

Name \_\_\_\_\_

**8-1B Lesson Master****Questions on SPUR Objectives**

See pages 521–523 for objectives.

**USES** Objective H

1. An art-supply store sells tubes of white paint in 4 sizes and in 3 different brands. How many different choices of size/brand are possible? \_\_\_\_\_
2. Edward wears jeans, a T-shirt, and a sweatshirt every day to school. He has 6 pair of jeans, 9 T-shirts, and 4 sweatshirts. How many different outfits can he wear? \_\_\_\_\_
3. Amy, Beth, Carlo, and Dion plan to run for the positions of president, vice-president, secretary, and treasurer of the student council. How many ways could the four offices be filled? \_\_\_\_\_
4. A combination lock has 50 numbers. The combination consists of 3 numbers, each of which can repeat. How many different combinations can be formed?
  - a. Write your answer in exponential form. \_\_\_\_\_
  - b. Write your answer in base 10. \_\_\_\_\_
5. Emma can choose from 50 types of freshwater fish for her new aquarium. She can also choose from 12 types of artificial plants.
  - a. If she chooses just one type of plant and one type of fish, how many different ways can she set up her tank? \_\_\_\_\_
  - b. Write your answer in scientific notation. \_\_\_\_\_
6. A math quiz has 8 true-false questions and 17 multiple-choice questions with 4 answer choices.
  - a. How many different answer sheets are possible? \_\_\_\_\_
  - b. What is the probability of getting all the answers on the quiz correct by guessing? \_\_\_\_\_

Use this information for 7–9. Seven Chicago Bears football fans each wrote a letter from the phrase “GO BEARS” on their chests to show their team support. When they arrived at the game they sat next to each other in random order.

7. How many different forms of the phrase are possible? \_\_\_\_\_
8. Write your answer in scientific notation. \_\_\_\_\_
9. What is the probability that the fans spelled the phrase correctly when they first sat down at the game? \_\_\_\_\_

Name \_\_\_\_\_

**8-1B****page 2**

A bakery offers the following breakfast options.

Doughnuts	Bagels	Muffins	Beverages
Plain	Cinnamon/raisin	Blueberry	Orange juice
Chocolate	Blueberry	Apple	Coffee
Pumpkin	Oatmeal	Chocolate	Tea
Buttermilk		Cinnamon	Apple juice
		Banana/nut	

10. Gilbert always orders a bagel and a drink. How many different choices are available? \_\_\_\_\_
11. Before Anna gets to school she orders one item to eat and one item to drink. How many different choices can she make? \_\_\_\_\_

Your aunt orders **1 doughnut, 2 bagels, 2 muffins, and 5 drinks** for her and some co-workers.

12. Write the number of ways she can order
- in exponential form. \_\_\_\_\_
  - in base 10. \_\_\_\_\_
  - in scientific notation. \_\_\_\_\_

Avery and his friends attend the Fall Frolic every year. There are **15 food booths, 20 game booths, 12 rides, and a haunted house.**

13. Avery plans to eat some food and play some games. How many different choices can he make? \_\_\_\_\_
14. Avery's friend Melody wants to attend one food booth, one game booth, one ride and the haunted house. How many different choices does she have? \_\_\_\_\_
15. How does the answer to Question 14 change if Melody wants to attend 2 food booths, 2 game booths, 2 rides, and the haunted house? She can attend the same booth or ride more than once. \_\_\_\_\_
16. Avery's parents also attend the festival and intend to eat at a food booth. What is the probability that they will eat at the same food booth as Avery? \_\_\_\_\_