

Problems based on Combination and Permutation.

(1) **Problems based on combination or selection:** To solve such kind of problems, we use

$${}^n C_r = \frac{n!}{r!(n-r)!}.$$

(2) **Problems based on permutation or arrangement:** To solve such kind of problems, we use

$${}^n P_r = \frac{n!}{(n-r)!}.$$