Warm-up Jan. 3

1. Find three consecutive integers such that five times the second is the same as ten more than twice the third.

Let 1st CI = x = 3 answers
2nd CI = $x+1$ = 4
3rd CI = $x+2$ = 5

Equation: $5(\overset{2nd\#}{x+1}) = 2(\overset{3\#}{x+2}) + 10$

$5x + 5 = 2x + 4 + 10$

$5x + 5 = 2x + 14$

$-2x \quad -2x$

$3x + 5 = 14$

$-5 \quad -5$

$\frac{3x}{3} = \frac{9}{3}$

$x = 3$

2. Solve for x. $\frac{2}{5} = \frac{4x}{7x-9}$ cross multiply • set cross products =

$5(4x) = 2(7x-9)$

$20x = 14x - 18$

$-14x \quad -14x$

$\frac{6x}{6} = \frac{-18}{6}$

$x = -3$

Notes: Graphing Linear Equation Slope - Intercept Form

Created for you by Ms. Nnotsoulbank

Steps:

1. The equation in slope-intercept form: **y = mx + b**
2. State the slope (m) and the y-intercept (b).
3. Use the y-intercept to plot the first point on the graph; (0, b).
4. Use the slope to get points on the line.

$$y = \underbrace{m}_{\text{slope}}x + \underbrace{b}_{\text{y-intercept}}$$

Slope (m) $\frac{rise}{run}$

y-intercept (b)

Examples:

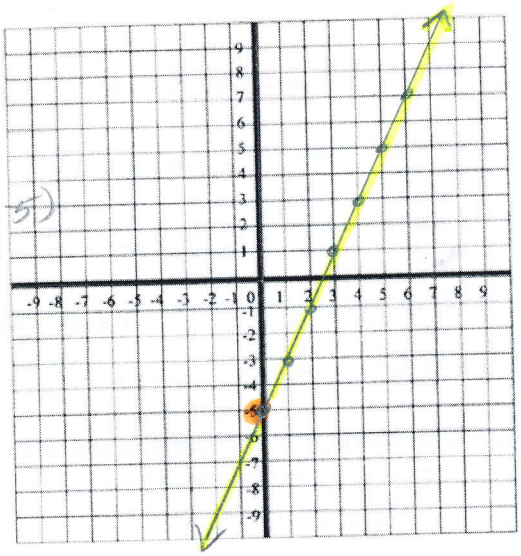
1) $y = 2x - 5$

$m = \frac{2\uparrow}{1\rightarrow}$

$b = -5$ (0, -5)

starting pt

x	y
0	-5
1	-3
2	-1



negative slope

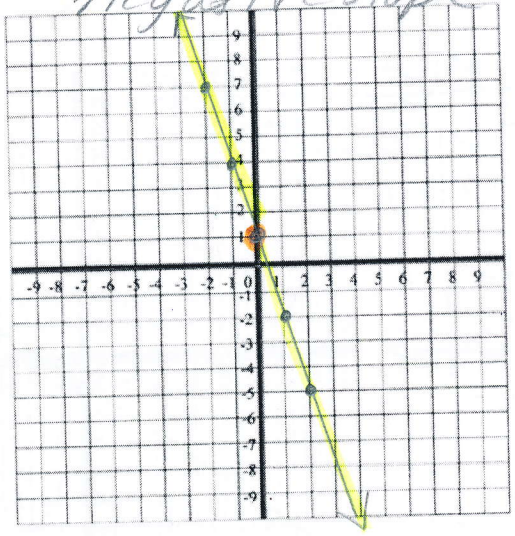
2) $y = -3x + 1$

$m = \frac{-3\downarrow}{1\rightarrow}$

$b = 1$

(0, 1)

x	y
0	1
1	-2
2	-5



Name: Key

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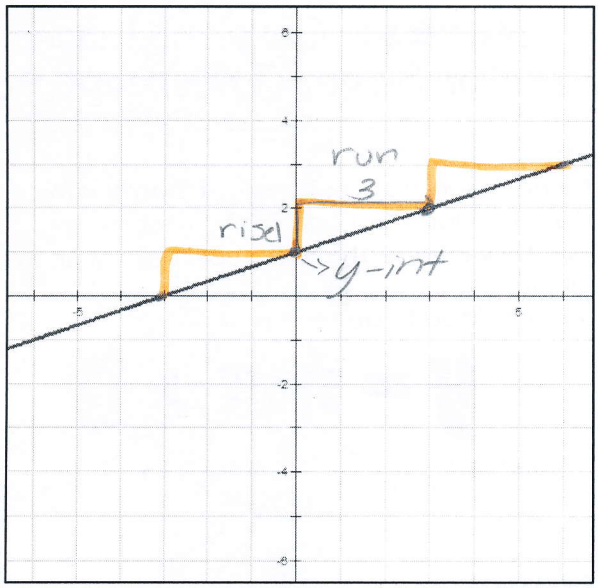
3)



Slope type positive

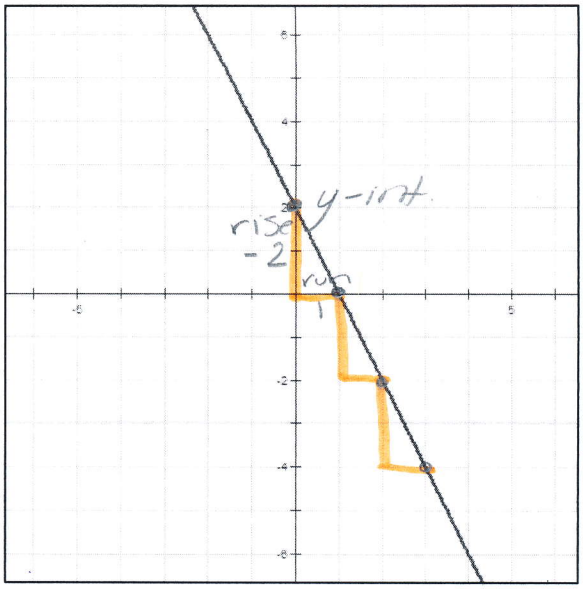
Find the slope (m) $\frac{1}{3}$

Find the y-intercept (b) 1

Write the linear equation $y = \frac{1}{3}x + 1$

$y = mx + b$

4)



Slope type negative

Find the slope (m) $\frac{-2}{1}$

Find the y-intercept (b) 2

Write the linear equation $y = -2x + 2$

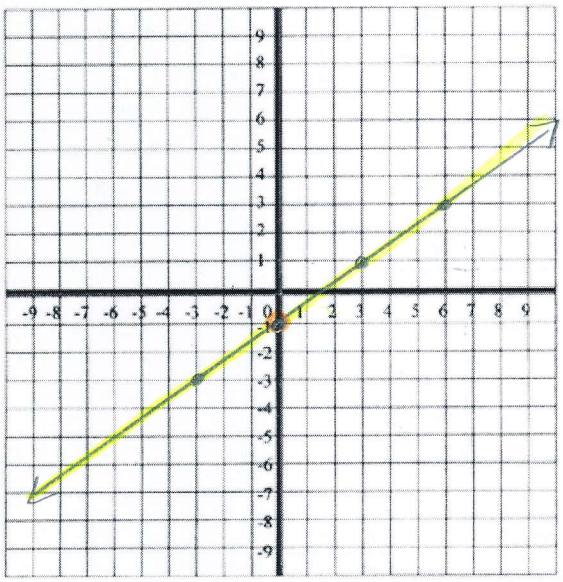
$y = mx + b$

DIRECTIONS: *Use the linear equation in the form $y = mx + b$ to graph each line. Then state the type of slope.*

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

$m = \frac{2}{3}$ $b = -1$

x	y
-3	-3
0	-1
3	1
6	3



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

$m = -\frac{1}{2}$ $b = 3$

x	y
-4	5
-2	4
0	3
2	2