Finding x- and y-intercepts

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Key idea

An **intercept** is where a graph crosses an axis: the **y-intercept** on the y-axis, the **x-intercept** on the x-axis.

Method

y-intercept: set $x = 0$, solve.
x-intercept: set $y = 0$, solve.
Write each answer as a point.

Example: $y = 2x + 8$

Set $x = 0$: $y = 8$, so $(0, 8)$.
Set $y = 0$: $0 = 2x + 8 \Rightarrow x = -4$, so $(-4, 0)$.

Common mistake

To find the x-intercept it is the **y**-value that becomes 0 — do not zero the wrong variable.

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

Finding x- and y-intercepts

Standard Form and Special Lines

Standard form: $3x - 2y = 12$

Set $x = 0$: $-2y = 12 \Rightarrow y = -6$, so $(0, -6)$.
Set $y = 0$: $3x = 12 \Rightarrow x = 4$, so $(4, 0)$.

Horizontal line: $y = 6$

Crosses the y-axis at $(0, 6)$. It never reaches $y = 0$, so it has **no x-intercept**.

Common mistake

An intercept is a **point**, not just a number — write $(0, 5)$, not 5.

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