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

$$(-1, 2) \ \& \ (0, 6)$$

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

Graph the equation.

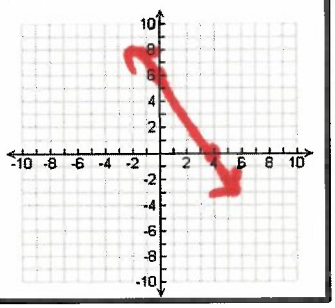
$$6x + 4y = 24$$

x-int

$6x = 24 \quad x = 4$

y-int

$4y = 24 \quad y = 6$



Write the equation in slope-intercept form.

$$2x + 8y = 40$$

$-2x \quad -2x$

$\frac{8y}{8} = \frac{-2x + 40}{8}$

$\boxed{y = -\frac{1}{4}x + 5}$

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

$$9x + 8y = 84$$

x-int

$\frac{9x}{9} = \frac{84}{9}$

$x = 28/3$

y-int

$\frac{8y}{8} = \frac{84}{8}$

$y = 21/2$

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

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

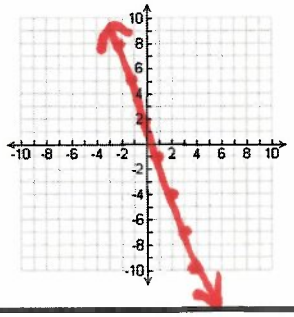
$y + 3 = 2/3(x - 0)$

Graph the equation.

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

$(-1, 5)$

$m = -3/1$



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

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

$m = 3/1$

$\perp m = -1/3$

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

$y + 2 = -\frac{1}{3}x + \frac{7}{3}$

$-2 \qquad -2$

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

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

$(7,3)\ \&\ (5,1)$

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

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

$y - 3 = x - 7$

$+3 \qquad +3$

$y = x - 4$

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

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

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

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

$-2x + 6y = -20$

x-int

$-2x = -20$

$x = 10$

y-int

$6y = -20$

$y = -10/3$

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: cookies

y: 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.

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

$m=1/2$

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

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

$+7 \quad +7$

$y=1/2x+6$

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

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

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

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

$y-5=-1x+1$

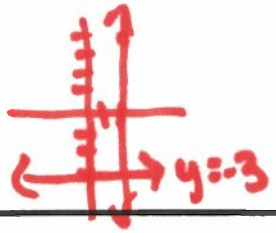
$+5 \quad +5$

$y=-1x+6$

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

$(2,4)\quad y=-3$

$x=2$



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

$y=6$

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

$y=4$

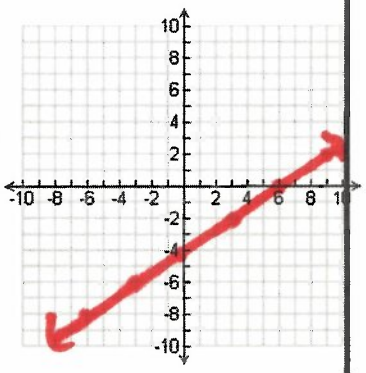
$y=6$

Graph the equation.

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

$m=2/3$

$b=-4$



Write the equation in slope-intercept form.

$10x=4y-6$

$+6 \quad +6$

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

$y=5/2x+3/2$