

Three Forms of a Line

8th Grade

Same line, three ways of writing it — and what each is good for.

Slope-intercept, point-slope and standard form all describe the same line. Which is easiest depends on the information you start with.

$$y = mx + b \cdot y - y_1 = m(x - x_1) \cdot Ax + By = C$$

Given slope and intercept

slope-intercept

$y = mx + b$. Ready to graph.

Given a point and slope

point-slope

$y - y_1 = m(x - x_1)$. No rearranging needed.

Given two points

find m , then point-slope

Slope first, then substitute either point.

Finding intercepts

standard form

Set $x = 0$, then $y = 0$.

All three convert into one another with algebra. None is more correct than the others.