Permutations and Combinations

Class XI

MCQ Worksheet

1. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

Ⓐ 564

Ⓑ 645

Ⓒ 735

Ⓓ 756

Ⓔ None of these

Permutations and Combinations

2. In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?

Ⓐ 360

Ⓑ 480

Ⓒ 720

Ⓓ 5040

Ⓔ None of these

Permutations and Combinations

3. In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together?

(A) 810

(B) 1440

(C) 2880

(D) 50400

(E) 5760

Permutations and Combinations

4. Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

Ⓐ 210

Ⓑ 1050

Ⓒ 25200

Ⓓ 21400

Ⓔ None of these

Permutations and Combinations

5. In how many ways can the letters of the word 'LEADER' be arranged?

(A) 72

(B) 144

(C) 360

(D) 720

(E) None of these

Permutations and Combinations

Class XI

6. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

Ⓐ 159

Ⓑ 194

Ⓒ 205

Ⓓ 209

Ⓔ None of these

Permutations and Combinations

Class XI

7. How many 3-digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?

(A) 5

(B) 10

(C) 15

(D) 20

Permutations and Combinations

8. In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?

Ⓐ 266

Ⓑ 5040

Ⓒ 11760

Ⓓ 86400

Ⓔ None of these

Permutations and Combinations

9. A box contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the box, if at least one black ball is to be included in the draw?

Ⓐ 32

Ⓑ 48

Ⓒ 64

Ⓓ 96

Ⓔ None of these

Permutations and Combinations

10. In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?

Ⓐ 32

Ⓑ 48

Ⓒ 36

Ⓓ 60

Ⓔ 120

Permutations and Combinations

Class XI

11. In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?

Ⓐ 63

Ⓑ 90

Ⓒ 126

Ⓓ 45

Ⓔ 135

Permutations and Combinations

12. How many 4-letter words with or without meaning, can be formed out of the letters of the word, 'LOGARITHMS', if repetition of letters is not allowed?

Ⓐ 40

Ⓑ 400

Ⓒ 5040

Ⓓ 2520

Permutations and Combinations

13. In how many different ways can the letters of the word 'MATHEMATICS' be arranged so that the vowels always come together?

(A) 10080

(B) 4989600

(C) 120960

(D) None of these

Permutations and Combinations

14. In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together?

Ⓐ 120

Ⓑ 720

Ⓒ 4320

Ⓓ 2160

Ⓔ None of these

Permutations and Combinations

Permutations and Combinations

Class XI

MCQ Worksheet