

Practice 11-7

Mixed Exercises

Use a calculator to evaluate.

1. ${}_9C_4$
 2. ${}_{12}C_8$
 3. ${}_9C_6$
 4. ${}_{15}C_9$
 5. ${}_{10}C_8$
 6. ${}_{13}C_6$
 7. ${}_{18}C_5$
 8. ${}_{16}C_3$
 9. ${}_{17}C_7$
 10. ${}_9C_5$
 11. ${}_{17}C_{13}$
 12. ${}_{14}C_7$
13. A group of six tourists arrive at the airport 15 min before flight time. At the gate they learn there are only three seats left on the airplane. How many different groups of three could get on the airplane?
 14. How many ways can you select 5 cards from a choice of 12 cards at a store?
 15. A committee of four students is to be formed from members of the student council. The student council contains 13 girls and 12 boys.
 - a. How many different committees of four students are possible?
 - b. How many committees will only contain boys?
 - c. What is the probability that the committee will only contain boys?
 16. Suppose your math class consists of 24 students. In how many ways can a group of five students be selected to form a math team?
 17. A jar of marbles contains six yellow and eight red marbles. Three marbles are selected at random.
 - a. How many different groups of three marbles are possible?
 - b. How many groups of three marbles will contain only red ones?
 - c. What is the probability that the group of marbles will contain only red ones?
 18. Suppose two members of your class need to be selected as members of the student council. Your class has 26 students in it. How many groups of two students can be selected?
 19. The letters of the alphabet are written on slips of paper and placed in a hat. Three letters are selected at random.
 - a. How many different combinations of three letters are possible?
 - b. How many combinations consist only of the letters A, C, H, I, K, or Y?
 - c. What is the probability that the letters selected consist only of the letters A, C, H, I, K, or Y?