

## Counting Problems - B

1. How many ways can you arrange the numbers 4, 7, 9?
2. There are three people in a race; in how many ways can the racers finish?
3. Ted has 4 books, algebra, chemistry, literature, and a social studies book; in how many ways can he arrange them on his bookshelf?
4. You can travel from Las Vegas to San Diego by car, plane, or train. From San Diego to San Clement, you can either travel by car or train. In how many ways can you travel from Las Vegas to San Clemente traveling through San Diego?
5. How many ways can you arrange the letters A, B, C, and D?
6. Three people can sit in the back seat of a car, how many ways can they be seated?
7. Bob has 4 shirts, 2 pair of pants, and three pairs of shoes. Assuming clothes always match, how many different outfits does Bob have?
8. In how many ways can you list any four letters of the alphabet?
9. A license plate is made up of six characters, if the first three are letters and second three are numbers, how many different license plates can be made?
10. A license plate is made up of 6 characters, the first three are letters, the second three are numbers. Once a letter or number is used, it can not be used again, how many different license plates can be made?
11. The school board has seven members, how many ways can the president and vice president be chosen if the first selected is the president?
12. A baseball team has 9 players. Find the number of ways the manager can arrange the batting order?
13. A coin is tossed five times, in how many different ways can the sequence of heads and tails appear?
14. Angelo's Pizza Palace offers three kinds of salads, 15 kinds of pizza, and five kinds of desserts. How many different three-course meals can be ordered?
15. Find the number of different ways that five flags can be flown on a flagpole, one above the other, if 8 different flags are available?
16. How many different five digit numbers can be formed if the first digit can not be zero and the last digit must be even?