

# Daily Math

## Week 31 (2013-2014)

Mon. March 31, 2014

Tues. April 1, 2014

Wed. April 2, 2014

Thurs. April 3, 2014

Fri. April 4, 2014

Monday, March 31, 2014

1<sup>st</sup>

Simplify  $7x - 2x$

Monday, March 31, 2014

1<sup>st</sup>

Simplify  $7x - 2x$

Answer:  $7x - 2x$

$$x(7 - 2) = 5x$$

Monday, March 31, 2014

2<sup>nd</sup>

Simplify  $7\sqrt{2} - 2\sqrt{2}$

Monday, March 31, 2014

2<sup>nd</sup>

Simplify  $7\sqrt{2} - 2\sqrt{2}$

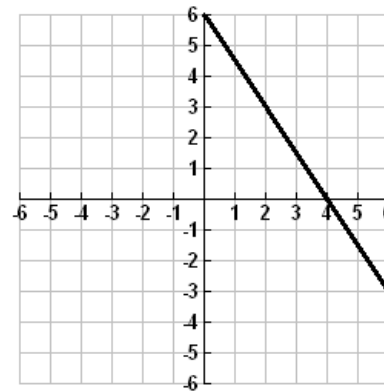
Answer:  $7\sqrt{2} - 2\sqrt{2}$

$$\sqrt{2}(7 - 2) = 5\sqrt{2}$$

Monday, March 31, 2014

3<sup>rd</sup>

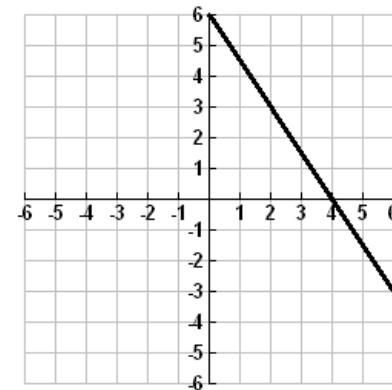
Write the equation of the line shown in the graph.



Monday, March 31, 2014

3<sup>rd</sup>

Write the equation of the line shown in the graph.



Answer: Equation:  $y = mx + b$

$$b = 6$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{3-6}{2-0} = \frac{-3}{2}$$

$$\text{Thus, } \mathbf{y = -\frac{3}{2}x + 6}$$

Monday, March 31, 2014

4<sup>th</sup>

A soda machine starts the day with 100 cans of coke. Cans of coke are sold at a rate of 7 cans per hour. Write an equation that models the number of cans of coke,  $c$ , left in the machine after  $h$  hours.



Monday, March 31, 2014

4<sup>th</sup>

A soda machine starts the day with 100 cans of coke. Cans of coke are sold at a rate of 7 cans per hour. Write an equation that models the number of cans of coke,  $c$ , left in the machine after  $h$  hours.

Answer:

Cans left = Starting # of cans – cans sold

$$c = 100 - 7h$$

Monday, March 31, 2014

5<sup>th</sup>

Solve  $V = lwh$  for  $w$

Monday, March 31, 2014

5<sup>th</sup>

Solve  $V = lwh$  for  $w$

Answer:  $V = lwh$

$$V \div l = lwh \div l$$

$$\frac{V}{l} = wh$$

$$\frac{V}{l} \div h = wh \div h$$

$$\frac{V}{lh} = w$$

Monday, March 31, 2014

6<sup>th</sup>

Simplify  $8x - x$

Monday, March 31, 2014

6<sup>th</sup>

Simplify  $8x - x$

Answer:  $8x - x$

$$x(8 - 1) = 7x$$

Monday, March 31, 2014

7<sup>th</sup>

Simplify  $8\sqrt{5} - \sqrt{5}$

Monday, March 31, 2014

7<sup>th</sup>

Simplify  $8\sqrt{5} - \sqrt{5}$

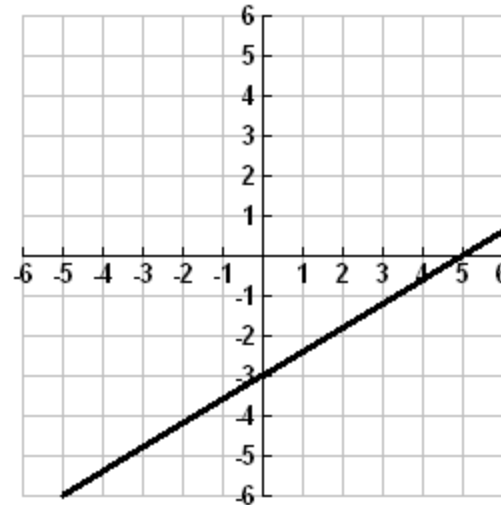
Answer:  $8\sqrt{5} - \sqrt{5}$

$$\sqrt{5}(8 - 1) = 7\sqrt{5}$$

Tuesday, April 1, 2014

1<sup>st</sup>

Write the equation of the line shown in the graph.

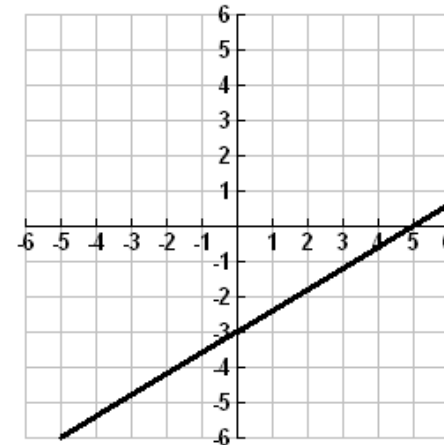




Tuesday, April 1, 2014

1<sup>st</sup>

Write the equation of the line shown in the graph.



Answer:

Equation:  $y = mx + b$

$$b = -3$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{0 - (-3)}{5 - 0} = \frac{3}{5}$$

$$\text{Thus, } \mathbf{y = \frac{3}{5}x - 3}$$

Tuesday, April 1, 2014

2<sup>nd</sup>

A car is 500 miles from its destination. If it travels 60 mph, write an equation that models the distance,  $d$ , the car is from its destination after  $t$  hours.

Tuesday, April 1, 2014

2<sup>nd</sup>

A car is 500 miles from its destination. If it travels 60 mph, write an equation that models the distance,  $d$ , the car is from its destination after  $t$  hours.

Answer:

Remaining distance = starting distance – distance traveled after  $t$  hours.

$$d = 500 - 60t$$

Tuesday, April 1, 2014

3<sup>rd</sup>

Solve  $a + b + c = 12$  for  $c$

Tuesday, April 1, 2014

3<sup>rd</sup>

Solve  $a + b + c = 12$  for  $c$

Answer:  $a + b + c = 12$

$$a - a + b + c = 12 - a$$

$$b + c = 12 - a$$

$$b - b + c = 12 - a - b$$

$$c = 12 - a - b$$

Tuesday, April 1, 2014

4<sup>th</sup>

Simplify  $-2x + 4x$

Tuesday, April 1, 2014

4<sup>th</sup>

Simplify  $-2x + 4x$

Answer:  $-2x + 4x$

$$x(-2 + 4) = \mathbf{2x}$$

Tuesday, April 1, 2014

5<sup>th</sup>

Simplify  $-2\sqrt{2} + 4\sqrt{2}$

Tuesday, April 1, 2014



Tuesday, April 1, 2014

5<sup>th</sup>

Simplify  $-2\sqrt{2} + 4\sqrt{2}$

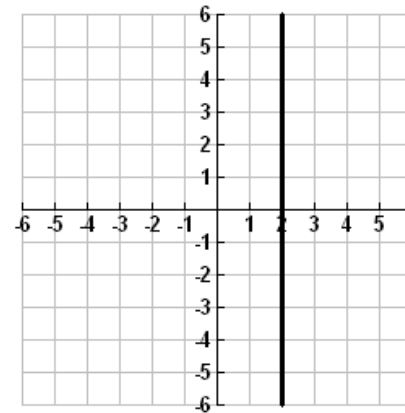
Answer:  $-2\sqrt{2} + 4\sqrt{2}$

$$\sqrt{2}(-2 + 4) = \mathbf{2\sqrt{2}}$$

Tuesday, April 1, 2014

6<sup>th</sup>

Write the equation of the line shown in the graph.

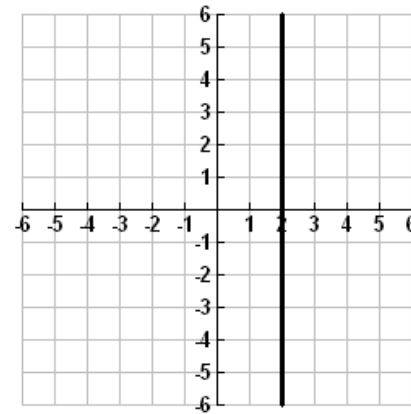


Tuesday, April 1, 2014

6<sup>th</sup>

Write the equation of the line shown in the graph.

Answer:  $y$  doesn't vary and isn't a variable in the equation.

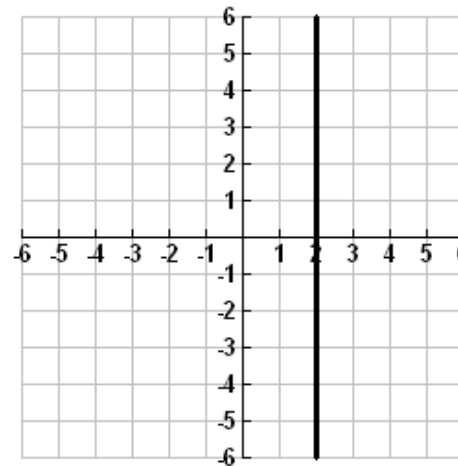


Equation:  $x = 2$

Tuesday, April 1, 2014

7<sup>th</sup>

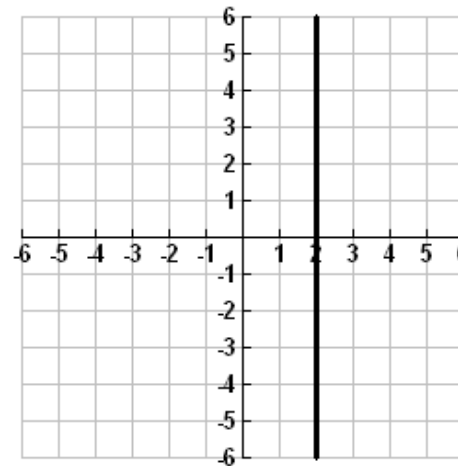
What is the slope of the line shown in the graph?



Tuesday, April 1, 2014

7<sup>th</sup>

What is the slope of the line shown in the graph?



Answer: There is no “run” (i.e. it is zero).

Since we cannot divide by zero, slope of a vertical line is **undefined**.

Wednesday, April 2, 2014

1<sup>st</sup>

Solve  $C = 2\pi r$  for  $r$

Wednesday, April 2, 2014

1<sup>st</sup>

Solve  $C = 2\pi r$  for  $r$

Answer:  $C = 2\pi r$

$$C \div 2 = 2\pi r \div 2$$

$$\frac{C}{2} = \pi r$$

$$\frac{C}{2} \div \pi = \pi r \div \pi$$

$$\frac{C}{2\pi} = r$$

Wednesday, April 2, 2014

**2nd**

Simplify  $-5x - 4x$



Wednesday, April 2, 2014

2nd

Simplify  $-5x - 4x$

Answer:  $-5x - 4x$

$$x(-5 - 4) = -9x$$

Wednesday, April 2, 2014

3rd

Simplify  $-5\sqrt{5} - 4\sqrt{5}$

Wednesday, April 2, 2014

3rd

Simplify  $-5\sqrt{5} - 4\sqrt{5}$

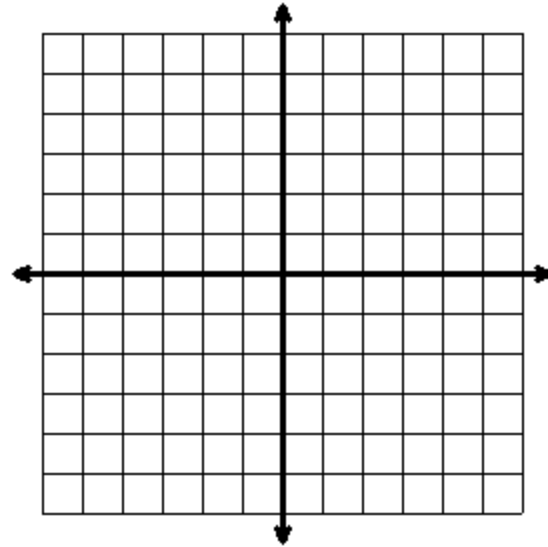
Answer:  $-5\sqrt{5} - 4\sqrt{5}$

$$\sqrt{5}(-5 - 4) = -9\sqrt{5}$$

Wednesday, April 2, 2014

4th

Graph the equation  $y = 3x + 1$  on the coordinate plane to the right.



Wednesday, April 2, 2014

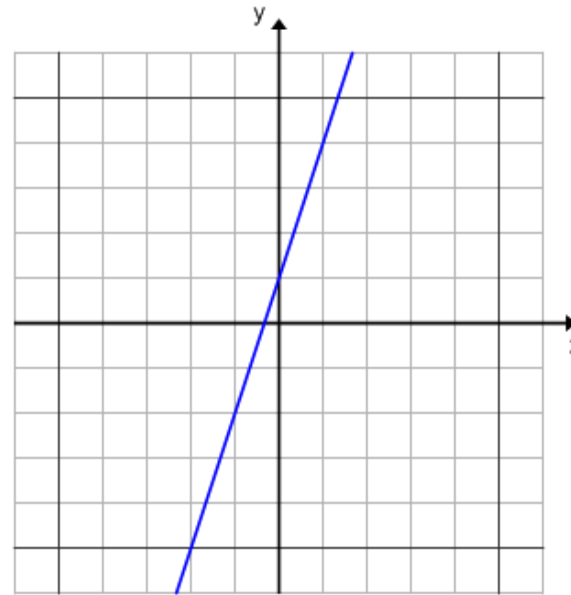
4th

Graph the equation  $y = 3x + 1$  on the coordinate plane to the right.

Answer:

$$b = 1$$

$$m = 3$$



Wednesday, April 2, 2014

5<sup>th</sup>

Write the equation of a line that passes through  $(1, 2)$  and has a slope of  $-2$ .

# Wednesday, April 2, 2014

5<sup>th</sup>

Write the equation of a line that passes through (1, 2) and has a slope of -2.

Answer:  $y = mx + b$

The point (1, 2) must work in the equation.

$$\text{Thus, } 2 = -2(1) + b \Rightarrow 2 = -2 + b$$

$$2 + 2 = -2 + 2 + b$$

$$4 = b$$

$$\text{So, } y = -2x + 4$$

Wednesday, April 2, 2014

6<sup>th</sup>

Solve  $3x + y = 2$  for  $y$



Wednesday, April 2, 2014

6<sup>th</sup>

Solve  $3x + y = 2$  for  $y$

Answer:  $3x + y = 2$

$$3x - 3x + y = 2 - 3x$$

$$y = 2 - 3x$$

Wednesday, April 2, 2014

7<sup>th</sup>

Simplify  $2x - 10x$

Wednesday, April 2, 2014

7<sup>th</sup>

Simplify  $2x - 10x$

Answer:  $2x - 10x$

$$x(2 - 10) = -8x$$

Thursday, April 3, 2014

**1st**

Simplify  $2\sqrt{3} - 10\sqrt{3}$

Thursday, April 3, 2014

1st

Simplify  $2\sqrt{3} - 10\sqrt{3}$

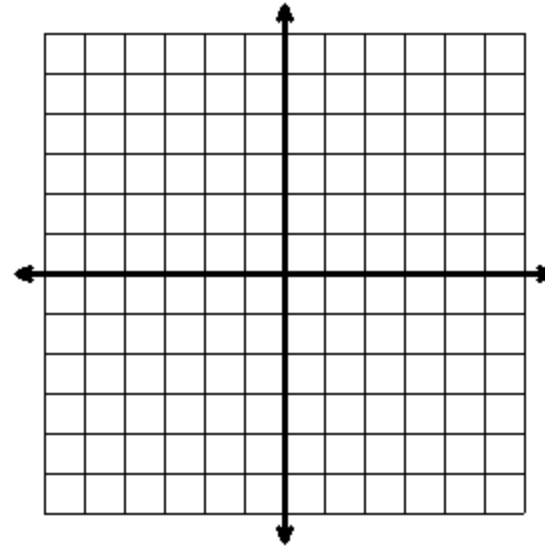
Answer:  $2\sqrt{3} - 10\sqrt{3}$

$$\sqrt{3}(2 - 10) = -8\sqrt{3}$$

Thursday, April 3, 2014

2nd

Graph the equation  $y = -2x - 1$  on the coordinate plane to the right.



Thursday, April 3, 2014

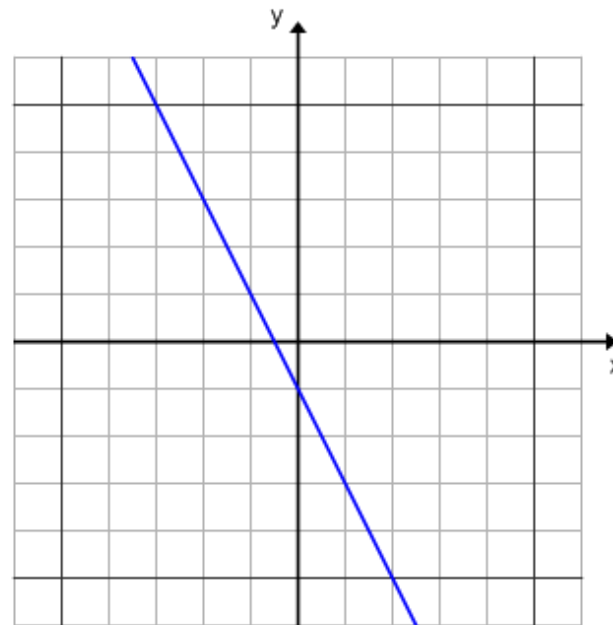
2nd

Graph the equation  $y = -2x - 1$  on the coordinate plane to the right.

Answer:

$$b = -1$$

$$m = -2$$



Thursday, April 3, 2014

3rd

Write the equation of a line that passes through  $(1, 2)$  and has a slope of  $\frac{1}{2}$ .



# Thursday, April 3, 2014

# 3rd

Write the equation of a line that passes through (1, 2) and has a slope of  $\frac{1}{2}$ .

Answer:  $y = mx + b$

The point (1, 2) must work in the equation.

$$\text{Thus, } 2 = \frac{1}{2}(1) + b \Rightarrow 2 = \frac{1}{2} + b$$

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

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

$$\text{So, } y = \frac{1}{2}x + \frac{3}{2}$$

Thursday, April 3, 2014

4th

Solve  $6x - 2y = 18$  for  $y$

Thursday, April 3, 2014

4th

Solve  $6x - 2y = 18$  for  $y$

Answer:  $6x - 2y = 18$

$$6x - 6x - 2y = 18 - 6x$$

$$-2y = 18 - 6x$$

$$\frac{-2y}{-2} = \frac{18-6x}{-2}$$

$$y = -9 + 3x$$

Thursday, April 3, 2014

5th

Simplify  $4x + 2x + 5y$

Thursday, April 3, 2014

5th

Simplify  $4x + 2x + 5y$

Answer:  $4x + 2x + 5y$

$x(4 + 2) + 5y$

**$6x + 5y$**

Thursday, April 3, 2014

6th

Simplify  $4\sqrt{6} + 2\sqrt{6} + 5\sqrt{3}$

Thursday, April 3, 2014

6th

Simplify  $4\sqrt{6} + 2\sqrt{6} + 5\sqrt{3}$

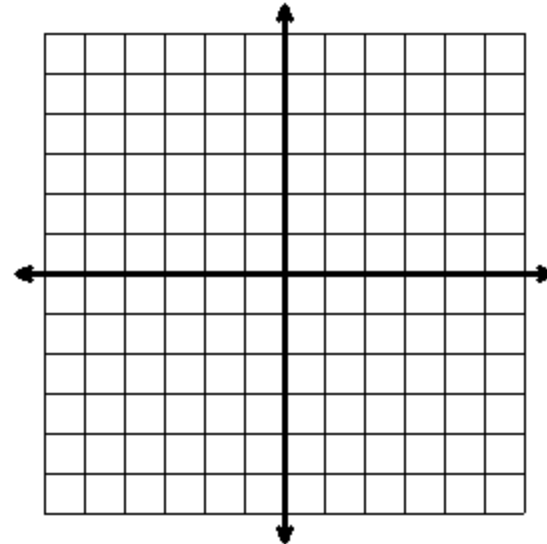
Answer:  $4\sqrt{6} + 2\sqrt{6} + 5\sqrt{3}$

$\sqrt{6}(4 + 2) + 5\sqrt{3}$

**$6\sqrt{6} + 5\sqrt{3}$**

Thursday, April 3, 2014 7th

Graph the equation  $y = -\frac{4}{3}x - 2$  on the coordinate plane to the right.





Thursday, April 3, 2014

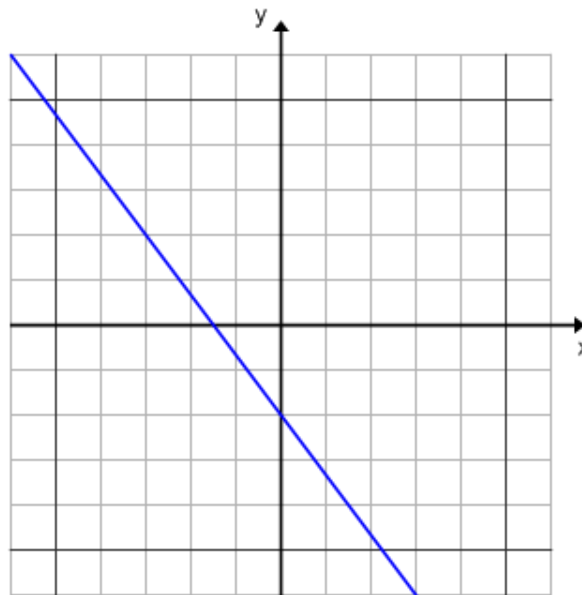
7th

Graph the equation  $y = -\frac{4}{3}x - 2$  on the coordinate plane to the right.

Answer:

$$b = -2$$

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



Friday, April 4, 2014

**1st**

Write the equation of a line that passes through  $(3, 0)$  and has a slope of  $-2$ .

Friday, April 4, 2014

1st

Write the equation of a line that passes through (3, 0) and has a slope of -2.

Answer:  $y = mx + b$

The point (3, 0) must work in the equation.

Thus,  $0 = -2(3) + b \Rightarrow 0 = -6 + b$

$$0 + 6 = -6 + 6 + b$$

$$6 = b$$

$$\text{So, } y = -2x + 6$$

Friday, April 4, 2014

**2nd**

Solve for  $x$ :  $\frac{x}{3} = \frac{12}{9}$

Friday, April 4, 2014

2nd

Solve for  $x$ :  $\frac{x}{3} = \frac{12}{9}$

Answer:  $\frac{x}{3} = \frac{12}{9}$

$$9x = 3(12)$$

$$9x = 36$$

$$9x \div 9 = 36 \div 9$$

$$x = 4$$

Friday, April 4, 2014

**3rd**

Simplify  $9x + 2y - 7x$

Friday, April 4, 2014

3rd

Simplify  $9x + 2y - 7x$

Answer:  $9x + 2y - 7x$

$9x - 7x + 2y$

$x(9 - 7) + 2y$

**$2x + 2y$**

Friday, April 4, 2014

**4th**

Simplify  $9\sqrt{5} + 2\sqrt{2} - 7\sqrt{5}$



Friday, April 4, 2014

4th

Simplify  $9\sqrt{5} + 2\sqrt{2} - 7\sqrt{5}$

Answer:  $9\sqrt{5} + 2\sqrt{2} - 7\sqrt{5}$

$9\sqrt{5} - 7\sqrt{5} + 2\sqrt{2}$

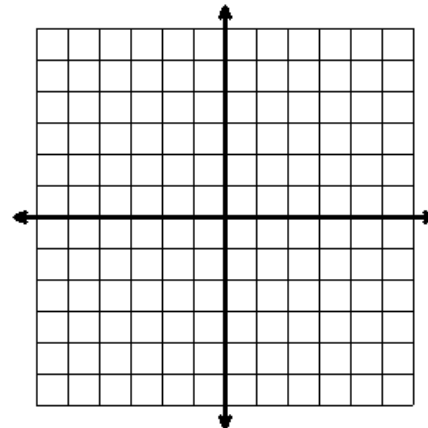
$\sqrt{5}(9 - 7) + 2\sqrt{2}$

**$2\sqrt{5} + 2\sqrt{2}$**

Friday, April 4, 2014

5th

Graph the equation  $y = -\frac{1}{4}x$  on the coordinate plane to the right.



Friday, April 4, 2014

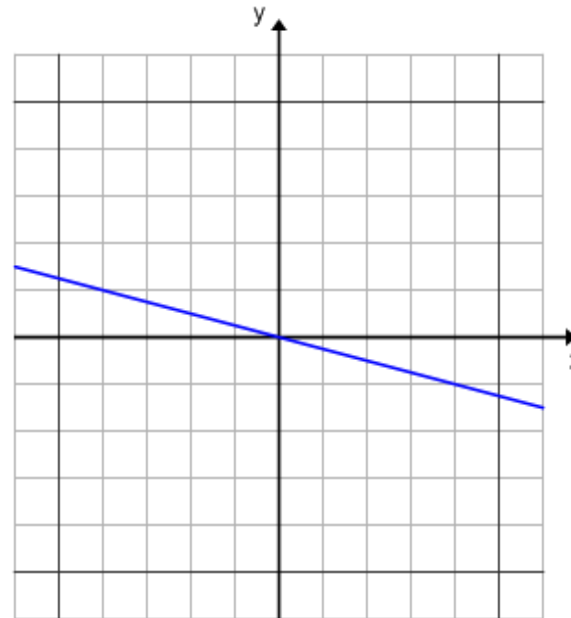
5th

Graph the equation  $y = -\frac{1}{4}x$  on the coordinate plane to the right.

Answer:

$$b = 0$$

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



Friday, April 4, 2014

6th

Write the equation of a line that passes through  $(2, 4)$  and has a slope of  $-3$ .

Friday, April 4, 2014

6th

Write the equation of a line that passes through (2, 4) and has a slope of -3.

Answer:  $y = mx + b$

The point (2, 4) must work in the equation.

Thus,  $4 = -3(2) + b \Rightarrow 4 = -6 + b$

$$4 + 6 = -6 + 6 + b$$

$$10 = b$$

So,  $y = -3x + 10$

Friday, April 4, 2014

7th

Solve for  $x$ :  $\frac{(x+2)}{10} = \frac{3}{5}$

Friday, April 4, 2014

7th

Solve for  $x$ :  $\frac{(x+2)}{10} = \frac{3}{5}$

Answer:  $\frac{(x+2)}{10} = \frac{3}{5}$   
 $5(x + 2) = 3(10)$   
 $5x + 10 = 30$   
 $5x + 10 - 10 = 30 - 10$   
 $5x = 20$   
 $5x \div 5 = 20 \div 5$   
 $x = 4$