



Calculate permutations without repetition

1 ${}_nC_r = \frac{n!}{r!(n-r)!}$

A
Permutation

B
Combination

2 ${}_nC_r = \frac{n!}{r!(n-r)!}$

A
Order matters

B
Order does not matter

3 Combination
Combination

A ${}_nC_r = \frac{n!}{r!(n+r)!}$

B ${}_nC_r = \frac{n!}{(n-r)!}$

C ${}_nC_r = \frac{n!}{r!(n-r)!}$

D ${}_nC_r = \frac{n!}{r!}$

4 Order does not matter
Order does not matter

A ${}_nC_r = \frac{n!}{r!(n+r)!}$

B ${}_nC_r = \frac{n!}{r!(n-r)!}$

C ${}_nC_r = \frac{n!}{(n-r)!}$

D ${}_nC_r = \frac{n!}{r! + (n-r)!}$

5 ${}_5P_4$

A ${}_nP_r = \frac{n!}{(n-r)!}$

B ${}_nP_r = \frac{n!}{r!}$

C ${}_nP_r = \frac{n!}{r!(n-r)!}$

D ${}_nP_r = \frac{r!}{(n-r)!}$

6 ${}_nC_r = \frac{n!}{r!(n-r)!}$

A ${}_2C_3$

B ${}_2P_5$

C ${}_5C_2$

D ${}_2P_2$

7 From 4 paintings, 2 are hung in a row along a gallery wall. How many arrangements are possible?
From 4 paintings, 2 are hung in a row along a gallery wall. How many arrangements are possible?

A ${}_2P_4$

B ${}_4P_2$

C ${}_4C_2$

D ${}_2P_2$



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8

From 6 exam questions, 4 are selected to answer. How many selections are possible?

From 6 exam questions, 4 are selected to answer. How many selections are possible?

A ${}_nC_r = \frac{n!}{(n-r)!}$

B ${}_nC_r = \frac{n!}{r! + (n-r)!}$

C ${}_nC_r = \frac{n!}{r! (n-r)!}$

D ${}_nC_r = \frac{r! (n-r)!}{n!}$

9

$$\frac{4!}{1!}$$

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A Choose 3 options in a specific order from a group of 4 options

B Choose a set of 3 items from a group of 4 total items. Ignore the order.

C From a group of 4 items select a set of 3 items regardless of order.

10

From 5 players, a tournament team of 3 is chosen. How many teams are possible?

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A 0

B 60

C 10

D 21

11

From 3 numbers, 2 lottery numbers are drawn. How many possible draws are there?

From 3 numbers, 2 lottery numbers are drawn. How many possible draws are there?

A $\frac{2!}{3! \cdot 1!}$

B $\frac{3!}{3! \cdot 0!}$

C $\frac{3!}{2! \cdot 1!}$

D $3!$

12

From 4 speakers, 2 are scheduled into the first, second, and later presentation slots. How many schedules are possible?

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A 12

B 6

C 19

D 3