

Algebra /

Graphing a line given its equation in slope-intercept form: Fractional...

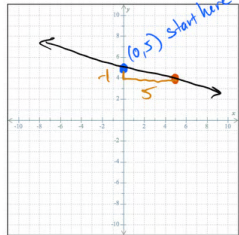
Keys to Success:

The key to this problem is figuring where to start and go from there. You want to start at you b (y-intercept) and then do what your slope says. Slope is rise over run so for the top number you go up if it's positive and down if it's negative and the bottom number you always go that many to the RIGHT.

Worked Examples:

Graphing a line given its equation in slope-intercept form: Fractional slope

Graph the line.
 $y = -\frac{1}{5}x + 5$



$y = mx + b$
 $m = \text{slope} \frac{\text{rise}}{\text{run}}$
 $b = \text{y-intercept}$ *starting point*
 (x, y) any point on the line

$y = -\frac{1}{5}x + 5$
 $m = -\frac{1}{5}$ since negative $\frac{\text{down } 1}{\text{right } 5}$
 $b = 5$ start at $(0, 5)$

Note: The Solve feature is not available to students.

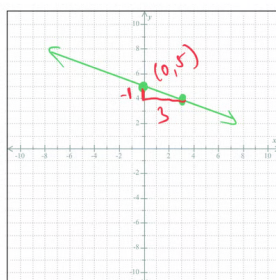
Explanation Try Another Check Solve

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Graphing a line given its equation in slope-intercept form: Fractional slope

Graph the line.

$$y = -\frac{1}{3}x + 5$$



$$y = mx + b$$

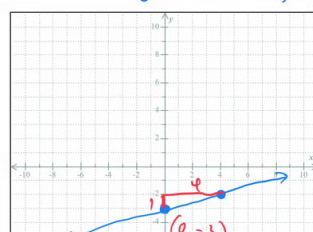
$$m = -\frac{1}{3} \frac{\text{down } 1}{\text{right } 3}$$

$$b = 5$$
 start here

Graphing a line given its equation in slope-intercept form: Fractional slope

Graph the line.

$$y = \frac{1}{4}x - 3$$



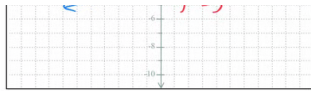
$$m = \frac{1}{4} \frac{\text{up } 1}{\text{right } 4}$$

$$b = -3$$
 (0, -3) *start here*

$$y = mx + b$$

$$m = \text{slope} \frac{\text{rise}}{\text{run}} \frac{\text{up/down}}{\text{right}}$$

$$b = \text{y-intercept}$$
 starting point
 $x=0$ (0, b)
 (x, y) any point on line

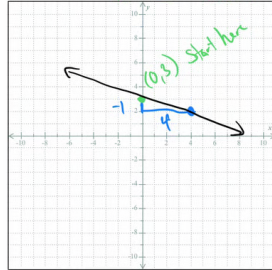


Graphing a line given its equation in slope-intercept form: Fractional slope

Graph the line.

$$y = -\frac{1}{4}x + 3$$

$m = -\frac{1}{4}$ down 1 right 4
 $b = 3$ *start here*



$$y = mx + b$$

$m = \text{slope} \quad \frac{\text{rise}}{\text{run}} \quad \frac{\text{up/down}}{\text{right}}$
 $b = \text{y-intercept} \quad \text{*start here*}$

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