

6.5 part II pg. 225

Converting from slope-point form
to slope-y intercept

$$y - y_1 = m(x - x_1) \Rightarrow y = mx + b$$

ex.1) $y - 5 = 2(x - 3)$
 $y - 5 = 2x - 6$

$$y = 2x - 6 + 5$$

$$y = 2x - 1$$

ex.2) $y + 1 = -\frac{2}{3}(x - 4)$
 $y + 1 = -\frac{2}{3}x + \frac{8}{3}$

$$y = -\frac{2}{3}x + \frac{8}{3} - 1$$

$$y = -\frac{2}{3}x + \frac{8}{3} - \frac{3}{3}$$

$$y = -\frac{2}{3}x + \frac{5}{3}$$

Two to try:

$$1) y + 4 = -3(x - 7)$$

$$y + 4 = -3x + 21$$

$$y = -3x + 21 - 4$$

$$y = -3x + 17$$

$$2) y + 2 = -\frac{3}{4}(x - \frac{3}{1})$$

$$y + 2 = -\frac{3}{4}x + \frac{9}{4}$$

$$y = -\frac{3}{4}x + \frac{9}{4} - 2$$

$$y = -\frac{3}{4}x + \frac{9}{4} - \frac{8}{4}$$

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

6.6: General Form of the line pg. 234

$$Ax + By + C = 0$$

* $m = \text{slope}$ is not visible!

ex.1) $2x + 3y - 6 = 0$

To get the slope, rearrange to $y = mx + b$

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

$$\frac{3y}{3} = \frac{-2x}{3} + \frac{6}{3}$$

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

↑ slope = $-\frac{2}{3}$

ex.2) $4x - 5y + 20 = 0$

$$\frac{-5y}{-5} = \frac{-4x - 20}{-5}$$

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

page 230

#40

41 a, b

page 239

#49.