

Office hours - Wed Sept. 1

WebWork - Lines Lab, #1:

Given linear equation in "standard form":

$$-3x - 3y = 9$$

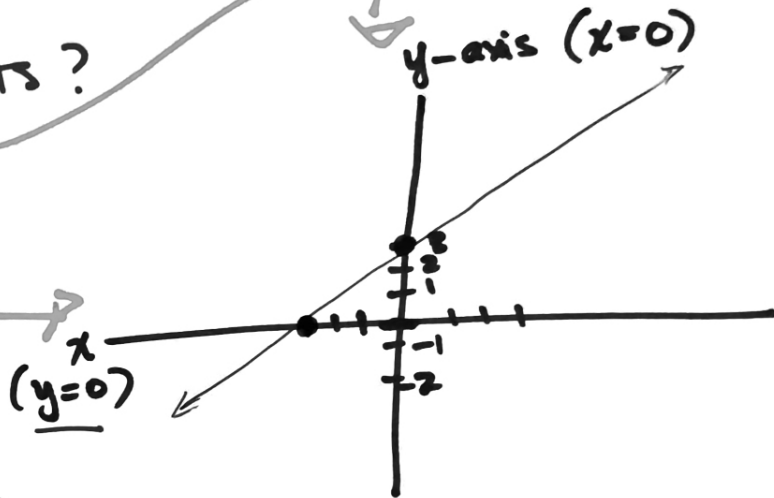
Two ways to graph this linear equation:

(1) Put the equation in slope -int form,
i.e., isolate y on LHS.

(2) Find the x- and y-intercepts!

$$\boxed{-3x - 3y = 9}$$

x- and y-intercepts?



- x-int: Plug y=0 into the equation!
(and solve for x)

$$\begin{aligned} -3x - 3(\underline{0}) &= 9 \\ -3x &= 9 \\ x &= \frac{9}{-3} = \underline{-3} \end{aligned} \quad \left. \vphantom{\begin{aligned} -3x - 3(\underline{0}) &= 9 \\ -3x &= 9 \\ x &= \frac{9}{-3} = \underline{-3} \end{aligned}} \right\} \begin{array}{l} \text{x-int} \\ (-3, 0) \end{array}$$

y-int: Plug x=0 into the equation!

(see §3.1)

$$\begin{aligned} -3(\underline{0}) - 3y &= 9 \\ -3y &= 9 \\ y &= \underline{-3} \end{aligned} \quad \left. \vphantom{\begin{aligned} -3(\underline{0}) - 3y &= 9 \\ -3y &= 9 \\ y &= \underline{-3} \end{aligned}} \right\} \begin{array}{l} \text{y-int} \\ (0, -3) \end{array}$$