

<a-b-c-d-e-f>

1- $4! = 4 \times 3 \times 2 \times 1 = 24$ 2- $(n-1)! = 3! = 6$ 3- $\frac{n!}{r} = \frac{4!}{2} = 12$

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

5- $\binom{4}{3} \times 3! = \frac{4 \times 3 \times 2}{1 \times 2 \times 1} \times 6 = 24$

6- $\binom{4}{1} \times 4! = 4 \times 24 = 96$

7- a, b, c, d, e, f $\rightarrow \binom{6}{2} \times 2! = \frac{6 \times 5}{2 \times 1} \times 2 = 30$

8- (c, d), a, b, e, f $\rightarrow 2! = 2$
 \rightarrow d, c

9- $2! \times 4! = 2 \times 24 = 48$ 10- (c, d) $\frac{4!}{2!} = 12$

11- (c, d, e), a, b, f $\rightarrow 3! \times 2! = 6 \times 2 = 12$

12- (c, d) (e) $\frac{4!}{2!} = 12$ 13- (c, d) (e) $\frac{4!}{2!} = 12$

14- (c, e), (d) (a) $\frac{4!}{2! \times 2!} = 6$

<..... / >

15- (.....) (.....) $\rightarrow 2! \times 4! = 48$

16- (.....) (.....) $\rightarrow 2! \times 2! \times 2! = 24$

17- -o-o-o-o-o-o- $\rightarrow 2! \times \binom{4}{2} \times 2! = 48$

18- 1.1- $4! \times 2! = 24 \times 2 = 48$

19- (.....) $\rightarrow 2 \times 2! \times 2! = 8$ 20- $2! \times 2! = 4$