# COUNTING TECHNIQUE PROBLEMS

1) In how many ways can Iris choose 4 of 8 books to bring on vacation?

2) In how many ways can a board of supervisors choose a president, a treasurer, and a secretary from its 6 members?

3) Karen is completing a fitness circuit. There are 10 fitness stations. At each station she can choose from 4 different activities. If she chooses one activity at each fitness station, in how many ways can she complete the circuit?

4) A company makes skirts in 5 different styles. Each style comes in two different fabrics and 4 different colors. How many skirts are available from this company?

5) License plates are made using 2 letters followed by 2 digits. How many plates can be made if repetition of letters and digits is allowed?

6) If a coin is tossed 11 times, how many head-tail sequences are possible?

7) A pool of possible candidates for a student council consists of 12 freshmen and 8 sophomores. How many different Councils consisting of 5 freshmen and 7 sophomores are possible?

8) How many arrangements are there of the letters DISAPPOINT?

9) How many different arrangements are possible using 4 letters from the word PAYMENT?

10) There are 11 runners in a race. In how many ways can the first, second, and third place finishes occur? (Assume there are no ties.)

11) A poet will read 5 of her poems at an award ceremony. How many ways can she choose the 5 poems from 8 poems given that the sequence is important?

12) A license plate is to consist of 3 letters followed by 5 digits. Determine the number of different license plates possible if the first letter must be a K, L, or M and repetition of letters and numbers is not permitted.

13) In how many ways can 6 women and 3 men be seated in a row of 9 seats at a movie theater assuming that all the women must sit together and all the men must sit together?

14) In how many ways can a club choose a president, a treasurer, a secretary, and three other committee members (with identical duties) from a group of 13 candidates?

15) How many numbers in the range 1000 - 9999 have no repeated digits?