Combining Like Terms

6th Grade

Only terms with identical variable parts can be added together.

Like terms have exactly the same variable raised to exactly the same power. Add their coefficients; the variable part never changes.

$$5x + 3x = 8x$$

$5x + 3x$ → **$8x$**

Same variable, same power.

$5x + 3y$ → **$5x + 3y$**

Different variables — nothing to combine.

$4x^2 + 2x$ → **$4x^2 + 2x$**

Same letter, different power. Not like terms.

$7a - 2a + 5$ → **$5a + 5$**

Combine the a terms; the constant stays separate.

THE COMMON MISTAKE

× $4x^2 + 2x = 6x^3$

✓ $4x^2 + 2x$ cannot be combined

Adding terms never multiplies the variables or adds the powers.

Think of x and x^2 as different units, like metres and square metres. You cannot add them.