right)$

18. $\left(\dfrac{-2}{7} \right) \div (-3)$

19. $\left(\dfrac{7}{9} \right) \div \left(\dfrac{-7}{18} \right)$

20. $\left(\dfrac{5}{3} \right) \bullet \left(\dfrac{-3}{4} \right)$