

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

$$(-1, 2) \text{ \& \ } (0, 6)$$

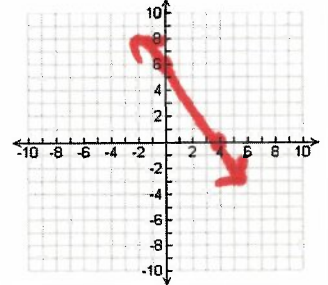
$$m = \frac{6-2}{0-(-1)} = \frac{4}{1} = \boxed{4}$$

Graph the equation.

$$6x + 4y = 24$$

$$\begin{array}{l} \text{x-int} \\ 6x = 24 \quad x = 4 \end{array}$$

$$\begin{array}{l} \text{y-int} \\ 4y = 24 \quad y = 6 \end{array}$$



Write the equation in slope-intercept form.

$$\begin{array}{l} 2x + 8y = 40 \\ \begin{array}{r} -2x \qquad -2x \\ \hline 8y = -2x + 40 \\ \frac{8}{8} \quad \frac{8}{8} \quad \frac{8}{8} \\ \hline y = -\frac{1}{4}x + 5 \end{array} \end{array}$$

Find the x- and y-intercepts of the equation.

$$9x + 8y = 84$$

$$\begin{array}{l} \text{x-int} \\ 9x = 84 \\ \frac{9}{9} \quad \frac{9}{9} \\ \hline x = 28/3 \end{array}$$

$$\begin{array}{l} \text{y-int} \\ 8y = 84 \\ \frac{8}{8} \quad \frac{8}{8} \\ \hline y = 21/2 \end{array}$$

Write an equation in point-slope form that has the given slope and passes through the given point.

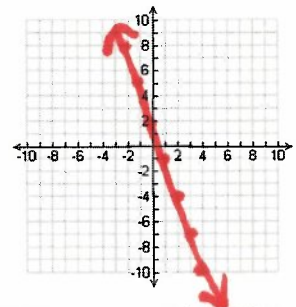
$$m = \frac{2}{3} \quad (0, -3)$$

$$y + 3 = \frac{2}{3}(x - 0)$$

Graph the equation.

$$y - 5 = -3(x + 1)$$

$$\begin{array}{l} (-1, 5) \\ m = -3/1 \end{array}$$



Write an equation in slope-intercept form for the line that passes through the given point and is PERPENDICULAR to the given line.

$$(7, -2) \quad y = 3x + 6$$

$$m = 3/1$$

$$k m = -1/3$$

$$y + 2 = -1/3(x - 7)$$

$$y + 2 = -1/3x + 7/3$$

$$\begin{array}{r} -2 \\ -2 \end{array}$$

$$y = -1/3x + 1/3$$

Write an equation in slope-intercept form that passes through the given points.

$$(7, 3) \text{ \& } (5, 1)$$

$$m = \frac{3-1}{7-5} = \frac{2}{2} = 1$$

$$y - 3 = 1(x - 7)$$

$$y - 3 = x - 7$$

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

$$y = x - 4$$

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

$$\left(\frac{1}{3}, 3\right) \text{ \& } \left(\frac{5}{3}, 7\right)$$

$$m = \frac{7-3}{\frac{5}{3}-\frac{1}{3}} = \frac{4}{\frac{4}{3}} = 3$$

Find the x- and y-intercepts of the equation.

$$-2x + 6y = -20$$

$$\begin{array}{l} \text{x-int} \\ -2x = -20 \\ x = 10 \end{array}$$

$$\begin{array}{l} \text{y-int} \\ 6y = -20 \\ y = -10/3 \end{array}$$

The math club is raising money for a competition. They need to raise \$150. They decide to have a bake sale where they sell cookies for \$0.75 each and cake for \$1.25 a slice.

- a) Write an equation to find how many types of each treat must be sold to raise \$150.

$$x = \text{cookies}$$

$$y = \text{cake}$$

$$0.75x + 1.25y = 150$$

Write an equation in point-slope form that has the given slope and passes through the given point.

$$m = -2 \quad (3, -6)$$

$$y + 6 = -2(x - 3)$$

Write an equation in slope-intercept form for the line that passes through the given point and is PARALLEL to the given line.

(2, 7) $y = \frac{1}{2}x - 4$

$m = \frac{1}{2}$

$y - 7 = \frac{1}{2}(x - 2)$

$y - 7 = \frac{1}{2}x - 1$

$y = \frac{1}{2}x + 6$

Write an equation in slope-intercept form that passes through the given points.

$m = \frac{8 - 5}{-2 - 1} = \frac{3}{-3} = -1$

(1, 5) & (-2, 8)

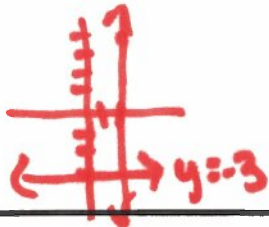
$y - 5 = -1(x - 1)$

$y - 5 = -1x + 1$

$y = -1x + 6$

Write an equation in slope-intercept form for the line that passes through the given point and is PERPENDICULAR to the given line.

(2, 4) $y = -3$



$x = 2$

Write an equation in slope-intercept form for the line that passes through the given point and is PARALLEL to the given line.

$y = 6$
(-3, 6) $y = 4$



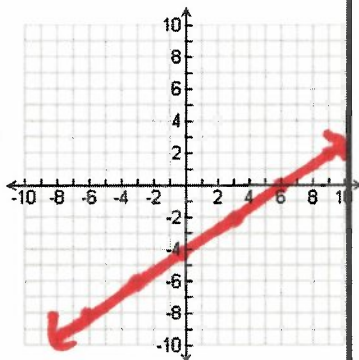
$y = 6$

Graph the equation.

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

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

$b = -4$



Write the equation in slope-intercept form.

$10x = 4y - 6$

$\frac{10x + 6}{4} = \frac{4y}{4}$

$y = \frac{5}{2}x + \frac{3}{2}$