

Factorial

The symbol of Factorial is
'!'

Example 1

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

Example 2

$$\frac{3! 2!}{9!}$$

$$\frac{\cancel{3!} 2!}{9 \times 8 \times 7 \times 6 \times 5 \times 4 \times \cancel{3!}}$$

$$\frac{\cancel{2} \times 1}{9 \times 8 \times 7 \times 6 \times 5 \times \cancel{4} \times 2}$$

$$\frac{1}{9 \times 8 \times 7 \times 6 \times 5 \times 2}$$

important

$$0! = 1$$