**6-4 Lesson Master**

**SKILLS Objective B**
1. List all the permutations of the letters L, O, V, and E.

2. How many three-letter permutations can be made from the letters in the word PACHYDERM?

3. How many three-letter permutations can be made from the letters in the word PACHYDERM that contain no E?

**SKILLS Objective C**
In 4-7, evaluate without using a calculator.
4. \(1!\)
5. \(\frac{1}{4!}\)
6. \(0!\)
7. \(\frac{8647!}{8646!}\)
8. a. Write \(\frac{78!}{5!}\) as the ratio of two factorials.
   
   b. Evaluate the expression you wrote for Part a.

**USES Objective I**
9. A combination lock with 36 numbers opens when the correct sequence of 3 numbers is dialed. You have forgotten the combination to your lock. What is the probability you will guess it on the first try?

10. There are 15 teams in the NBA Eastern Division. What is the probability of correctly picking the top two teams in order by randomly guessing?

**USES Objective J**
11. A car seats five people, two in the front and three in the back.
   a. In how many ways can a family of five drivers be seated?
   
   b. In how many ways can a family of five be seated in the car on a driving trip if only two have driver’s licenses?