

Warm-up Given $A(3, -5)$ and $B(6, 2)$,
create the Standard Form and $y = mx + b$ form.
slope intercept

(1) Slope:

$$m = \frac{2 + 5}{6 - 3} = \frac{7}{3}$$

(2) Point-slope using B

$$y - y_1 = m(x - x_1)$$

$$(y - 2) = \frac{7}{3}(x - 6)$$

$$3y - 6 = 7x - 42$$

(3) Standard

$$0 = 7x - 3y - 36$$

(4) $y = mx + b$

$$3y - 6 = 7x - 42$$

$$\frac{3y}{3} = \frac{7x}{3} - \frac{36}{3}$$

$$y = \frac{7}{3}x - 12$$

8.4 pg 428

Slope y-intercept

May 16, 2016

$$y = mx + b$$

26 $(4, -5)$ $(-2, 3)$

$$m = \frac{3 + 5}{-2 - 4} = \frac{8}{-6} = -\frac{4}{3}$$

$$y - y_1 = m(x - x_1)$$

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

$$3y - 9 = -4x - 8$$

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

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

Create $y = mx + b$ then convert to Standard form.

27. $m = 2, b = 3$

$$y = 2x + 3 \quad y = mx + b$$

$$0 = 2x - y + 3 \quad \text{Standard form}$$

30. $m = -5, b = -7$

$$y = -5x - 7$$

$$5x + y + 7 = 0$$

32. $m = \frac{2}{3}, b = -2$

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

$$3(0 = \frac{2}{3}x - y - 2)$$

$$0 = 2x - 3y - 6$$

35. Horizontal line through
 $m = 0$
 $(0, 4)$

$$y - 4 = 0(x - 0)$$

$$y - 4 = 0 \quad \text{or} \quad y = 4$$

36. Vertical line through $(3, 0)$
 $m = \text{undefined}$

$$x = 3$$

39. $y = 2x + 5$

① plot the y -intercept
 $(0, 5)$

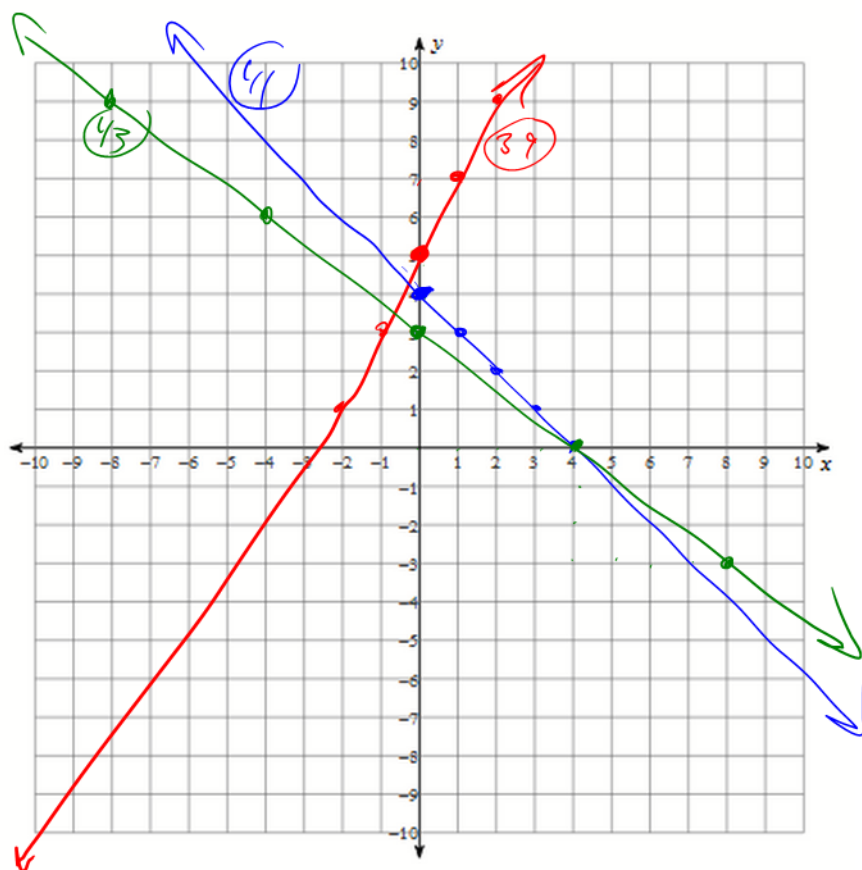
② use the slope from that
point $m = \frac{2}{1}$ - Rise
- Run

41. $y = -x + 4$

$$m = -1 \quad y\text{-int: } (0, 4)$$

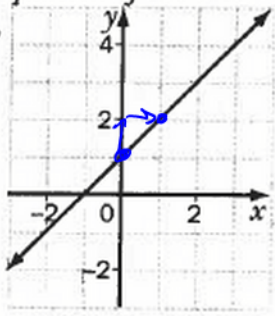
43. $y = \frac{-3}{4}x + 3$

$$m = \frac{-3}{4} \quad y\text{-int: } (0, 3)$$



an equation of the line.

49.



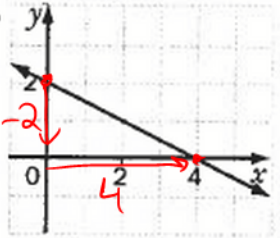
Write the $y = mx + b$ of each line

y -int: $(0, 1)$, $b = 1$

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

$$\therefore y = 1x + 1 \text{ or } y = x + 1$$

51.



y -int: $(0, 2)$ $\therefore b = 2$

$$m = \frac{-2}{4} = \frac{-1}{2}$$

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

On the boards:

Find the standard and $y = mx + b$ form of:

① $(-2, 8)$ $(5, 10)$ { ② $(3, 7)$ $(3, 4)$

Homework: pg 428 # 24 to 52.

