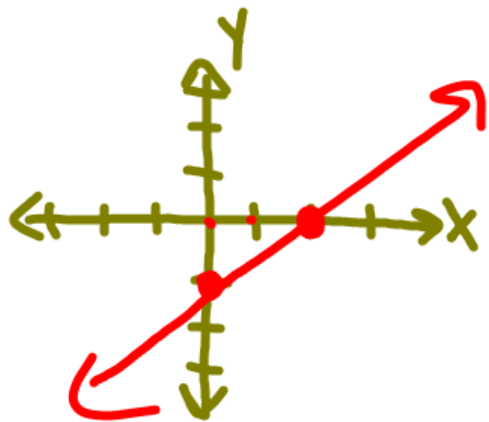


Warm-up

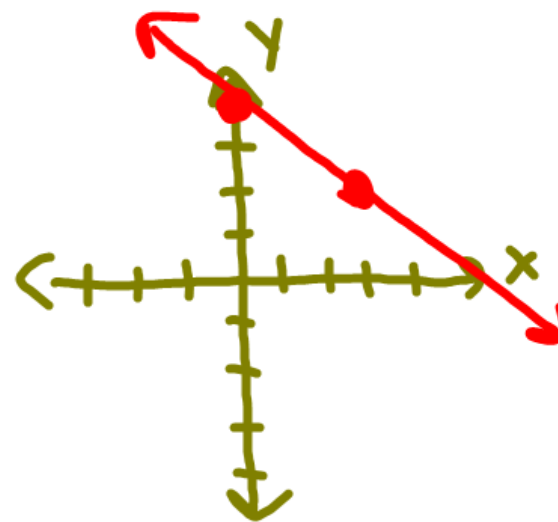
Sketch graph for:

$$\textcircled{1} \quad y = \frac{1}{2}x - 1$$

*hint: Slope-Intercept form



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



5.2 Linear Equations in S.I. Form

y-intercept - Cross y-axis @ $(0, y)$

Slope (m) - $\frac{y_1 - y_2}{x_1 - x_2}$ or $\frac{y's}{x's}$ or $\frac{\text{rise}}{\text{run}}$

* Together (Slope Intercept) Can write any line

$$y = \underline{m}x + \underline{b} \quad \leftarrow \begin{array}{l} \text{Just need Slope } \hat{=} \\ \text{y-int} \end{array}$$

Example

Write equation of line thru $P(-1, 3)$ with slope of 2

1st - Find Slope

$$m = 2$$

2nd - Find y-intercept by plugging in $m \hat{=} \text{ point}$

$$y = \underline{m}x + \underline{b}$$

$$3 = 2(-1) + b$$

$$3 = -2 + b$$

$$b = 5$$

3rd - Write equation of the line w/m $\hat{=} \text{ b}$

$$y = mx + b$$

$$m = 2$$

$$b = 5$$

$$y = 2x + 5$$

Example

Write equation for line thru $C(-1,5)$ & $D(2,-3)$.

1st.

2nd.

3rd.