

A زير

مركب

مركب و ساده

$$n! \rightarrow 4! = 24$$

19, 20

1) 1

$$(n-1)! \rightarrow (4-1)! = 3! = 6$$

1) 2

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

1) 3

$$\binom{4}{2} \times 2! = \frac{4 \times 3}{2} \times 2 \times 1 = 12 \times 2 = 24$$

1) 4

$$\binom{4}{1} \times 3! = 4 \times 6 = 24$$

1) 5

$$\binom{4}{2} \times \frac{(n-1)!}{r} = \binom{4}{2} \times \frac{3!}{2} = 12 \times 3 = 36$$

1) 6

a b c d e f  $\binom{6}{3} = 120$   ~~$\binom{6}{3} \times 3!$~~   $\binom{6}{3} \times 3!$

2) 7

c d a b e f  $\rightarrow 3! = 6$

1) 8

d c a b e f  $\rightarrow 3! \times 2! = 12$

1) 9

$$\frac{4!}{2!} = \frac{4 \times 3 \times 2 \times 1}{2 \times 1} = 12$$

1) 10

a b c d e f  $\rightarrow 3! \times 2! = 12$

1) 11

a b c d e f  $\rightarrow \frac{4!}{2!} = 4 \times 3 \times 2 = 24$

1) 12

b e c d e a f  $\rightarrow \frac{4!}{2!} = 4 \times 3 \times 2 = 24$

1) 13

b c e d a f  $\rightarrow \frac{4!}{2! \times 2!} = \frac{4 \times 3 \times 2 \times 1}{2 \times 2} = 6$

1) 14

a b c d e f  $\rightarrow 4! \times 3! = 24 \times 6 = 144$

