

The Distributive Property

6th Grade

Multiply everything inside the bracket — including the term you forget.

A number outside a bracket multiplies every single term inside it, not just the first one.

$$a(b + c) = ab + ac$$

$$3(x + 4)$$

$$3x + 12$$

Both terms get multiplied.

$$5(2x - 3)$$

$$10x - 15$$

The minus sign is carried through.

$$-2(x + 6)$$

$$-2x - 12$$

A negative outside flips the sign of everything inside.

Factorising back

$$6x + 9 = 3(2x + 3)$$

The same rule, run in reverse.

THE COMMON MISTAKE

$$\times 3(x + 4) = 3x + 4$$

$$\checkmark 3(x + 4) = 3x + 12$$

The 3 multiplies everything inside. The 4 does not escape.

This one rule becomes long multiplication, then expanding brackets, then factorising. It never stops being useful.