

Slope-Intercept Form

8th Grade

$y = mx + b$ — the form you can graph without doing any working.

In $y = mx + b$, m is the slope and b is the y -intercept — the point where the line crosses the y -axis.

$$y = mx + b$$

$$y = 2x + 3$$

Read both straight off.

slope 2, crosses at (0,3)

$$y = -x + 5$$

A bare minus means a coefficient of -1 .

slope -1 , crosses at (0,5)

$$y = 4$$

No x term, so a horizontal line.

slope 0, crosses at (0,4)

$$2y = 6x + 8$$

Divide everything by 2 to get into the form first.

$$y = 3x + 4$$

THE COMMON MISTAKE

✗ reading b from $2y = 6x + 8$ as 8

✓ b is 4

The equation must be solved for y before the form can be read.

To graph: mark b on the y -axis, then use rise-over-run to step to a second point.