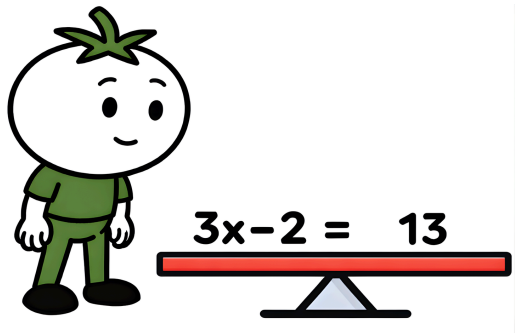
Solving Linear Equations
(One and Two-Step)

Level 1 - Solve linear equations with one step
Level 2 - Solve linear equations with two steps
Level 3 - Solve two-step equations involving fractions

Solving an equation means finding the value of the variable (like x) that makes the equation true. The goal is to isolate the variable by undoing operations in the reverse order they were applied.

Think of equations as balanced scales. Whatever you do to one side, you must also do to the other side.



Step 1: Isolate the term the variable is in.
Step 2: Isolate the variable itself.

Equations with fractions can be simplified by clearing the fraction first, then solving as usual.

Example #1	**Example #2**	**Example #3**
$x - 2 = -5$	$\frac{x}{3} + 4 = 5$	$\frac{1}{4}\left(x + \frac{3}{2}\right) = 2$
$x - 2 = -5$ $+2 \quad +2$ $\boxed{x = -3}$	$\frac{x}{3} + 4 = 5$ $-4 \quad -4$ $(3) \times \frac{x}{3} = 1 \times (3)$ $\boxed{x = 3}$	$(4) \times \frac{1}{4}\left(x + \frac{3}{2}\right) = 2 \times (4)$ $x + \frac{3}{2} = 8$ $x + \frac{3}{2} - \frac{3}{2} = 8 - \frac{3}{2}$ $x = \frac{16 - 3}{2}$ $\boxed{x = \frac{13}{2}}$

Remember:
- Always keep the equation balanced by doing the same step to both sides.
- Undo operations in reverse order: fix addition/subtraction first, then multiplication/division.
- For fractions, clear them early by multiplying through by the denominator.