Introductory Statistics Section 2.1 Name:_____

The Fundamental Counting Principle

1. How many meals consisting of one sandwich, one drink, and one type of chips are possible from a selection of eight different sandwiches, five different drinks, and seven different types of chips?

2. A code for a locking briefcase consists of five digits that must be entered in a definite order. Each of the digits zero through nine may be used in the code, and repetition of digits is allowed. How many different five-digit codes are possible?

3. There are 30 separate candidates for three vice-president positions at a university. Assuming all 30 candidates are qualified to be selected for any one of the three VP positions, how many different ways can the positions be filled?

4. Suppose a high school issues a student identification number (ID) that consists of two letters followed by six digits (zero through nine) to each student. Assuming repetition of letters and digits is allowed, how many unique student ID numbers are possible?

5. In a certain state, a car license plate number consists of three letters followed by three digits (zero through nine). For that state, how many different car license plate numbers are possible if repetition of digits and letters is allowed?

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6. In the area code 936, how many seven-digit telephone numbers that begin with 564- are possible if repetition of digits is allowed?

7. Suppose a code is dialed by means of three disks, each of which is stamped with 15 letters. How many three-letter codes are possible using the three disks?

8. How many three-digit codes are possible using only the digits one and zero if repetition of digits is allowed?

9. In how many different ways is it possible to seat three people in three chairs?

10. How many different ways can you arrange the five letters in the word *chair* if you use all five letters each time?