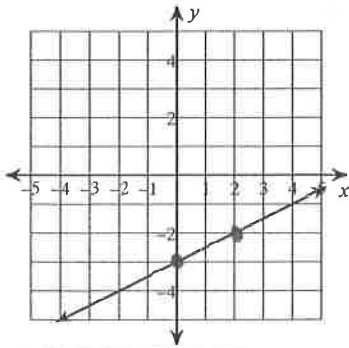


## Review for PC #2 Unit 2 WS

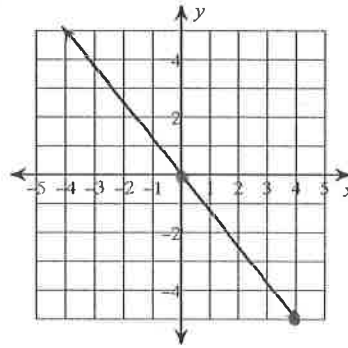
Write the slope-intercept form of the equation of each line.

1)



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

2)

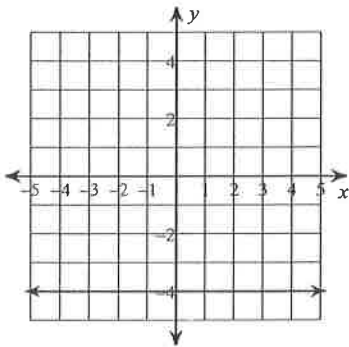


$$f(x) = -\frac{5}{4}x + 0$$

-or-

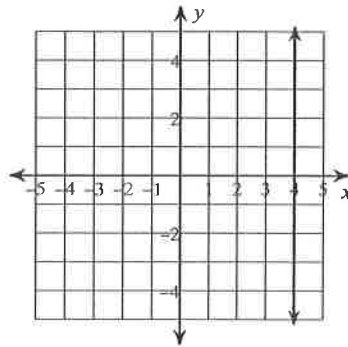
$$f(x) = -\frac{5}{4}x$$

3)



$$y = -4$$

4)



$$x = 4$$

Write the slope-intercept form of the equation of the line through the given points.

5) through: (0, 2) and (2, 1)

$$\begin{array}{r|l} 0 & 2 \\ 2 & 1 \end{array} - 1$$

$$m = -\frac{1}{2} \quad (0, 2)$$

$$2 = -\frac{1}{2}(0) + b$$

$$2 = b$$

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

6) through: (-1, 1) and (1, 2)

$$\begin{array}{r|l} -1 & 1 \\ 1 & 2 \end{array} + 1$$

$$m = \frac{1}{2} \quad (-1, 1)$$

$$1 = \frac{1}{2}(-1) + b$$

$$1 = -\frac{1}{2} + b$$

$$1.5 = b$$

$$y = \frac{1}{2}x + 1.5$$

7) through: (1, -4) and (-3, 5)

$$\begin{array}{r|l} 1 & -4 \\ -3 & 5 \end{array} + 9$$

$$m = -\frac{9}{4} \quad (1, -4)$$

$$-4 = -\frac{9}{4}(1) + b$$

$$-4 = -\frac{9}{4} + b$$

$$-1.75 = b$$

$$y = -\frac{9}{4}x - 1.75$$

8) through: (-4, -1) and (-3, 1)

$$\begin{array}{r|l} -4 & -1 \\ -3 & 1 \end{array} + 2$$

$$m = 2 \quad (-4, -1)$$

$$-1 = 2(-4) + b$$

$$-1 = -8 + b$$

$$7 = b$$

$$y = 2x + 7$$

9) through: (1, -5) and (-3, -3)

$$-4 \left( \begin{array}{c|c} 1 & -5 \\ -3 & -3 \end{array} \right) + 2 \quad m = -\frac{1}{2} \quad (1, -5)$$

$$-5 = -\frac{1}{2}(1) + b$$

$$-5 = -\frac{1}{2} + b$$

$$-4.5 = b \quad \boxed{y = -\frac{1}{2}x - 4.5}$$

10) through: (-3, 3) and (1, -5)

$$+4 \left( \begin{array}{c|c} -3 & 3 \\ 1 & -5 \end{array} \right) - 8 \quad m = -\frac{8}{4} = -2 \quad (-3, 3)$$

$$3 = -2(-3) + b$$

$$3 = 6 + b$$

$$-3 = b \quad \boxed{y = -2x - 3}$$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

11) through: (-2, 5), slope =  $-\frac{1}{2}$

$$5 = -\frac{1}{2}(-2) + b$$

$$5 = 1 + b$$

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

12) through: (1, 5), slope = undefined

$$\boxed{x = 1}$$

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Write the slope-intercept form of the equation of the line described.

13) through: (1, -4), parallel to  $y = -2x - 5$

$$m = -2$$

$$-4 = -2(1) + b$$

$$-4 = -2 + b$$

$$-2 = b \quad \boxed{y = -2x - 2}$$

14) through: (-5, -3), parallel to  $y = x + 1$

$$m = 1$$

$$-3 = (-5) + b$$

$$-3 = -5 + b$$

$$2 = b \quad \boxed{y = x + 2}$$

15) through: (-5, 1), parallel to  $y = -6x + 5$

$$m = -6$$

$$1 = -6(-5) + b$$

$$1 = 30 + b$$

$$-29 = b \quad \boxed{y = -6x - 29}$$

16) through: (-3, 4), parallel to  $y = -3x - 3$

$$m = -3$$

$$4 = -3(-3) + b$$

$$4 = 9 + b$$

$$-5 = b \quad \boxed{y = -3x - 5}$$

17) through: (5, 4), perp. to  $y = 5x - 3$

$$m = -\frac{1}{5}$$

$$4 = -\frac{1}{5}(5) + b$$

$$4 = -1 + b$$

$$5 = b \quad \boxed{y = -\frac{1}{5}x + 5}$$

18) through: (2, -3), perp. to  $y = -\frac{2}{3}x - 5$

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

$$-3 = \frac{3}{2}(2) + b$$

$$-3 = 3 + b$$

$$-6 = b \quad \boxed{y = \frac{3}{2}x - 6}$$

19) through: (-1, 3), perp. to  $y = \frac{1}{5}x$

$$m = -5$$

$$3 = -5(-1) + b$$

$$3 = 5 + b$$

$$-2 = b \quad \boxed{y = -5x - 2}$$

20) through: (-3, -2), perp. to  $y = -\frac{3}{2}x$

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

$$-2 = \frac{2}{3}(-3) + b$$

$$-2 = -2 + b$$

$$0 = b \quad \boxed{y = \frac{2}{3}x + 0} \quad \text{or}$$

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