GRADE 12 APPLIED

Name:						

FUNDAMENTAL COUNTING AND PERMUTATIONS

Date:

SHOW WORK IN WORKSPACE PROVIDED. Do the Puzzle!

Did You Hear About . . .

1The	2.	3.	4-	5•	6.	7.
8.	9.	10.	11.	12.	13.	14. ?



Find each correct answer in the answer column. Write the word next to the answer in the box containing the exercise number.



Solve.

- 1. Bubba's Barbecue sells 4 kinds of sandwiches. Each sandwich comes with either chips, coleslaw, or baked beans. How many different choices are there?
- 2. Ms. Mogg has 6 sweatshirts and 5 pairs of running shorts that she wears with either green or blue running shoes. How many different outfits can she make?
- 3. Balloons or Bust sells balloons in 16 different colors. Each color comes in small, medium, or large size. They will inflate the balloon and tie on a gold, green, red, blue, orange, pink, or purple ribbon. How many different choices are there?

416 FLOWER

32,760 HER 180 JUMPED

863.040 FRIENDS

60 LITTLE

38.500 TRICYLE

35 BOTTLE

720 FRIEND

158,184,000 TOGETHER

Find the value of the expression.

4. 7P7

5. 7P3

6. ₁₅P₄

7. 200P2

95,040 BECAUSE



Solve.

- 8. Kamisha wants to line up her 4 stuffed polar bears on a shelf over her bed. How many different arrangements are possible?
- 9. Suppose you want to make an arrangement of the letters in the word "SMILE" to use as a computer password. How many choices do you have?
- 10. Ten horses are competing in a race. How many different first-second-third places finishes are possible?
- 11. Camp Cornflake offers 12 different activities. How many different schedules of 5 activities are possible?
- 12. In how many different ways can a president, vice president, secretary, and treasurer be elected from a club with 32 members?
- 13. Each locker at Kermit Middle School has a dial with 50 numbers printed on it. A lock is opened by dialing three different numbers in a certain order. How many different sequences are possible?
- 14. Regular license plates in California begin with a digit from 1-9, followed by three letters, followed by three digits, each from 0-9. How many different license plates are possible?

[Workspace]

