

Arranging Objects Taken r At A Time:

A. This type of problem will always use permutations.

1. The reason why we are using permutations is because we are concerned with how many different ways we can arrange the objects, so order does not matter.

Ex [1] How many ways can we arrange 6 objects taken 3 at a time?

- a. The answer is $P(6,3) = 120$.

Ex [2] How many ways can 6 people sit on 7 chairs taken 6 at a time?

- a. The answer is $P(7,6) = 5040$.