

Lesson 3.2 Graphing Linear Equations Using Slope

If the **slope** of a line and the place it **intercepts** (or crosses) the y -axis are known, a line can be graphed using an equation with x and y variables.

Graph $y = -2x + 5$.

slope

intercept

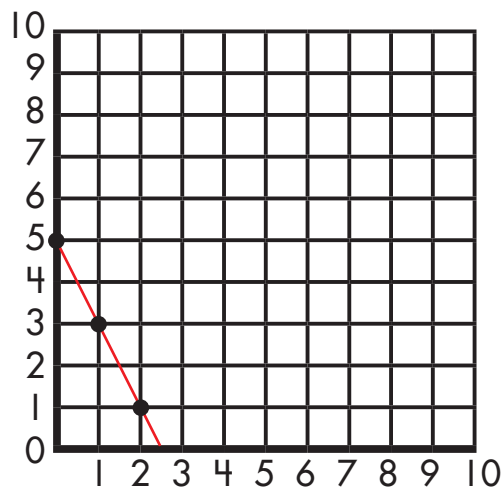
Step 1: Find the point where the line crosses the y -axis. $(0, 5)$

Step 2: Find the slope: -2 .

In fraction form, the slope is $-\frac{2}{1}$.

Step 3: Starting at the intercept, mark the slope by using the numerator to count along the y -axis, and the denominator to count along the x -axis: Move down 2, and to the right 1.

Step 4: Draw a line to connect the points.

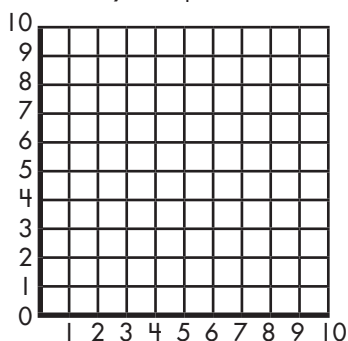


Use the slope-intercept form of equations to draw lines on the grids below.

a

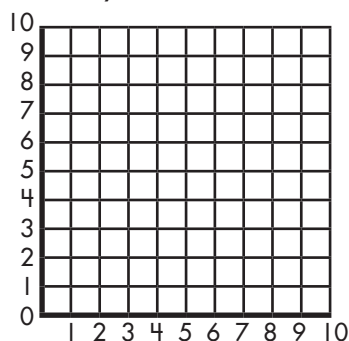
1.

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



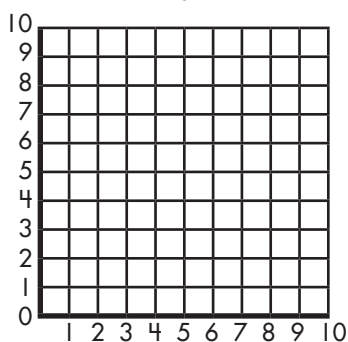
b

$$y = -x + 2$$



2.

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



$$y = 2x + 3$$

