

checked HW (Notes on back) 2/5

$$f(x) = 2x + 5 \quad g(x) = \left(-\frac{1}{3}x + 2\right)$$

$$(50) \quad f(-4) = 2(-4) + 5$$

$$\boxed{f(-4) = -3}$$

(x, y)
(-4, -3)

$$(51) \quad 2 \cdot g(7) = 2 \left(-\frac{1}{3} \cdot 7 + 2\right)$$

$$(52) \quad -2f(x+1) = -2(2(x+1) + 5)$$
$$= -2(2x + 2 + 5)$$
$$= -2(2x + 7)$$
$$= -4x - 14$$

$$(53) \quad \frac{f(1)}{g(3)} = \frac{2(1) + 5}{-\frac{1}{3} \cdot 3 + 2} = \frac{7}{1} = 7$$

$$(54) \quad \frac{f(-2)}{g(-f(-2)+1)} = \frac{1}{-\frac{1}{3}(2) + 2}$$
$$g(2)$$

2.2

Linear Equations

2/5

①

$$y = mx + b$$

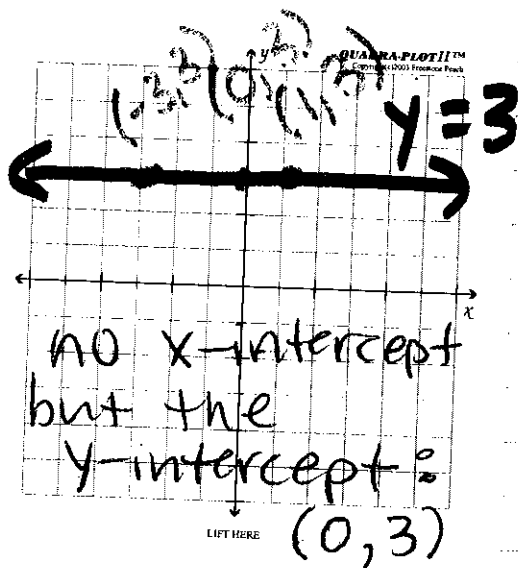
(diagonal line)

slope-intercept form

$m = \text{slope}$ $b = y\text{-intercept}$

only $y = 3$ then its a **horizontal line**

Slope of a horizontal line is zero.



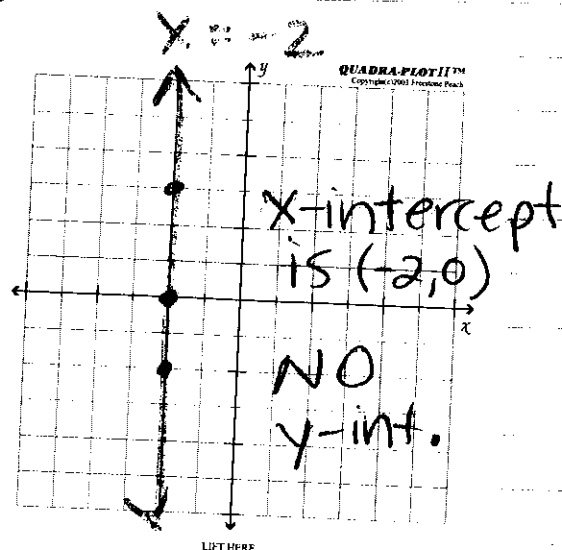
$$\text{slope} = \frac{\text{rise}}{\text{run}}$$

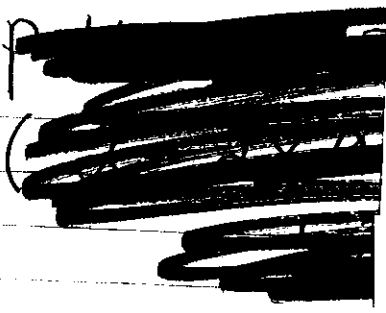
$$m = \frac{0}{4} = 0$$

Vertical Line
"x = -2"

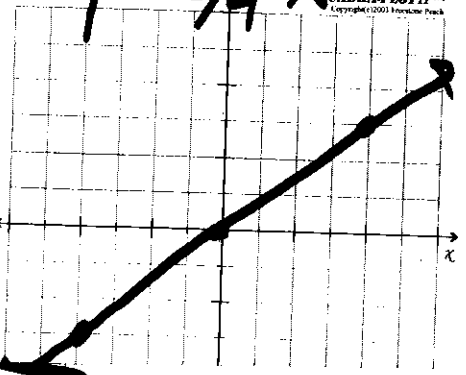
the eq. only contains an "x"

$$m = \frac{5}{0} = \text{undefined}$$





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



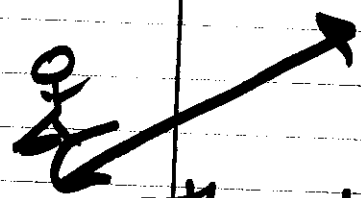
ex. diagonal

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

$$m = \frac{3}{4}$$
$$b = 0$$

Always start on the y-axis.

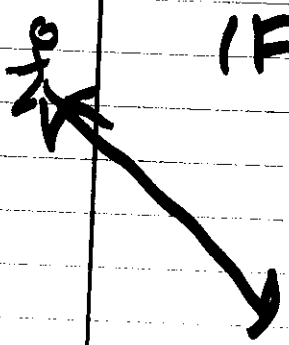
IF m is positive:



up or down
Right or left

The line should rise to the right.

IF m is negative:



up or down
left or right

The line should fall to the right.

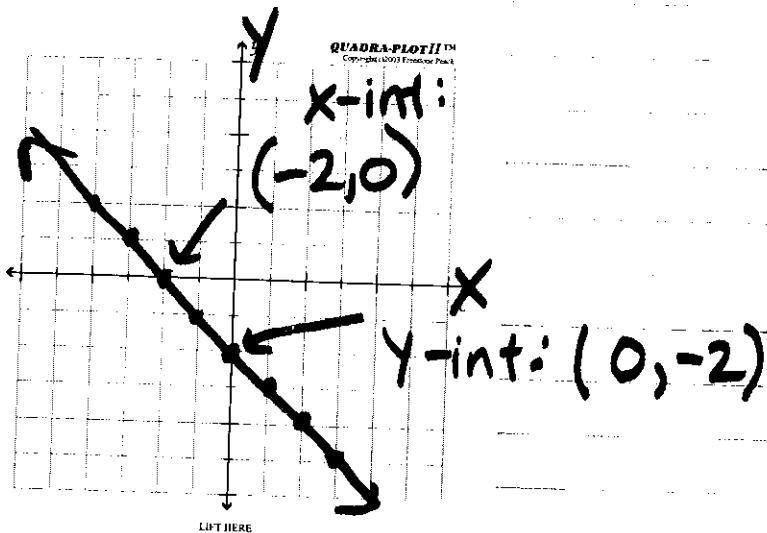
ex 2

$$\begin{array}{r} -1x \\ -1x \end{array} + y = -2$$

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

$$y = -1x - 2$$

$$b = -2$$



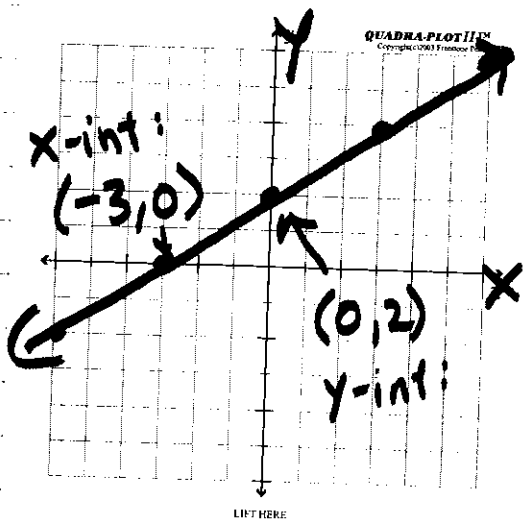
ex 3

$$\begin{array}{r} -2x \\ +2x \end{array} + 3y = 6$$

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

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

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



CW: p. 67 (1-5, 7, 13-18)

6 graphs

↑
slope
Formula