

HW 7.1 Slope Intercept Form

Due Date _____ 5K _____

Convert to $y=mx+b$, then state the slope (m) and y-intercept (b) of each line.

1) $y = -\frac{4}{3}x - 5$

$$m = -\frac{4}{3} \quad b = -5$$

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

$$m = -\frac{1}{2} \quad b = -2$$

3) $3x + 2y = 4$

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

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

$$m = -\frac{3}{2} \\ b = 2$$

4) $5x + 2y = -10$

$$\frac{2y}{2} = \frac{-5x}{2} - \frac{10}{2}$$

$$y = -\frac{5}{2}x - 5$$

$$m = -\frac{5}{2}$$

$$b = -5$$

5) $x + 3y = 12$

$$\frac{3y}{3} = \frac{-1x}{3} + \frac{12}{3}$$

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

$$m = -\frac{1}{3} \\ b = 4$$

6) $x + y = 0$

$$y = -x$$

$$m = -1 \quad b = 0$$

7) $-12x - 15y + 15 = 0$

$$\frac{-12x}{15} + \frac{15}{15} = \frac{15y}{15}$$

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

$$m = -\frac{4}{5}$$

$$b = 1$$

8) $-6y - 18 = 9x$

$$\frac{-9x}{6} - \frac{18}{6} = \frac{6y}{6}$$

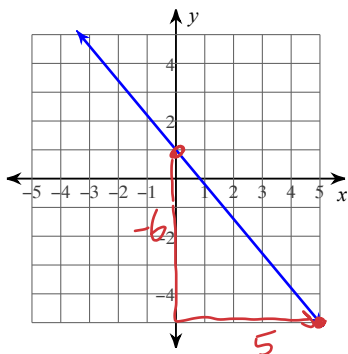
$$-\frac{3}{2}x - 3 = y$$

$$m = -\frac{3}{2}$$

$$b = -3$$

State the slope and y-intercept, then write equation to the line.

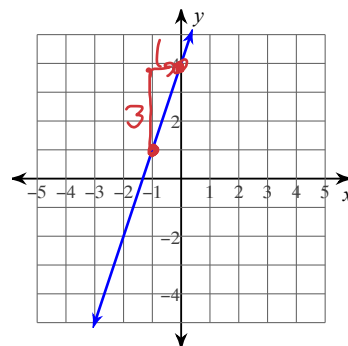
9)



$$b = 1 \\ m = -\frac{1}{5}$$

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

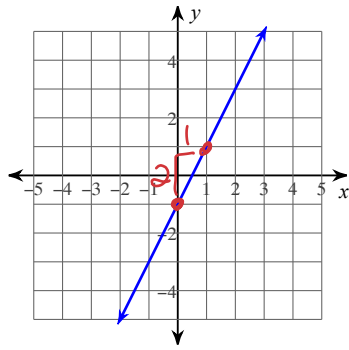
10)



$$b = 4 \\ m = \frac{4}{3}$$

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

11)

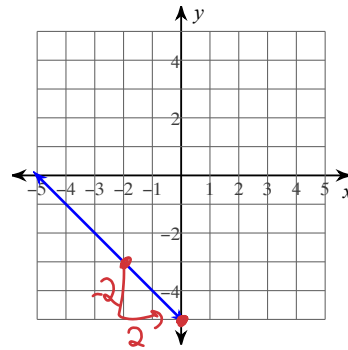


$$b = -1$$

$$m = \frac{2}{1} = 2$$

$$\therefore y = 2x - 1$$

12)



$$b = -5$$

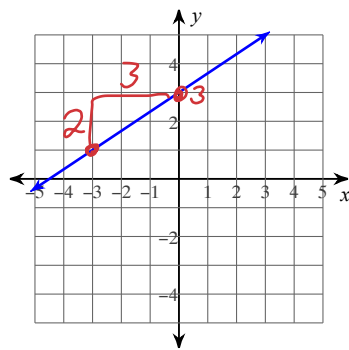
$$m = \frac{-2}{2} = -1$$

$$\therefore y = -x - 5$$

or

$$y = -x - 5$$

13)

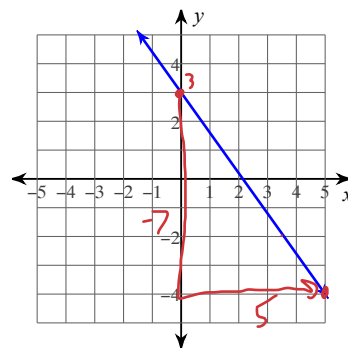


$$b = 3$$

$$m = \frac{2}{3}$$

$$\therefore y = \frac{2}{3}x + 3$$

14)



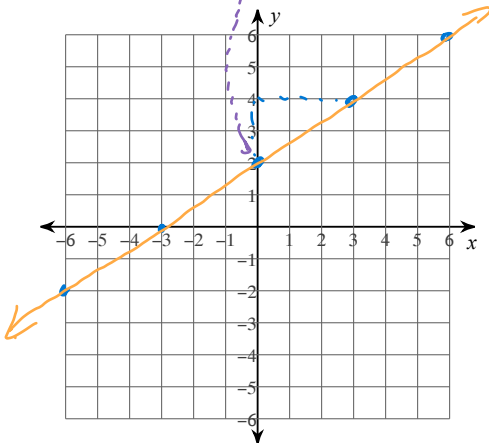
$$b = 3$$

$$m = \frac{-7}{5}$$

$$\therefore y = -\frac{7}{5}x + 3$$

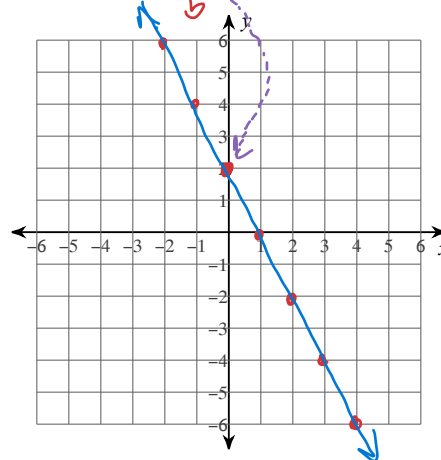
Graph by plotting the y-intercept, then use the Rise/Run from the y-int.

$$15) y = \frac{2}{3}x + 2$$

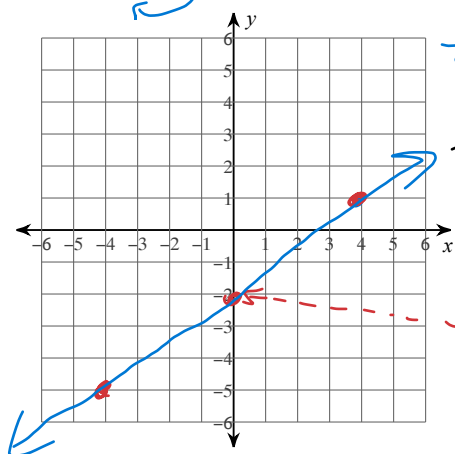


$$16) y = -2x + 2$$

$$m = \frac{-2}{1}$$



17) $3x - 4y = 8$



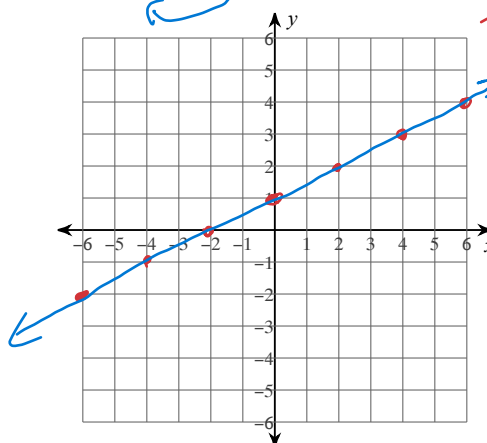
$$\frac{3x}{4} - \frac{8}{4} = \frac{4y}{4}$$

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

$$m = \frac{3}{4} \uparrow$$

$$b = -2$$

18) $x - 2y = -2$



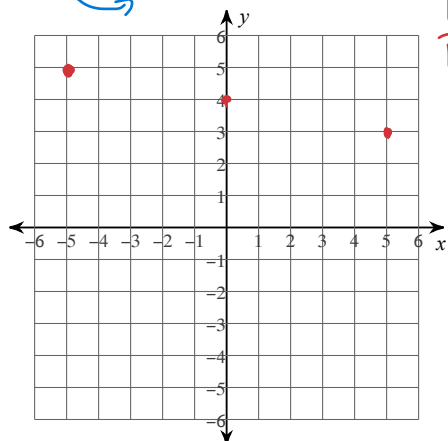
$$\frac{1}{2}x + \frac{2}{2} = \frac{2y}{2}$$

$$\frac{1}{2}x + 1 = y$$

$$m = \frac{1}{2}$$

$$b = 1$$

19) $2x = -10y + 40$



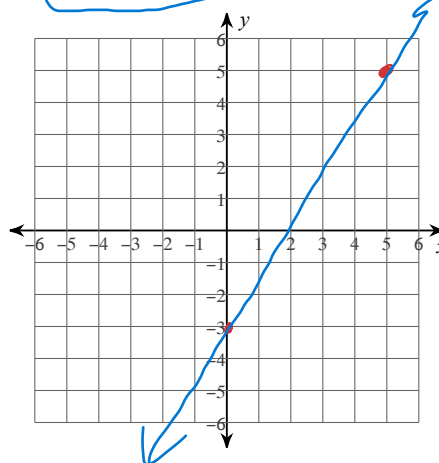
$$\frac{10y}{10} = \frac{-2x}{10} + \frac{40}{10}$$

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

$$m = -\frac{1}{5} \downarrow$$

$$b = 4 \text{ start}$$

20) $-15 - 5y = -8x$



$$\frac{8x}{5} - \frac{15}{5} = \frac{5y}{5}$$

$$\frac{8}{5}x - 3 = y$$

$$m = \frac{8}{5} \uparrow$$

$$b = -3$$