

## Tips and Tricks

Helpful Permutation and Combination difference with examples.

Description	Permutation	Combination
What is a	Number of Arrangement or Listing of objects	Number of Selections or Grouping of objects
Where to use	If the ordering of objects matters	If the ordering of objects does not matter
Representation	${}^n P_r$	${}^n C_r$
Examples		
In a game of cricket	The number of batting line up of 11 players out of the 15 players	The number of teams consisting of 11 players out of 15 players
In a process of prize distribution	The number of ways of distributing 3 distinct prizes	The number of ways of distributing 3 identical prizes

Relation between permutation and combination:

$${}^n P_r = {}^n C_r \times r!$$

In permutation and combination it is important to understand basic type problems and then being able to apply them on new problems.

To be able to master this you should first try to understand basic problems taught in video lectures in depth. Then try to solve as many problems as possible, with more problems you will get better idea of concepts

As always try to practice timed tests.

Other realted tips are given in next two pages.