Slope-Intercept Screen

Explore the parameters of the slope-intercept form of a line.

VIEW Simplified equation of line

DRAG the blue point to change the slope

DRAG the pink point to change the y-intercept

USE the point tool to get the integer coordinates of any point

MANIPULATE the slope and/or y-intercept from the equation

SAVE a line to compare multiple lines simultaneously

SHOW reference lines of $y = x$ or $y = -x$

$y = mx + b$

$y = \dfrac{8}{-4}x + -3$

Save Line   Erase Lines

Slope

$y = x$

$y = -x$

(2, -7)

(?, ?)

Graphing Slope-Intercept

Slope-Intercept   Line Game

Game Screen

Challenges are random within each level, but increase in difficulty.

LEVELS 1-2: Set the Slope or Set the Y-Intercept by manipulating either the equation or the graph

Your Equation:

$y = \dfrac{1}{1}x - 3$

Your Equation:

$y = \dfrac{2}{3}x + 0$

LEVELS 3-4: Make the Equation, Graph the Line, or Put Points on Line

Your Equation:

$y = \dfrac{1}{1}x + 0$

Choose Your Level

| Level 1 | Level 2 | Level 3 | Level 4 |

Slope-Intercept

Slope-Intercept   Line Game

Complex Controls

- If two points are stacked vertically on any screen, the slope will be displayed as undefined and a red x will appear over the equation.

See all published activities for Graphing Slope-Intercept here.
For more tips on using PhET sims with your students, see Tips for Using PhET.