Adding and Subtracting Expressions (Like Terms)

Terms and Like Terms

Key idea

In $-5x^2$, the **coefficient** is -5 and the **variable part** is x^2.

Terms are **like** only when their variable parts match: $3x$ and $-2x$ are like; $3x$ and $3x^2$ are not.

Method

Mark each sign, match variable parts, combine coefficients.

Example

$3c - 10d - c + 4d$

$= (3c - c) + (-10d + 4d) = 2c - 6d$

Common mistake

Adding never adds the powers: $x^3 + x^3 = 2x^3$, **not** $2x^6$.

= copy this into your book. Boxes without a pencil are just to read.

Adding and Subtracting Expressions (Like Terms)

Fractions and Perimeters

Key idea

Coefficients can be fractions, or contain π and $\sqrt{}$ — collect them exactly like whole numbers.

Example

$$\frac{1}{2}y + \frac{3}{4}y = \frac{5}{4}y$$

Perimeter example

An equilateral triangle with side $2x + y$ has perimeter $3(2x + y) = 6x + 3y$.

Common mistake

x and x^2 are **not** like terms: $2x^2 + 3x - x^2 = x^2 + 3x$, not $4x^2$.

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