Algebra I Unit 4

$m = \frac{y_2 - y_1}{x_2 - x_1}$

Name Key Date 2013! Period _____

HW: Graphing Equations from Standard Form

Find the x-intercept ,y-intercept, slope, and graph the equation.

Ex 1) $3x + 2y = 6$ $m = \frac{-A}{B}$

x-intercept (zero): $3x + 2(0) = 6$

$\frac{3}{3}x = \frac{6}{3}$

$x = 2$

$(2, 0)$

y-intercept: $3(0) + 2y = 6$

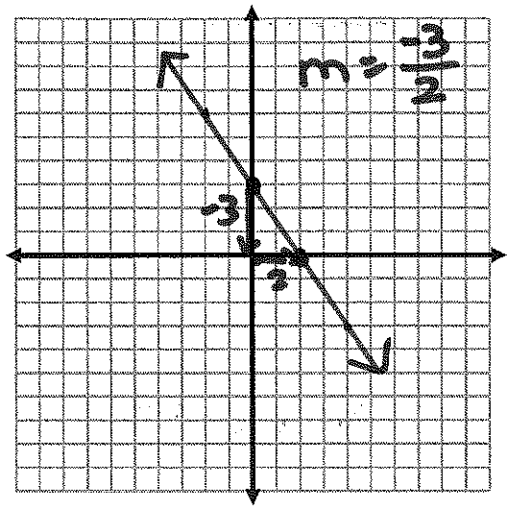
$\frac{2}{2}y = \frac{6}{2}$

$y = 3$

$(0, 3)$

slope: A: 3, B: 2

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



Ex 2) $4x - 2y = 12$ (A, B)

when $y = 0$

x-intercept (zero): $4x - 2(0) = 12$

$\frac{4}{4}x = \frac{12}{4}$

$x = 3$

$(3, 0)$

when $x = 0$

y-intercept: $4(0) - 2y = 12$

$\frac{-2}{-2}y = \frac{12}{-2}$

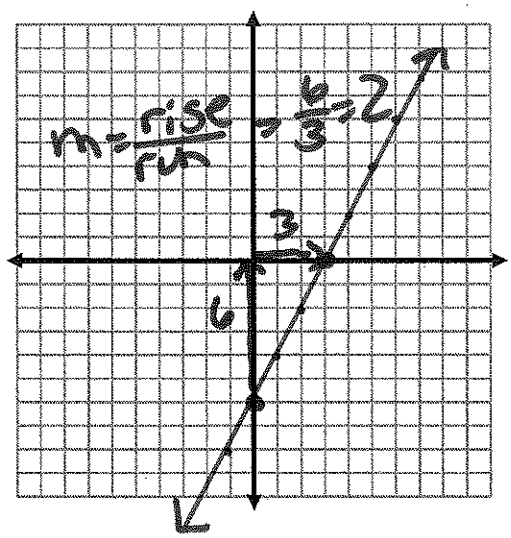
$y = -6$

$(0, -6)$

slope: A: 4, B: -2

$m = \frac{-4}{-2} = 2$

$m = 2$



~~A~~ not in standard Form

Ex 3) $3x = -12 - 4y$

x-intercept (zero): $3x = -12 - 4(0)$

$\frac{3}{3}x = \frac{-12}{3}$

$x = -4$

$(-4, 0)$

(x_1, y_1)

y-intercept: $3(0) = -12 - 4y$

$0 = -12 - 4y$

$+12 \quad +12$

$\frac{12}{4} = \frac{-4y}{-4}$

$3 = y$

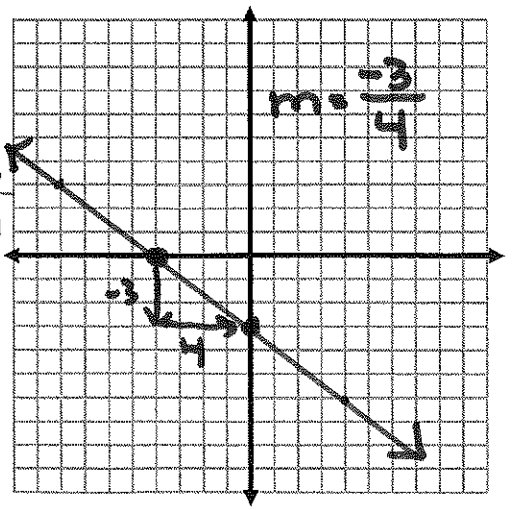
$(0, -3)$

(x_2, y_2)

slope: $\frac{y_2 - y_1}{x_2 - x_1}$

$\frac{-3 - 0}{0 - -4} = \frac{-3}{4}$

$m = \frac{-3}{4}$



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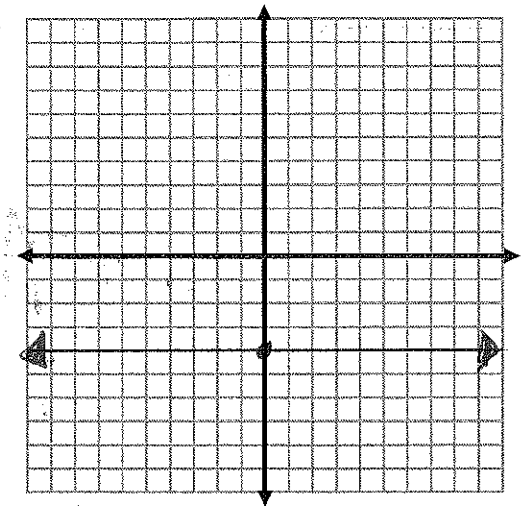
Ex 4) $y = -4$ Horizontal

x-intercept (zero): DNE y-intercept: (0, -4) slope: $m = 0$



Ex 5) $x = 6$ Vertical

x-intercept (zero): (6, 0) y-intercept: DNE slope: m = undefined