

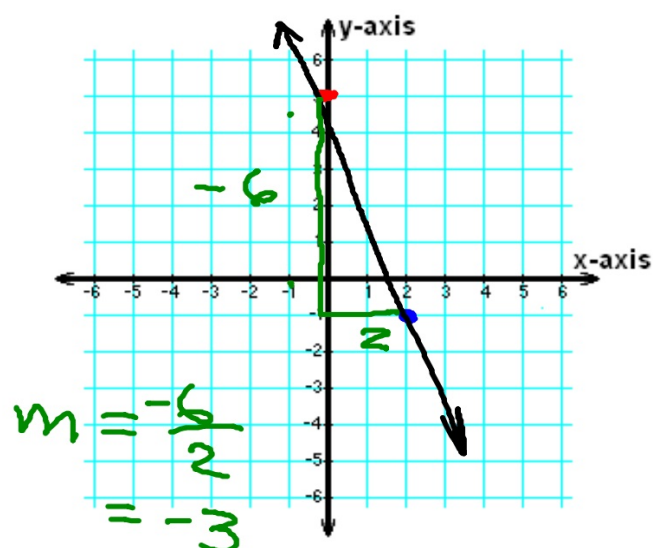
# January 26, 2012

Get out your homework... *Pink* WS3

$$\begin{array}{l} 21) \quad \frac{-2y}{-2} = \frac{-14x + 6}{-2} \\ y = 7x - 3 \end{array}$$

$$\begin{array}{l} 18) \quad -16x = 6y - 30 \\ \quad \quad +30 \quad \quad +30 \\ \hline -16x + 30 = 6y \\ \quad \quad \quad 6 \quad \quad \quad 6 \\ -\frac{8}{3}x + 5 = y \end{array}$$

## 1/26 - Writing equations of lines that go through 2 given points



$(2, -1)$  and  $(0, 5)$

$$y = -3x + 5$$

through:  $(0, -1)$  and  $(4, 3)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{3 - (-1)}{4 - 0}$$

$$m = \frac{4}{4} = 1$$

$$y = mx + b$$

$$3 = 1 \cdot 4 + b$$

$$-3 = 4 + b$$

$$-1 = b$$

1. Write the formula
2. Find  $m$  from the 2 points
3. Substitute  $x$ ,  $y$ , and  $m$   
*Choose 1 point*
4. Solve the equation for  $b$
5. Substitute  $m$  and  $b$

$$y = 1x - 1$$

$$y = x - 1$$

through:  $(4, 3)$  and  $(2, -1)$

$$m = \frac{-1 - 3}{2 - 4} \\ = \frac{-4}{-2} \\ = 2$$

$$y = mx + b$$

$$3 = 2 \cdot 4 + b \\ 3 = 8 + b \\ -5 = b$$

$$y = 2x - 5$$

1. Write the formula
2. Find  $m$  from the equation
3. Substitute  $x$ ,  $y$  and  $m$
4. Solve the equation for  $b$
- ~~5. Write the equation~~
6. Substitute  $m$  and  $b$

through  $(4, 4)$  and  $(0, 1)$

$$m = \frac{1-4}{0-4} \\ = \frac{-3}{-4} \\ = \frac{3}{4}$$

$$y = mx + b$$

$$4 = \frac{3}{4} \cdot 4 + b$$

$$4 = 3 + b$$

$$\begin{array}{r} -3 \\ -3 \end{array} \\ 1 = b$$

$$y = \frac{3}{4}x + 1$$

1. Write the formula
2. Find  $m$  from the equation
3. Substitute  $x$ ,  $y$  and  $m$
4. Solve the equation for  $b$
5. ~~Write the equation~~
6. Substitute  $m$  and  $b$

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

$$m = \frac{-3 - (-5)}{1 - 5}$$

$$m = \frac{2}{-4}$$

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

$$y = mx + b$$

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

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

$$+2\frac{1}{2} \quad +2\frac{1}{2}$$

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

1. Write the formula
2. Find  $m$  from the equation
3. Substitute  $x$ ,  $y$  and  $m$
4. Solve the equation for  $b$
- ~~5. Write the equation~~
6. Substitute  $m$  and  $b$

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

# Homework

Green worksheet 4

Due Friday