

Graphing Linear Equations Part 3

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Mathematics 9 Linear Relations Graphing Linear Relations Part 3

A. Graphing Complex Linear Equations

We have learned that in order to graph a linear equation we must first create a table of values and find 3 acceptable points. Since a complex linear equation contains a fraction, your choices for x and y will be even more restricted.

Example 1

$$y = \frac{2}{3}x - 4$$

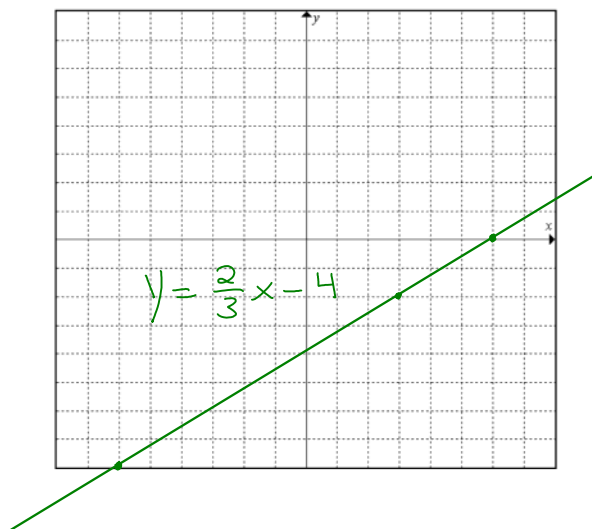
x	y
6	0
3	-2
-6	-8

Hint: If your equation contains a fraction, try picking numbers which are multiples of the denominator.

$$\begin{aligned}y &= \frac{2}{3}x - 4 \\y &= \frac{2}{3}(6) - 4 \\y &= 4 - 4 \\y &= 0 \checkmark\end{aligned}$$

$$\begin{aligned}y &= \frac{2}{3}x - 4 \\y &= \frac{2}{3}(3) - 4 \\y &= 2 - 4 \\y &= -2 \checkmark\end{aligned}$$

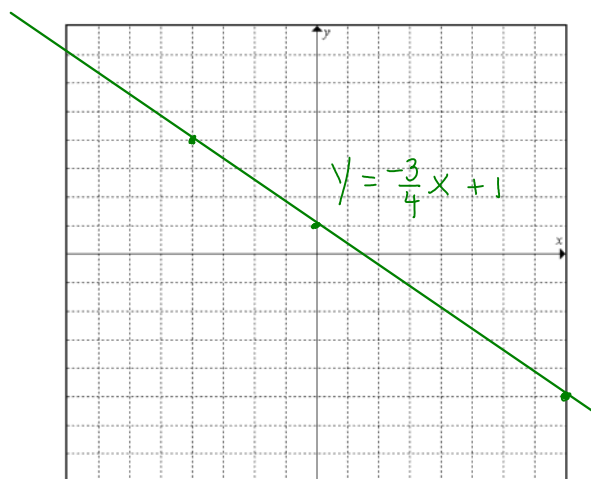
$$\begin{aligned}y &= \frac{2}{3}x - 4 \\y &= \frac{2}{3}(-6) - 4 \\y &= -4 - 4 \\y &= -8 \checkmark\end{aligned}$$



Example 2

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

x	y
8	-5
-4	4
0	1



$$\begin{aligned}y &= -\frac{3}{4}x + 1 \\y &= -\frac{3}{4}(8) + 1 \\y &= -6 + 1 \\y &= -5 \checkmark\end{aligned}$$

$$\begin{aligned}y &= -\frac{3}{4}x + 1 \\y &= -\frac{3}{4}(-4) + 1 \\y &= 3 + 1 \\y &= 4 \checkmark\end{aligned}$$

$$\begin{aligned}y &= -\frac{3}{4}x + 1 \\y &= -\frac{3}{4}(0) + 1 \\y &= 0 + 1 \\y &= 1 \checkmark\end{aligned}$$

Assignment: Graphing Linear Equations Part 3 Assignment

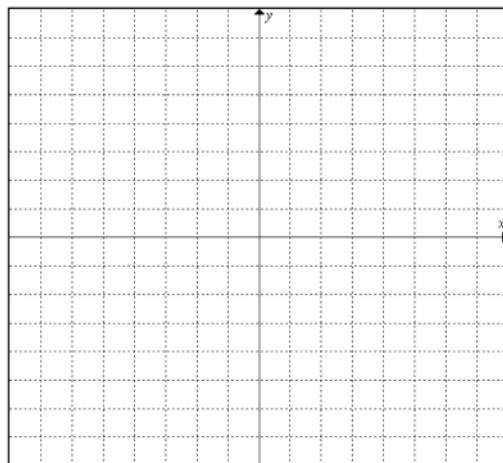
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Graphing Linear Equations Part 3 Assignment

For each of the following linear equations, create a table of values of 3 acceptable points and then graph and label the linear equation.

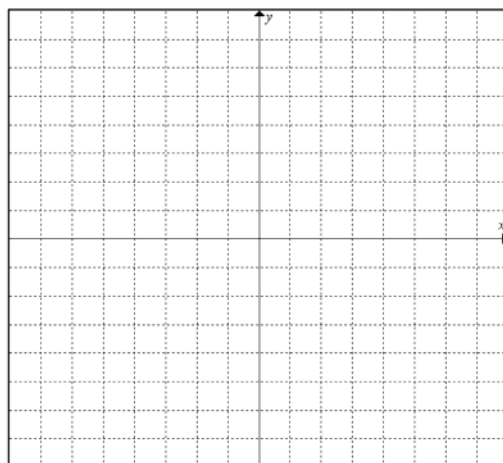
1) $2x - y = 6$

x	y



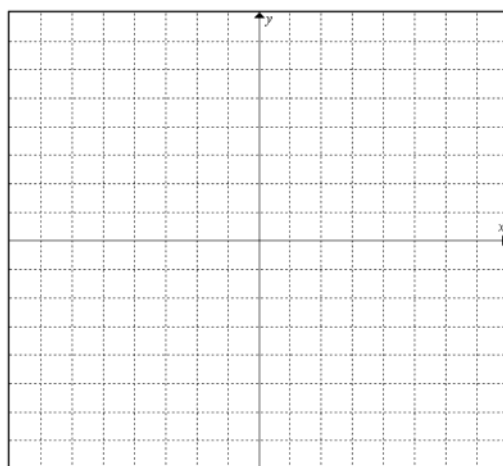
2) $y = \frac{1}{2}x - 3$

x	y



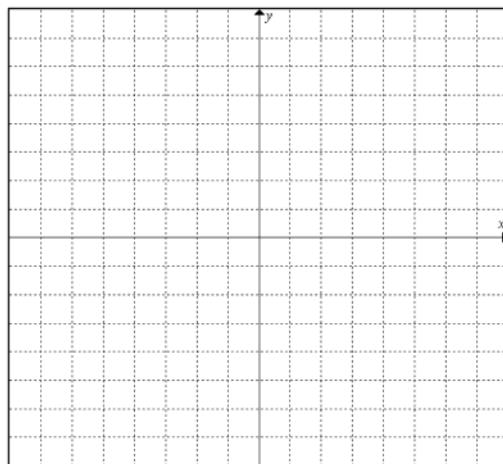
3) $3x + y = 5$

x	y



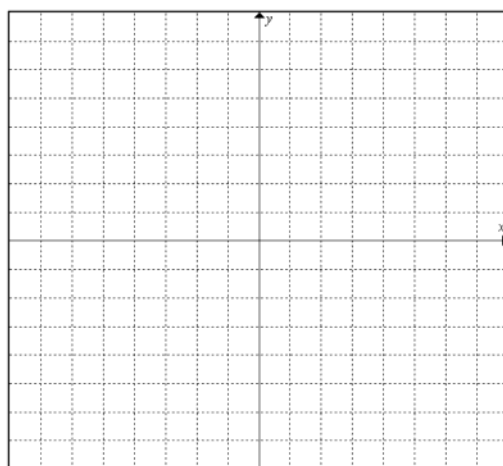
4) $y = -\frac{2}{3}x + 2$

x	y



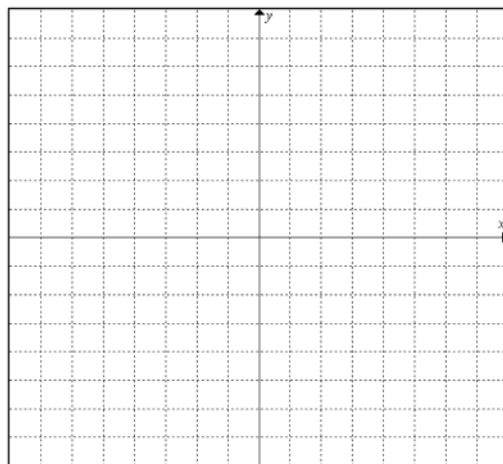
5) $3x - 2y = 8$

x	y



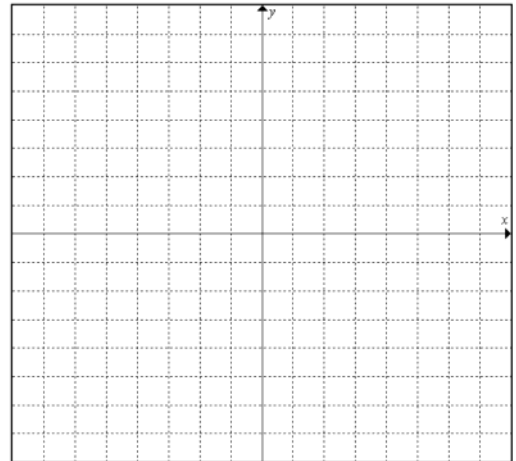
6) $y = \frac{1}{4}x - 5$

x	y



$$7) 4x - 2y = -8$$

x	y



$$8) y = -\frac{2}{5}x + 1$$

x	y

