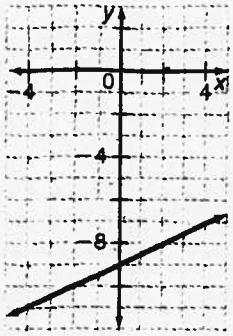
Isabella Montano

Practise: Determine the Equation of a Line

1. For each graph below, state i) the slope as a fraction in lowest terms, ii) the y-intercept, and iii) the equation.

a)

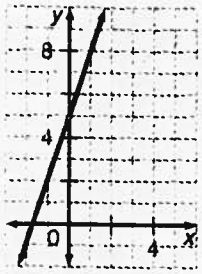


slope: $-8/4 = -1/3$

y-intercept: -9

equation: $y = -\frac{1}{3}x - 9$

b)

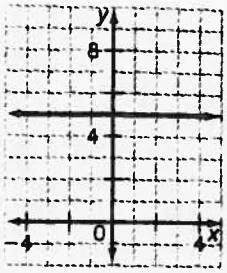


slope: $3/1$

y-intercept: 5

equation: $y = 3/1x + 5$

c)



slope: ___

y-intercept: 5

equation: $y = 5x\ 5$

2. Use the given information to write the equation of each line in the form $y = mx + b$.

a) slope $= -\frac{1}{3}$ and y-intercept $= 2$ $y = -1/3 + 2$

b) $m = 4$ and $b = -3$ $y = 4x - 3$

3. Use the given information to write the equation of each line.

a) slope $= -2$, through the point $(0, 0)$ $y = -2x$

c) $m = -4$, through the point $(4, 8)$ $b = 24$

x y

$y = -4x + b$

$8 = -4(4) + b$

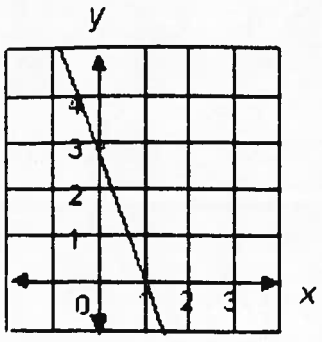
$8 = -16 + b$

$8 + 16 = b$

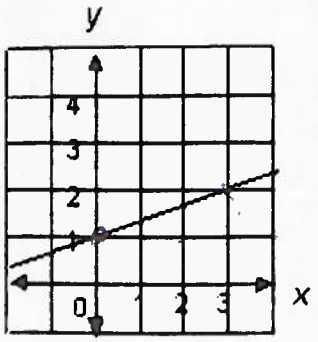
$y = -4x + 24$

Find the equation of each line.

(a)



(b)



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

(b) $y = 1/3x + 1$