



## Probability Permutation or Combination - Scenario to Factorial

1

Select the correct factorial formula.

From a menu of 6 toppings, 4 pizza toppings are chosen. How many topping choices are possible?

A	$\frac{6!}{2!}$	B	$\frac{6!}{4! \cdot 2!}$
C	$\frac{5!}{5! \cdot 0!}$	D	$\frac{4!}{6! \cdot 2!}$

2

Select the correct factorial formula.

From 5 songs, 2 are placed into a numbered playlist order. How many playlists are possible?

A	$\frac{2!}{3!}$	B	$\frac{5!}{3!}$
C	<b>4!</b>	D	$\frac{5!}{2! \cdot 3!}$

3

Select the correct factorial formula.

A 2-digit PIN with no repeated digits is created from 5 available digits. How many PINs are possible?

A	$\frac{5!}{3!}$	B	$\frac{7!}{5!}$
C	$\frac{6!}{2!}$	D	$\frac{5!}{2! \cdot 3!}$

4

Select the correct factorial formula.

From 5 available courses, 3 elective courses are chosen. How many choices are possible?

A	$\frac{5!}{2!}$	B	$\frac{6!}{2! \cdot 4!}$
C	$\frac{5!}{3! \cdot 2!}$	D	$\frac{3!}{5! \cdot 2!}$

5

Select the correct factorial formula.

From 4 members, 2 delegates are selected to attend a conference. How many selections are possible?

A	$\frac{2!}{4! \cdot 2!}$	B	$\frac{4!}{2! \cdot 2!}$
C	$\frac{3!}{2! \cdot 1!}$	D	$\frac{4!}{2!}$

6

Select the correct factorial formula.

In a race with 3 runners, distinct medals are awarded to the top 2 finishers. How many ways can the medals be awarded?

A	$\frac{5!}{3!}$	B	<b>2!</b>
C	<b>3!</b>	D	$\frac{3!}{2! \cdot 1!}$

7

Select the correct factorial formula.

From 3 contestants, distinct first, second, and third prizes are awarded to 2 winners. How many ways are there?

A	$\frac{3!}{2! \cdot 1!}$	B	<b>4!</b>
C	<b>2!</b>	D	<b>3!</b>

8

Select the correct factorial formula.

From 6 available courses, 2 elective courses are chosen. How many choices are possible?

A	$\frac{8!}{2! \cdot 6!}$	B	$\frac{6!}{2! \cdot 4!}$
C	$\frac{2!}{6! \cdot 4!}$	D	$\frac{6!}{4!}$