Fundamental Counting Principle

Find the number of possible outcomes in the sample space.

1) A bag contains tickets numbered 0 to 9. One at a time, you pick five tickets without returning the tickets to the bag. To create a password, you write down each number in the order picked.

2) A soccer player takes nine penalty kicks in a game. Each attempt results in a goal or a miss.

3) Seven books need to be placed on a shelf. You randomly arrange the books on the shelf from left to right.

4) Five rooms in a house need to be painted. Each room can be painted white, yellow, or pink.

5) A math quiz has seven true/false questions.

6) The chess club must decide when and where to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m. There are nine classrooms available.

7) A spinner can land on either red or blue. You spin seven times and then roll a six-sided die.

8) When a button is pressed, a computer program outputs a random even number greater than 0 and less than 10. You press the button six times.

9) A jewelry store sells gold and platinum rings. Each ring is available in six styles and is fitted with one of eight gemstones.

10) A sandwich shop has three types of sandwiches: ham, turkey, and chicken. Each sandwich can be ordered with white bread or multi-grain bread. Customers can add any combination of the eight available toppings.
Sec 3 Honors

Fundamental Counting Principle

Find the number of possible outcomes in the sample space.

1) A bag contains tickets numbered 0 to 9. One at a time, you pick five tickets without returning the tickets to the bag. To create a password, you write down each number in the order picked.
   30240

2) A soccer player takes nine penalty kicks in a game. Each attempt results in a goal or a miss.
   512

3) Seven books need to be placed on a shelf. You randomly arrange the books on the shelf from left to right.
   5040

4) Five rooms in a house need to be painted. Each room can be painted white, yellow, or pink.
   243

5) A math quiz has seven true/false questions.
   128

6) The chess club must decide when and where to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m. There are nine classrooms available.
   81

7) A spinner can land on either red or blue. You spin seven times and then roll a six-sided die.
   768

8) When a button is pressed, a computer program outputs a random even number greater than 0 and less than 10. You press the button six times.
   4096

9) A jewelry store sells gold and platinum rings. Each ring is available in six styles and is fitted with one of eight gemstones.
   96

10) A sandwich shop has three types of sandwiches: ham, turkey, and chicken. Each sandwich can be ordered with white bread or multi-grain bread. Customers can add any combination of the eight available toppings.
    1536