

1. Put in slope-intercept form.  
 $y + 8 = 3(x - 5)$

$$y = 3x - 15 - 8$$
  

$y = 3x - 23$

Answer: \_\_\_\_\_

2. Find the slope and y-intercept.

$$y = \frac{3}{4}x - \frac{2}{5}$$
  

Answer:  $m = \frac{3}{4}$      $b = -\frac{2}{5}$

3. Find the slope and y-intercept.

$$3x + 2y = 8$$

$$\begin{array}{r} -3x \qquad -3x \\ \hline 2y = -3x + 8 \\ \frac{2y}{2} = \frac{-3x}{2} + \frac{8}{2} \\ y = -\frac{3}{2}x + 4 \end{array}$$
  

Answer:  $m = -\frac{3}{2}$      $b = 4$

4. Find the slope of the line that passes through each pair of points

(7, 3), (7, -5)

$$m = \frac{-5 - 3}{7 - 7} = \frac{-8}{0}$$

undefined

$x = 7$

5. Find the slope of the line that passes through each pair of points

(2, -4), (-2, 8)

$$m = \frac{8 - (-4)}{-2 - 2} = \frac{12}{-4} = -3$$
  

$m = -3$

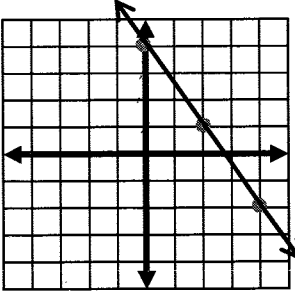
6. Find the slope of the line that passes through each pair of points

(-2, -3), (6, -3)

$$m = \frac{-3 - (-3)}{6 - (-2)} = \frac{0}{8} = 0$$
  

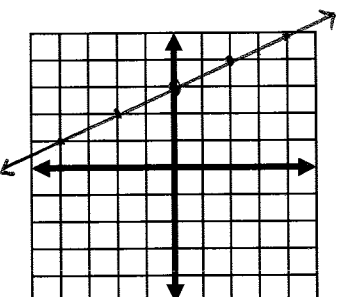
$m = 0$

7. Write the equation of the line graphed below:

Answer:  $y = -\frac{3}{2}x + 4$

8. Graph  $y = \frac{1}{2}x + 3$



9. Each pair of points lies on the same line. Find x.

(x, 5), (-3, -3); slope = 4

$$m = \frac{-3 - 5}{-3 - x} = \frac{4}{1}$$

$x = -1$

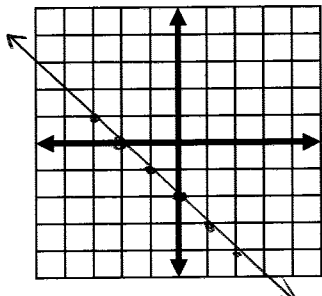
$$\frac{-8}{-3 - x} = \frac{4}{1}$$

$$-8 = 4(-3 - x)$$

$$-8 = -12 - 4x$$

$$+12 \quad +12$$

$$y = -x - 2$$



13. Write the equation of the line passing through (2,-5) and (4,3).

$$m = \frac{3 - (-5)}{4 - 2} = \frac{8}{2} = 4$$

$$-5 = 4(2) + b$$

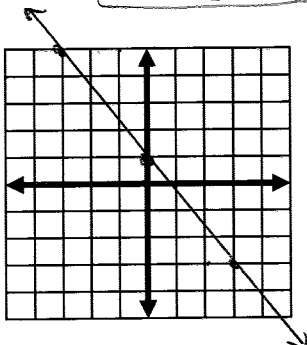
$$-5 = 8 + b$$

$$\begin{array}{r} -8 \\ -8 \end{array}$$

$$-13 = b$$

Answer:  $y = 4x - 13$

$$\begin{array}{r} 4x + 3y = 3 \\ -4x \quad -4x \\ \hline 3y = -4x + 3 \\ \frac{3y}{3} = \frac{-4x + 3}{3} \\ y = -\frac{4}{3}x + 1 \end{array}$$



14. Write the equation of the line parallel to  $y = -\frac{3}{2}x + 1$  passing through (-6,12)

$$m_{\parallel} = -\frac{3}{2}$$

$$12 = -\frac{3}{2}(-6) + b$$

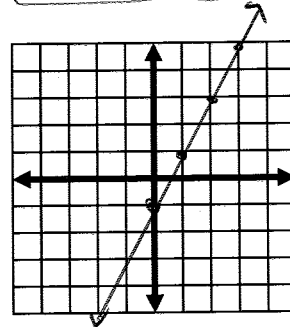
$$12 = 9 + b$$

$$\begin{array}{r} -9 \\ -9 \end{array}$$

$$3 = b$$

Answer:  $y = -\frac{3}{2}x + 3$

$$\begin{array}{r} 4x - 2y = 2 \\ -4x \quad -4x \\ \hline -2y = -4x + 2 \\ \frac{-2y}{-2} = \frac{-4x + 2}{-2} \\ y = 2x - 1 \end{array}$$



15. Write the equation of the line perpendicular to  $y = 4x + 5$  passing through (12,8).

$$m_{\perp} = -\frac{1}{4}$$

$$8 = -\frac{1}{4}(12) + b$$

$$8 = -3 + b$$

$$\begin{array}{r} +3 \\ +3 \end{array}$$

$$11 = b$$

Answer:  $y = -\frac{1}{4}x + 11$

16. Graph the following equation.

x	$f(x) =  x+1  - 3$	y
-3	$f(-3) =  -3+1  - 3$	-1
-2	$f(-2) =  -2+1  - 3$	-2
-1	$f(-1) =  -1+1  - 3$	-3
0	$f(0) =  0+1  - 3$	-2
1	$f(1) =  1+1  - 3$	-1
2	$f(2) =  2+1  - 3$	0

