

ALGEBRA FORMULAS

Square of
Binomial

$$(a+b)^2 = a^2 + 2ab + b^2$$

$$(a-b)^2 = a^2 - 2ab + b^2$$

Difference
of squares

$$a^2 - b^2 = (a - b)(a + b)$$

Cube of
Binomial

$$(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a - b)^3 = a^3 - 3a^2b + 3ab^2 + b^3$$

$$(x + a)(x + b) = x^2 + (a + b)x + ab$$

Product of
Binomial

Sum of
cubes

$$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$$

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

Diff of
cubes

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$$

Sq. of
Trinomial