The Practise Ground

Class 8-10 Maths

Algebraic Identities

Four identities that save time

1

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

Square of a sum

Example: $103^2 = (100 + 3)^2 = 10609$

2

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

Square of a difference

Example: $98^2 = (100 - 2)^2 = 9604$

3

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

Difference of two squares

Example: $51^2 - 49^2 = 100 \times 2 = 200$

4

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

Cube of a sum

Example: $11^3 = (10 + 1)^3 = 1331$

Use them to

Spot the pattern before you multiply or factorise.

They make mental maths and factorising much faster.

More examples

Expand: $(x + 4)^2 = x^2 + 8x + 16$

Factorise: $x^2 - 9 = (x + 3)(x - 3)$

Think you've got it? Test yourself.

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