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## Derivation of permutation of expression of objects not all different

- n objects as total.
- p objects of one kind.
- · q objects of one kind.
- r objects of one kind.
- · Permutation of 'n' objects as 'x'.
- Permutation of p, q, r objects as p! , q! , r!
- · Permutation of n objects as

.

$$n! = x \times p! \times q! \times r!$$

.

$$x = \frac{n!}{p!q!r!}$$

.

Total number of Permutation 
$$=\frac{n!}{p!q!r!}$$

## Expression of permutation of objects not all different

Total number of permutation  $=\frac{n!}{p!q!r!}$