

: Pg 281-282 : 1-7, 14, 19, 24, 25,
35, 37, 39, 40, 41, 42

① $y - y_1 = m(x - x_1)$
② $y + 1 = 3(x - 2)$
③ $y - 4 = 4(x - 3)$
④ $y + 7 = -2(x + 5)$
⑤ $y - 4 = \frac{1}{2}(x - 3)$
⑥ $y + 5 = \frac{2}{3}(x - 1)$
⑦ $y - 2 = 3(x - 2)$
⑧ $y + 4 = -(x - 4)$

⑨ $y - 3 = -6(x + 4)$
⑩ $y - 4 = 6(x + 3)$
⑪ $y = 2x - 2$
⑫ $y = \frac{1}{3}x - \frac{8}{3}$
⑬ $y = -9x - 5$
⑭ $y = \frac{1}{2}x - 14$
⑮ $y = 2x - 1$
⑯ $y = \frac{2}{3}x + 1$

42

(3, 3)

from the other Graph

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

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

5.3 Writing Linear Equations w/ 2 Points

Mar. 08, 2007

tell Me about Slope

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

Write the eq. of the line in $S-I$ form.
 that passes through $(-4, 5)$ and $(0, 2)$
 (S-I form: Slope-Intercept)

Need the Slope _____

Need the y-int. _____

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 5}{0 - (-4)} = \frac{-3}{4} \quad y - y_1 = m(x - x_1)$$

$$y - 5 = \frac{-3}{4}(x - (-4)) \quad \left\{ \begin{array}{l} y - 2 = \frac{-3}{4}(x - 0) \end{array} \right.$$

$$y - 5 = \frac{-3}{4}x - 3 \quad \left\{ \begin{array}{l} y - 2 = -\frac{3}{4}x + 2 \end{array} \right.$$

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

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

$$b = (0, 2) = 2$$

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

Write in S-I form the equ. Passing through

$(3, -5), (7, 0)$
 x_1, y_1 x_2, y_2

our Process

2 Pts \rightarrow slope \rightarrow Pt. Slope Form \rightarrow Slope Int. Form

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{0 - (-5)}{7 - 3} = \frac{5}{4} \quad y - y_1 = m(x - x_1)$$

$$y - 0 = \frac{5}{4}(x - 7) \quad \frac{5}{4}(7) = \frac{35}{4}$$

$$y = \frac{5}{4}x - \frac{35}{4}$$

$$y - (-5) = \frac{5}{4}(x - 3) \quad \frac{5}{4}(3) = \frac{15}{4}$$
$$y + 5 = \frac{5}{4}x - \frac{15}{4} - \frac{20}{4}$$

$$y = \frac{5}{4}x - \frac{35}{4}$$

Recall to Add or Subt Fractions they Both must have the Same Denom.

S-I form : $(0, 2), (4, -2)$
 x_1, y_1 x_2, y_2

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{-2 - 2}{4 - 0} = \frac{-4}{4} = -1 \quad y - y_1 = m(x - x_1)$$

$$y - 2 = -1(x - 0)$$

$$y - 2 = -1x$$

$$y = -1x + 2$$

$$y - (-2) = -1(x - 4)$$

$$y + 2 = -1x + 4$$

$$y = -1x + 2$$

$$y = mx + b$$

$$y = -1x + 2$$

S-I form: $(3, -1)$, $(4, 2)$

2 Pts \rightarrow Slope \rightarrow Pt-Slope \rightarrow Slope-Int.

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1} =$$

$$m = \frac{2 - (-1)}{4 - 3} = \frac{3}{1} = 3 \quad y - y_1 = m(x - x_1)$$

$$y - (-1) = 3(x - 3)$$

$$y + 1 = 3x - 9$$

$$y = 3x - 10$$

$$y - 2 = 3(x - 4)$$

$$y - 2 = 3x - 12$$

$$y = 3x - 10$$

○ T.L.

① Write Summary Box on Pg 287 in Notes

② Pg 288-289: 1-8(u), 10, 12, 16, 17, 23, 33-35(u)

③ If not already have
wk. sts. 5.3 & 5.4
- 12 Both sides only
done!