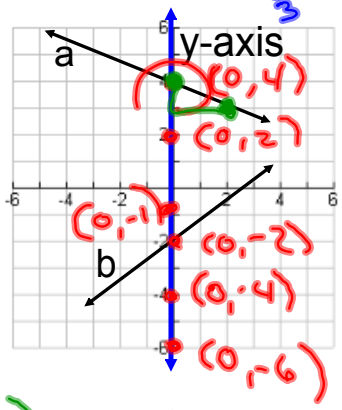
Pre-Algebra Chapter 5 Slope-Intercept Form

Time in Hours	0	1	2	3	4	5	6	7	8	9
Cost in dollars	50	53	56	59	62	65	68	71	74	77

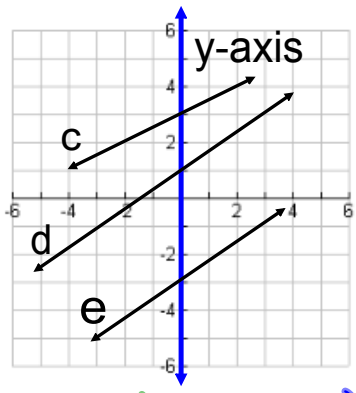
x: Δ 1

y: Δ 3



$m = \frac{\Delta y}{\Delta x}$

$y = 3x + 50$



a) $y = (\text{rate } m)x + (y \text{ value when } x = 0)$

$y = \frac{-1}{2}x + 4$

c) y-intercept (0, 3)

d) (0, 1)

e) (0, -3)

Equation of a line: y-intercept form $y = mx + b$

Identify slope and y-intercept

m = slope

y-intercept y value when x = 0

a) $y = -3x + 12$ m = -3 y-int(b) 12

b) $y = 2x - 18$ m = 2 y-int(b) -18

c) $y = \frac{-1}{2}x + 5$ m = $-\frac{1}{2}$ y-int(b) 5

1) $y = 6x + 12$ m = 6 y-int(b) 12

2) $y = \frac{1}{2}x + 3$ m = $\frac{1}{2}$ y-int(b) 3

3) $y = -x + 8$ m = -1 y-int(b) 8

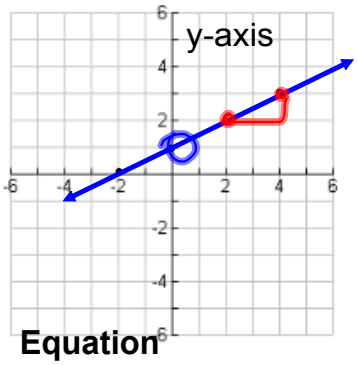
4) $y = -\frac{2}{3}x - 4$ m = $-\frac{2}{3}$ y-int(b) -4

Slope-Intercept Form $y = mx + b$

m = slope y-int(b) y value when x = 0 : y-axis

Given the graph, state the slope and the y-intercept.

slope=m= $\frac{1}{2}$
y-intercept=b= (0,1)

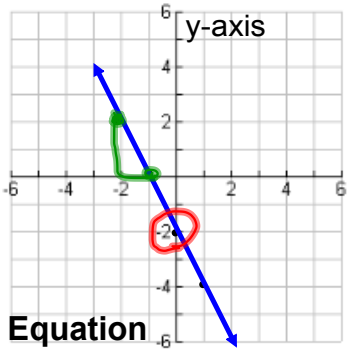


Equation

$y = mx + b$

$y = \frac{1}{2}x + 1$

slope=m= $\frac{-2}{1}$
y-intercept=b= (0,-2)



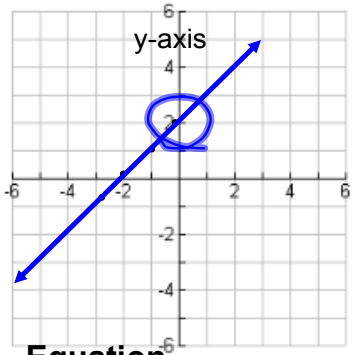
Equation

$y = mx + b$

$y = -2x + -2$

$y = -2x - 2$

slope=m= 1
y-intercept=b= (0,2)



Equation

$y = mx + b$

$y = 1x + 2$

$y = x + 2$

Write an equation given the slope and y intercept(b)

1) the line crosses the y axis at 4 and has a slope of 5 $y = 5x + 4$

2) the line crosses the yaxis at -3 and has a slope of 2/3 $y = \frac{2}{3}x - 3$

3) the line crosses the y axis at 0 and has a slope of -1 $y = -1x + 0$

4) the line crosses the y axis at 5 and has a zero slope $y = 0x + 5$ $y = 5$

5) the line does not cross the y-axis and has an undefined slope no y ? $x =$

h.w. handout on slope-intercept form