Expansion

- $a(b+c) = ab + ac$
- $(a+b)(c+d) = ac + ad + bc + bd$.
- $(a+b)(a+b) = a^2 + 2ab + b^2$
  $(a+b)^2$
- $(a-b)(a-b) = a^2 - 2ab + b^2$
  $(a-b)^2$
- $(a-b)(a+b) = a^2 - b^2$

Factorizing

- Taking out Common factor.
  $ab + ac \Rightarrow a(b+c)$
- special results:-
  $a^2 + 2ab + b^2 \Rightarrow (a+b)^2$
  $a^2 - 2ab + b^2 \Rightarrow (a-b)^2$
  $a^2 - b^2 \Rightarrow (a-b)(a+b)$