**6-3 Lesson Master**

**SKILLS** Objective B

1. How many 6-letter strings are there from the letters in the word TUNDRA? ________________

2. Suppose that on a 30-question multiple choice history test, each question has 4 choices.

   a. What is the length of each string? ____________________________

   b. What does each string represent? ____________________________

   c. How many possible strings are there? ________________________

**PROPERTIES** Objective E

In 3 and 4, tell whether the two events are dependent or independent.

3. Randomly choose two marbles, one after the other, from a bag of red and blue marbles when the first marble is not replaced. ____________________________

4. A fair 6-sided die is tossed twice, event $A =$ the first toss is a 4; event $B =$ the sum of the two tosses is a 7. ____________________________

**USES** Objective I

5. Refer to Question 2. If a student randomly guesses on all 30 questions, what is the probability of answering all 30 correctly? ____________________________

6. A test has 8 true-false questions and 12 multiple-choice questions each with 4 choices. What is the probability of answering all questions correctly if you randomly guess on each? ____________________________

**USES** Objective J

7. A car showroom has enough room to display 5 cars.

   a. How many ways can the five cars be arranged? ____________________________

   b. How many ways can the cars be arranged if the most expensive car is in the middle? ____________________________

8. How many license plates consisting of 3 letters A-Z followed by 3 digits 0-9 are there if repetition is allowed? ____________________________

9. How many different shirt-pants-shoes outfits are possible if you have 7 shirts, 4 pants, and 3 shoes but one shirt clashes with one of the pants, so they cannot be worn together? ____________________________