

n!

$$4! = 4 \times 3 \times 2 \times 1 = \boxed{24}$$

1

(n-1)!

$$(4-1)! = 3! = 3 \times 2 \times 1 = \boxed{6}$$

2

$$\frac{(n-1)!}{2} = \frac{3!}{2} = \frac{6}{2} = \boxed{3}$$

3

$$\binom{4}{4} = \frac{4!}{4! \times 0!} = 1$$

$$4! = 24$$

$$1 \times 24 = \boxed{24}$$

4

$$\binom{4-1}{4-1} = 3! = 6$$

$$1 \times 6 = \boxed{6}$$

5

$$\frac{(n-1)!}{2} = \frac{(4-1)!}{2} = \frac{6}{2} = 3$$

$$1 \times 3 = \boxed{3}$$

6

$$\binom{4}{3} = \binom{4}{1} = 4$$

$$4! = 24$$

$$4 \times 24 = \boxed{96}$$

7

$$0! = \boxed{1}$$

arbitrary [20]

8

$$0! \times 2 = 1 \times 2 = \boxed{2}$$

9

$$4! = 24$$

$$\frac{24}{2} = \boxed{12}$$

10

$$4! \times 3! = 24 \times 6 = \boxed{144}$$

11

$$e < d < c$$

$$\binom{4}{3} = \frac{4!}{3!1!} = 4$$

$$4! \times 3! = 24 \times 6 = \boxed{144}$$

4!
3!
edc

12

$$a < d < c$$

$$\binom{4}{3} = 4$$

$$a \rightarrow d \rightarrow c$$

$$4! \times 3! = \boxed{144}$$

13

$$e < c$$

$$a < d$$

$$4! \times \frac{1}{2} \times \frac{1}{2} = \frac{4!}{4} = \boxed{24}$$

14

$$5! \times 0! = 120 \times 1 = \boxed{120}$$

15

$$2! \times 0! \times 0! = 2 \times 1 \times 1 = \boxed{2}$$

16

$$0! = 1$$

$$\binom{4}{0} = 1$$

$$0! \times 4! \times 0! = 1 \times 24 \times 1 = \boxed{24}$$

17

$$10! - 120 = 362880 - 120 = 362760$$

$$4! \times 5! = 24 \times 120 = 2880$$

$$10! - (4! \times 5! + \binom{4}{5} \times 5! \times 5!)$$

هذه هي المسألة (مثل سؤال 17)

18

18

$$2 \times 0! \times 0! = 2 \times 1 \times 1 = \boxed{2}$$

19

$$0! \times 0! = 1 \times 1 = \boxed{1}$$

20

20