



## Probability Permutation or Combination - Scenario to Formula

1

Select the correct formula.

From a class of 4 students, 2 are chosen and lined up left-to-right for a class photo. How many different line-ups are possible?

A ${}_n P_r = \frac{n!}{r!}$	B ${}_n P_r = \frac{n!}{(n-r)!}$
C ${}_n P_r = \frac{n!}{r!(n-r)!}$	D ${}_n P_r = \frac{n!}{(n+r)!}$

2

Select the correct formula.

From 5 different coloured flags, 3 are arranged in a row along a flagpole. How many arrangements are possible?

A ${}_n P_r = \frac{(n-r)!}{n!}$	B ${}_n P_r = \frac{n!}{(n+r)!}$
C ${}_n P_r = \frac{n!}{(n-r)!}$	D ${}_n P_r = \frac{r!}{(n-r)!}$

3

Select the correct formula.

A 3-digit PIN with no repeated digits is created from 5 available digits. How many PINs are possible?

A ${}_n P_r = \frac{r!}{(n-r)!}$	B ${}_n P_r = \frac{n!}{r!(n-r)!}$
C ${}_n P_r = \frac{(n-r)!}{n!}$	D ${}_n P_r = \frac{n!}{(n-r)!}$

4

Select the correct formula.

A license plate uses 2 distinct characters arranged in a row, chosen from 3 options. How many plates are possible?

A ${}_n P_r = \frac{n!}{r!}$	B ${}_n P_r = \frac{n!}{(n+r)!}$
C ${}_n P_r = \frac{n!}{(n-r)!}$	D ${}_n P_r = \frac{r!}{(n-r)!}$

5

Select the correct formula.

From 6 members, 5 delegates are selected to attend a conference. How many selections are possible?

A ${}_n C_r = \frac{n!}{r!}$	B ${}_n C_r = \frac{n!}{r! + (n-r)!}$
C ${}_n C_r = \frac{r!(n-r)!}{n!}$	D ${}_n C_r = \frac{n!}{r!(n-r)!}$

6

Select the correct formula.

A 2-digit PIN with no repeated digits is created from 4 available digits. How many PINs are possible?

A ${}_n P_r = \frac{n!}{r!(n-r)!}$	B ${}_n P_r = \frac{(n-r)!}{n!}$
C ${}_n P_r = \frac{n!}{(n-r)!}$	D ${}_n P_r = \frac{n!}{r!}$

7

Select the correct formula.

From 5 available ingredients, 2 are chosen for a custom sandwich. How many choices are possible?

A ${}_n C_r = \frac{n!}{r! + (n-r)!}$	B ${}_n C_r = \frac{n!}{r!(n-r)!}$
C ${}_n C_r = \frac{n!}{r!(n+r)!}$	D ${}_n C_r = \frac{r!(n-r)!}{n!}$

8

Select the correct formula.

From a class of 4 students, 3 are chosen and lined up left-to-right for a class photo. How many different line-ups are possible?

A ${}_n P_r = \frac{r!}{(n-r)!}$	B ${}_n P_r = \frac{n!}{r!}$
C ${}_n P_r = \frac{n!}{(n-r)!}$	D ${}_n P_r = \frac{n!}{(n+r)!}$