

INTENSIVE REVISION QUESTIONS (ERQ)

SET 17-PERMUTATIONS

Name :.....

Form :.....

Teacher:.....

1. Find the number of ways of choosing 4 letters including the letter C from the word 'COSINE'. [2 marks]
2. How many 4-digit even numbers can be formed using the digits 1, 2, 3, 4, 5, 6, 7, 8 and 9 without any digit being repeated? [4 marks]
3. A committee of 2 boys and 2 girls are to be formed from 7 boys and 11 girls. In how many ways can the committee be formed? [2 marks]
4. How many 4-letter codes can be formed using the letters in the word 'HOTELS' without repetition such that the first letter is a vowel? [2 marks]
5. In how many different ways can all the letters in the word 'VASE' be arranged without repetition? [2 marks]
6. In how many ways can a girl dress herself up from 9 different skirts, 4 different blouses and 5 different pairs of cardigans for a dinner party? [3 marks]
7. How many 7-digit numbers that are greater than 5000000 can be formed using the digits 1, 2, 3, 4, 5, 6, 7, and 9 without repetition? [4 marks]
8. In how many different ways can all the letters in the word 'BACKGROUNDS' be arranged without repetition? [2 marks]
9. In how many ways can 4 players be chosen from a group of 10 players for a tournament? [2 marks]
10. In how many ways can a girl dress herself up from 4 different skirts, 8 different blouses and 6 different pairs of cardigans for a dinner party? [3 marks]
11. 5 chairs are arranged in a column. In how many different ways can a 8 students be seated? [3 marks]
12. How many 4-digit numbers that are greater than 6000 can be formed using the digits 1, 2, 3, 6, 7, 8, and 9 without repetition? [4 marks]
13. In how many different ways can all the letters in the word 'WIN' be arranged without repetition? [2 marks]

14. 2 girls and 8 boys are to be seated in a row of 5 chairs. Find the number of ways they can be seated if no two persons of the same sex are next to each other. [4 marks]
15. Find the number of ways of choosing 5 letters including the letter G from the word 'GRACIUOS'. [2 marks]
16. 6 chairs are arranged in a column. In how many different ways can a 12 students be seated? [3 marks]
17. How many 5-letter codes can be formed using the letters in the word 'COMBINE' without repetition such that the first letter is a vowel? [2 marks]
18. 6 chairs are arranged in a column. In how many different ways can a 9 students be seated? [3 marks]
19. In how many ways can 4 players be chosen from a group of 9 players for a tournament? [2 marks]
20. 2 girls and 4 boys are to be seated in a row of 5 chairs. Find the number of ways they can be seated if no two persons of the same sex are next to each other. [4 marks]

**Answers:**

1.  ${}^5C_3 = 10$
2. 1344
3.  ${}^7C_2 \times {}^{11}C_2 = 1155$
4.  $2 \times {}^5P_3 = 120$
5. 24
6. 180
7.  $4 \times {}^7P_6 = 20160$
8. 39916800
9.  ${}^{10}C_4 = 210$
10. 192
11. 6720
12.  $4 \times {}^6P_3 = 480$
13. 6
14.  $2 \times {}^8P_3 = 672$
15.  ${}^7C_4 = 35$
16. 665280
17.  $3 \times {}^6P_4 = 1080$
18. 60480
19.  ${}^9C_4 = 126$
20.  $2 \times {}^4P_3 = 48$