Circular permutation worksheet with answers pdf

In order to continue enjoying our site, we ask that you confirm your identity as a human. Thank you very much for your cooperation. Learning Objectives: In this section you will learn to calculate the number of possible permutations of objects arranged in a circle when there are frequent items in the section we will solve the following two problems. The first problem is into the example of circular permutations, which is a typical problem in competitive exams. In this section we will solve the problem of circular permutations with the help of an example. The problem is to find the number of ways in which a group of 5 people can be seated in a circular table with no two people seated adjacent to each other.

1. In a company, there are 5 people who are to be seated in a round table for a meeting. Find out the number of ways for people to sit on a round table of 5 people such as E and F should not sit next to each other and C and G should be seated together. Solution (i) If we want to put A and B together in all arrangements, we can consider these two as a single unit. Therefore, we have 4 units to arrange in a circle. The number of ways (4-1)! or 6. Let's explain why we consider them as a single unit. Therefore, the total number of methods will be 5 x 2 or 10. (ii) How many methods will be obtained in this case?

2. Find out the number of ways for people to sit on a round table of 5 people such as E and F should not sit next to each other and C and G should be seated together. Solution (i) If we want to put A and B together in all arrangements, we can consider these two as a single unit. Therefore, we have 4 units to arrange in a circle. The number of ways (4-1)! or 6. Let's explain why we consider them as a single unit. Therefore, the total number of methods will be 5 x 2 or 10. (ii) How many methods will be obtained in this case?

3. In how many ways can 6 people be arranged such that no two people sit next to each other? Solution We again emphasize that the first person can sit anywhere without affecting the arrangement in a circle. The number of ways (6-1)! or 120.

4. Find out the number of ways for people to sit on a round table of 5 people such as E and F should not sit next to each other and C and G should be seated together. Solution (i) If we want to put A and B together in all arrangements, we can consider these two as a single unit. Therefore, we have 4 units to arrange in a circle. The number of ways (4-1)! or 6. Let's explain why we consider them as a single unit. Therefore, the total number of methods will be 5 x 2 or 10. (ii) How many methods will be obtained in this case?

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