

PG 316 9-27 odd 30a, 31

9) $(4, 2)$ $m = -\frac{5}{3}$

15. $y - 2 = \frac{4}{9}(x - 3)$

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

$m = \frac{4}{9}$

$y - 2 = -\frac{5}{3}(x - 4)$

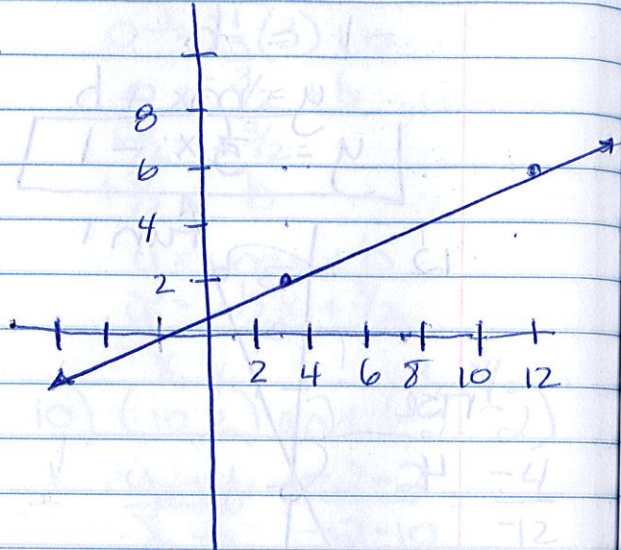
$(3, 2)$

11) $(4, 0)$ $m = -1$

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

$y - 0 = -1(x - 4)$

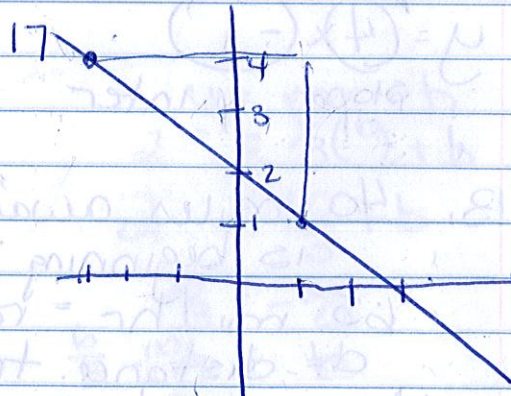
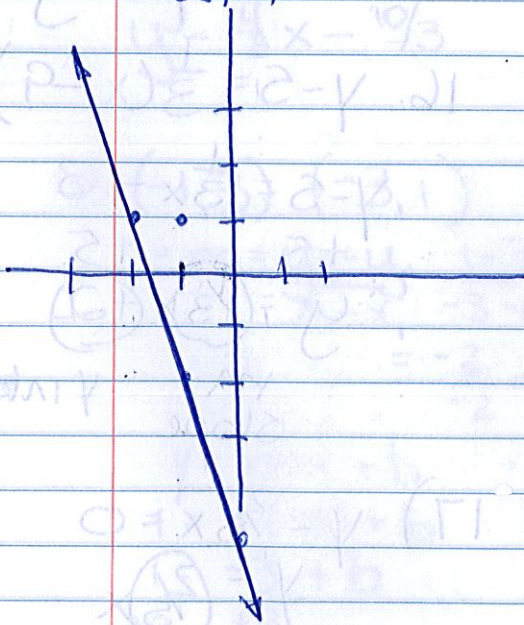
$y = -1(x - 4)$



13) $y - 1 = -3(x + 2)$

slope = $m = -3$

$(-2, 1)$



$m = \frac{\text{rise}}{\text{run}} = -\frac{3}{4}$

$(1, 1)$

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

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

$$19) \begin{pmatrix} x_1 & y_1 \\ 1 & 4 \end{pmatrix} \begin{pmatrix} x_2 & y_2 \\ -1 & 1 \end{pmatrix}$$

point slope form

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - 4}{-1 - 1} = \frac{-3}{-2} = \frac{3}{2}$$

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

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

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

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

$$21) \begin{pmatrix} x_1 & y_1 \\ -6 & 6 \end{pmatrix} \begin{pmatrix} x_2 & y_2 \\ 3 & 3 \end{pmatrix}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 6}{3 - (-6)} = \frac{-3}{9} = -\frac{1}{3}$$

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

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

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

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

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

Time Wages
x y

1	8.5
3	25.5
6	57.00
9	76.50

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{25.5 - 8.5}{3 - 1} = \frac{17}{2} = 8.5$$

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

$$y - 8.5 = 8.5(x - 1)$$

$$y - 8.5 = 8.5x - 8.5$$

$$y = 8.5x$$

slope 8.5 = hourly wages in dollars

y intercept 0 represents the amount earned for working 0 h.

$$A = (-3, 1) \quad B = (3, 3)$$

$$25 \quad (6-1) \quad m = -\frac{5}{3}$$

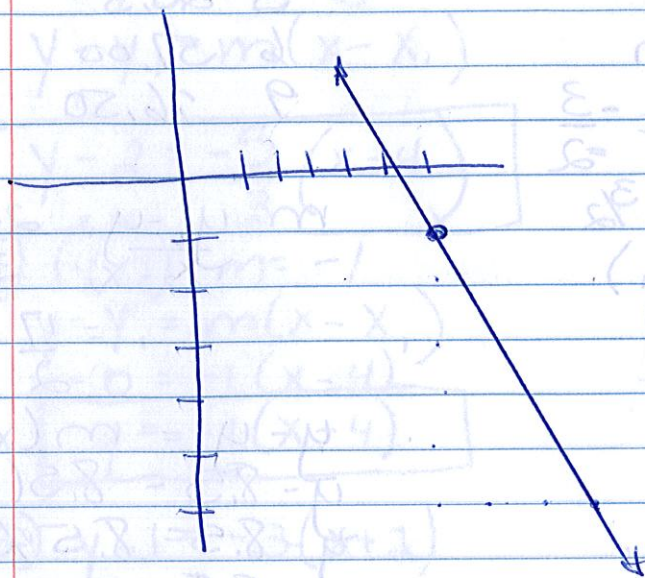
$$30a \quad AB = \frac{5}{3}$$

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - 1}{3 - (-3)} = \frac{2}{6} = \frac{1}{3}$$

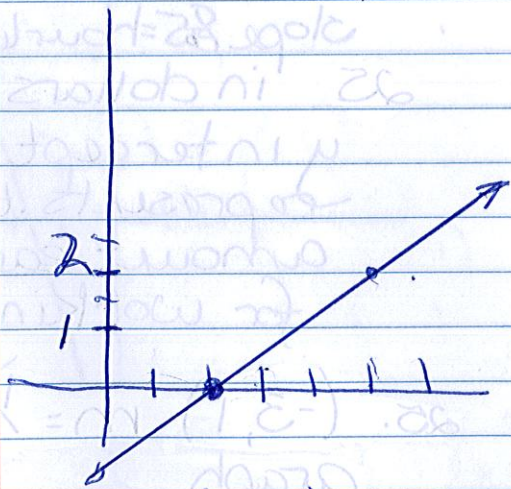
$$\text{slope} = \frac{1}{3}$$

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

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



$$27 \quad y - 2 = \frac{2}{3}(x - 0)$$



pt. (0, 2)
graphed point
(2, 0) not (0, 2)

x	y
31. 8000 ft.	197.6
4500	203.9

$$y = \frac{203.9 - 197.6}{4500 - 8000}$$

$$\frac{6.3}{-3500} = -.0018$$

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

$$y - 197.6 = -.0018(x - 8000)$$

$$y - 197.6 = -.0018x + 14.4$$

$$y = -.0018x + 212$$

$$y = -.0018(2500) + 212$$

$$207.5$$