

Daily Math

Week 11 (2013-2014)

Mon. October 28, 2013

Tues. October 29, 2013

Wed. October 30, 2013

Thurs. October 31, 2013

Fri. November 1, 2013

Monday, October 28, 2013

1st

What is the value of the y -coordinate in the point $(2,3)$?

Monday, October 28, 2013

1st

What is the value of the y -coordinate in the point $(2,3)$?

Answer: **3**

Monday, October 28, 2013

2nd

Complete the pattern:

| | | | | | | |
|---|----|----|----|----|--|--|
| x | 1 | 3 | 5 | 7 | | |
| y | 10 | 20 | 30 | 40 | | |

Monday, October 28, 2013

2nd

Complete the pattern:

| | | | | | | |
|---|----|----|----|----|--|--|
| x | 1 | 3 | 5 | 7 | | |
| y | 10 | 20 | 30 | 40 | | |

Answer:

| | | | | | | |
|---|----|----|----|----|----|----|
| x | 1 | 3 | 5 | 7 | 9 | 11 |
| y | 10 | 20 | 30 | 40 | 50 | 60 |

Monday, October 28, 2013

3rd

Simplify:

$$-3(x - 5)$$

Monday, October 28, 2013

3rd

Simplify:

$$-3(x - 5)$$

Answer:

$$-3(x - 5)$$

$$**-3x + 15**$$

Monday, October 28, 2013

4th

Solve:

$$2 + 3(4x - 6) = 20$$

Monday, October 28, 2013

4th

Solve:

$$2 + 3(4x - 6) = 20$$

Answer: $2 + 3(4x - 6) = 20$

$$2 + 12x - 18 = 20$$

$$12x - 16 = 20$$

$$12x - 16 + 16 = 20 + 16$$

$$12x = 36$$

$$12x \div 12 = 36 \div 12$$

$$x = 3$$

Monday, October 28, 2013

5th

What is 5% of 18?

Monday, October 28, 2013

5th

What is 5% of 18?

Answer: 5% of 18

$$(0.05)18 = \mathbf{0.9}$$

Monday, October 28, 2013

6th

If Adel is known for making 4 out of 6 baskets while shooting free throws, how many times would he have to shoot to make 24 baskets?

Monday, October 28, 2013

6th

If Adel is known for making 4 out of 6 baskets while shooting free throws, how many times would he have to shoot to make 24 baskets?

Answer: He made 6 times more baskets, so he would have to have taken 6 times more shots.

$6(6) = 36$ shots attempted

Monday, October 28, 2013

7th

Simplify:

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

Monday, October 28, 2013

7th

Simplify:

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

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

$$-2 + 5 = \mathbf{3}$$

Tuesday, October 29, 2013

1st

$$\left(1 \frac{3}{4}\right) \left(-\frac{2}{5}\right) =$$

Tuesday, October 29, 2013

1st

$$\left(1\frac{3}{4}\right)\left(-\frac{2}{5}\right) =$$

Answer:

$$\begin{aligned} &\left(1\frac{3}{4}\right)\left(-\frac{2}{5}\right) \\ &\quad \frac{7}{4} \cdot \left(-\frac{2}{5}\right) \\ &\quad -\frac{14}{20} \\ &-\frac{14}{20} \div \frac{2}{2} = -\frac{7}{10} \end{aligned}$$

Tuesday, October 29, 2013

2nd

If Jill mows 2 lawns in 3 hours, how long will it take her to mow 8 lawns?

Tuesday, October 29, 2013

2nd

If Jill mows 2 lawns in 3 hours, how long will it take her to mow 8 lawns?

Answer: Mowing 4 times more lawns will take Jill 4 times as long.

$$4(3 \text{ hours}) = \mathbf{12 \text{ hours}}$$

Tuesday, October 29, 2013

3rd

Solve for y in terms of x :

$$2y + 3x = 0$$

Tuesday, October 29, 2013

3rd

Solve for y in terms of x :

$$2y + 3x = 0$$

Answer: $2y + 3x = 0$

$$2y + 3x - 3x = 0 - 3x$$

$$2y = -3x$$

$$2y \div 2 = -3x \div 2$$

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

Tuesday, October 29, 2013

4th

True or false:

$$\frac{2x}{2} + \frac{15}{2} = \frac{2x+15}{2}?$$

Tuesday, October 29, 2013

4th

True or false:

$$\frac{2x}{2} + \frac{15}{2} = \frac{2x+15}{2}?$$

Answer: **True.**

2x “halves” + 15 “halves” equals 2x + 15 “halves”

Tuesday, October 29, 2013

5th

Solve:

$$2(x + 3) \leq 8(x - 1)$$

Tuesday, October 29, 2013

5th

Solve:

$$2(x + 3) \leq 8(x - 1)$$

Answer:

$$2(x + 3) \leq 8(x - 1)$$

$$2x + 6 \leq 8x - 8$$

$$2x + 6 + 8 \leq 8x - 8 + 8$$

$$2x + 14 \leq 8x$$

$$2x - 2x + 14 \leq 8x - 2x$$

$$14 \leq 6x$$

$$14 \div 6 \leq 6x \div 6$$

$$\frac{7}{3} \leq x$$

Tuesday, October 29, 2013

6th

If $c = -3$ and $d = 2$, then $2c^2 - 5d =$

Tuesday, October 29, 2013

6th

If $c = -3$ and $d = 2$, then $2c^2 - 5d =$

Answer: $2c^2 - 5d$

$$2(-3)^2 - 5(2)$$

$$2(9) - 5(2)$$

$$18 - 10 = 8$$

Tuesday, October 29, 2013

7th

Solve for y :

$$2y = 2x + 15$$

Tuesday, October 29, 2013

7th

Solve for y :

$$2y = 2x + 15$$

Answer: $2y = 2x + 15$

$$\frac{1}{2}(2y) = \frac{1}{2}(2x + 15)$$

$$y = x + \frac{15}{2}$$

Wednesday, October 30, 2013

1st

Simplify:

$$\frac{5x + 10}{5}$$

Wednesday, October 30, 2013 **1st**

Simplify:

$$\frac{5x + 10}{5}$$

Answer:

$$\begin{aligned} &\frac{5x+10}{5} \\ &\frac{5x}{5} + \frac{10}{5} \\ &\mathbf{x + 2} \end{aligned}$$

Wednesday, October 30, 2013 **2nd**

Simplify:

$$2 + 3(x - 4) - 7x$$

Wednesday, October 30, 2013 2nd

Simplify:

$$2 + 3(x - 4) - 7x$$

Answer: $2 + 3(x - 4) - 7x$

$$2 + 3x - 12 - 7x$$

$$(2 - 12) + (3x - 7x)$$

$$-10 + (-4x)$$

$$**-4x - 10**$$

Wednesday, October 30, 2013 **3rd**

Fill in the table for $y = 2x - 3$

| | | | | |
|---|----|---|---|---|
| x | -2 | 0 | 2 | 4 |
| y | | | | |

Wednesday, October 30, 2013 3rd

Fill in the table for $y = 2x - 3$

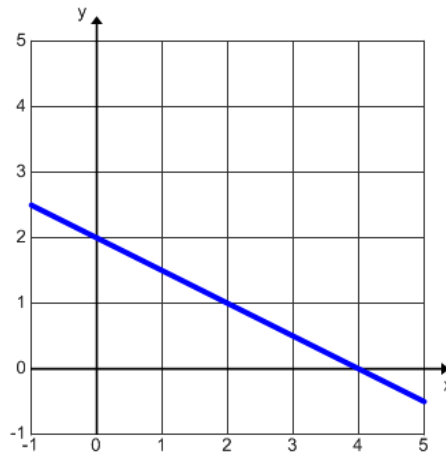
| | | | | |
|---|----|---|---|---|
| x | -2 | 0 | 2 | 4 |
| y | | | | |

Answer:

| | | | | |
|---|----|----|---|---|
| x | -2 | 0 | 2 | 4 |
| y | -7 | -3 | 1 | 5 |

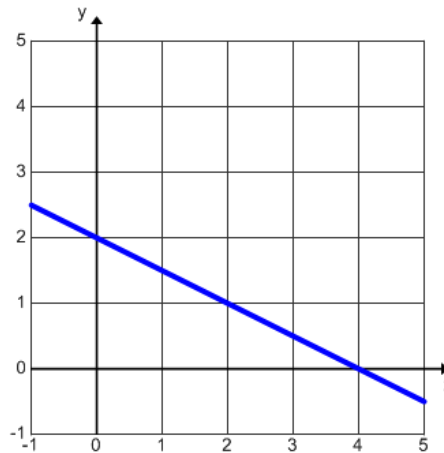
Wednesday, October 30, 2013 4th

What is the x -intercept in this graph?



Wednesday, October 30, 2013 4th

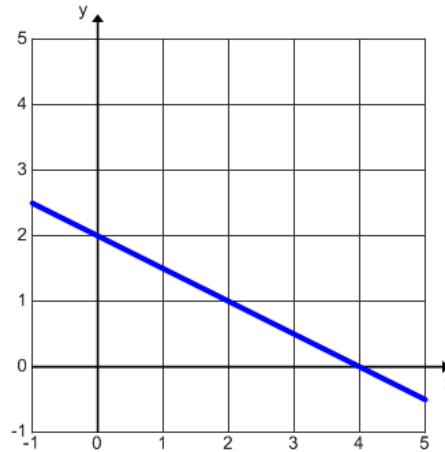
What is the x -intercept in this graph?



Answer: x -intercept is **(4, 0)**

Wednesday, October 30, 2013 5th

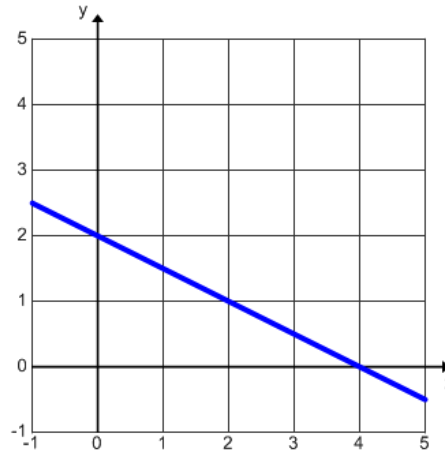
What is the y -intercept in this graph?



Wednesday, October 30, 2013

5th

What is the y -intercept in this graph?

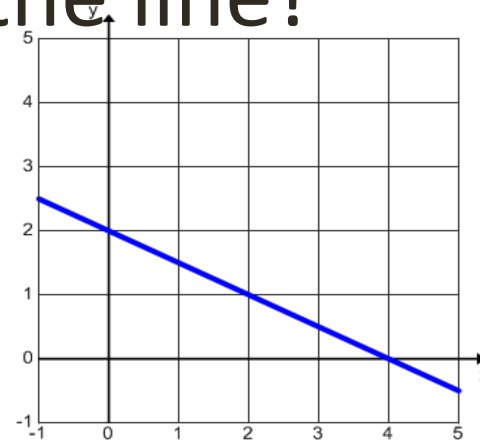


Answer: y -intercept is **(0, 2)**

Wednesday, October 30, 2013

6th

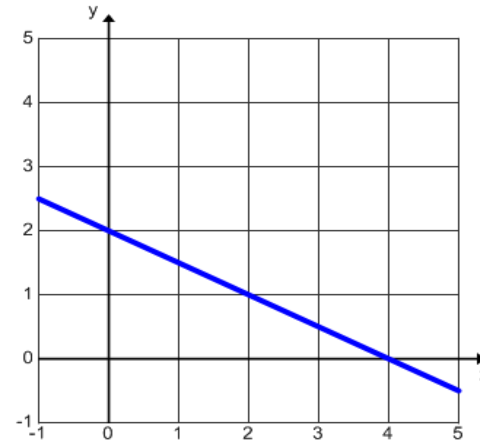
What is the slope of the line?



Wednesday, October 30, 2013

6th

What is the slope of the line?



Answer: Slope = $\frac{\text{rise}}{\text{run}}$

As the line moves from (0,2) to (4,0) its “rise” is -2 (i.e. “down” 2) and its “run” is +4.

$$\text{Slope} = \frac{-2}{+4} = -\frac{1}{2}$$

Wednesday, October 30, 2013 7th

Solve for r in the equation:

$$C = 2\pi r$$

Wednesday, October 30, 2013

7th

Solve for r in the equation:

$$C = 2\pi r$$

Answer: $C = 2\pi r$

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

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

Thursday, October 31, 2013

1st

Solve for x :

$$\frac{x}{3} = \frac{15}{12}$$

Thursday, October 31, 2013

1st

Solve for x :

$$\frac{x}{3} = \frac{15}{12}$$

Answer:

$$\frac{x}{3} = \frac{15}{12}$$

$$12x = 15 \cdot 3$$

$$12x = 45$$

$$12x \div 12 = 45 \div 12$$

$$x = \frac{45}{12}$$

$$x = \frac{45}{12} \div \frac{3}{3} = \frac{15}{4}$$

Thursday, October 31, 2013 **2nd**

What is the slope of the line $y = 3$?

Thursday, October 31, 2013 2nd

What is the slope of the line $y = 3$?

Answer: This line is a horizontal line. It has a slope of **zero**.

Thursday, October 31, 2013

3rd

Solve for y :

$$3y + x = 6$$

Thursday, October 31, 2013

3rd

Solve for y :

$$3y + x = 6$$

Answer: $3y + x = 6$

$$3y + x - x = 6 - x$$

$$3y = 6 - x$$

$$\frac{1}{3}(3y) = \frac{1}{3}(6 - x)$$

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

Thursday, October 31, 2013

4th

Find the y -intercept of the line:

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

Thursday, October 31, 2013

4th

Find the y -intercept of the line:

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

Answer: **(0,2)**

It's already in slope-intercept form ($y = mx + b$). The "b" term is the y -value of the y -intercept.

Thursday, October 31, 2013

5th

Solve the inequality for p :

$$1 - 2p \geq p$$

Thursday, October 31, 2013

5th

Solve the inequality for p :

$$1 - 2p \geq p$$

Answer: $1 - 2p \geq p$

$$1 - 2p + 2p \geq p + 2p$$

$$1 \geq 3p$$

$$1 \div 3 \geq 3p \div 3$$

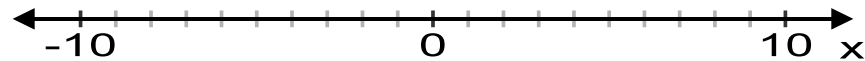
$$\frac{1}{3} \geq p$$

Thursday, October 31, 2013

6th

Solve and graph the inequality:

$$4 < 2x + 4$$

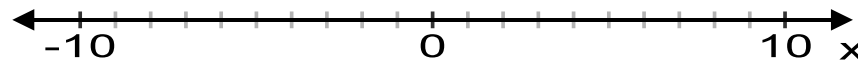


Thursday, October 31, 2013

6th

Solve and graph the inequality:

$$4 < 2x + 4$$



Answer: $4 - 4 < 2x + 4 - 4$

$$0 < 2x$$

$$0 \div 2 < 2x \div 2$$

$$0 < x$$



Thursday, October 31, 2013

7th

If Jane charges \$7 per hour for babysitting, and baby sits for 3.5 hours every weekday, how much does she make in one week?

Thursday, October 31, 2013 7th

If Jane charges \$7 per hour for babysitting, and baby sits for 3.5 hours every weekday, how much does she make in one week?

Answer:

$$(3.5 \text{ hours/day})(\$7/\text{hour})(5 \text{ weekdays/week}) \\ = \mathbf{\$122.50/week}$$

Friday, November 1, 2013

1st

What is the mean of the following set of values?

$\{7, 4, 2, 5, 5, 9, 10, 6\}$

Friday, November 1, 2013

1st

What is the mean of the following set of values?

{7, 4, 2, 5, 5, 9, 10, 6}

Answer: The *mean* is the formal math word for “average value”.

$$\text{Mean} = \frac{7+4+2+5+5+9+10+6}{8} = \frac{48}{8}$$

Mean = 6

Friday, November 1, 2013

2nd

Simplify:

$$3(3x + 5) - 4(2x - 3)$$

Friday, November 1, 2013

2nd

Simplify:

$$3(3x + 5) - 4(2x - 3)$$

Answer: $3(3x + 5) - 4(2x - 3)$

$$9x + 15 - 8x + 12$$

$$**x + 27**$$

Friday, November 1, 2013

3rd

One out of four cars in a parking lot is white. If there are 73 white cars, how many total cars are in the parking lot?

Friday, November 1, 2013

3rd

One out of four cars in a parking lot is white. If there are 73 white cars, how many total cars are in the parking lot?

Answer: White = One-fourth of total

$$73 = \frac{1}{4}x$$

$$73 \cdot 4 = \frac{1}{4}x \cdot 4$$

$$292 = x$$

292 cars

Friday, November 1, 2013

4th

Carek decided to save for his X-box. He earns \$25 a week mowing lawns. He needs to save \$237 before he can purchase it. How many weeks does he need to work?

Friday, November 1, 2013

4th

Carek decided to save for his X-box. He earns \$25 a week mowing lawns. He needs to save \$237 before he can purchase it. How many weeks does he need to work?

Answer: $(\$25/\text{week})(x \text{ weeks}) = \237

$$25x = 237$$

$$25x \div 25 = 237 \div 25$$

$$x = 237 \div 25 \approx 9.48$$

Assuming he works only full weeks, he needs to work **10 weeks**.

Friday, November 1, 2013

5th

A pair of jeans are 35% off the regular price. If you paid \$65 for those jeans, how much is the regular price?

Friday, November 1, 2013

5th

A pair of jeans are 35% off the regular price. If you paid \$65 for those jeans, how much is the regular price?

Answer: $\$65 = \text{Regular price} (100\% - 35\%)$

$$65 = R \cdot 0.65$$

$$65 \div 0.65 = R \cdot 0.65 \div 0.65$$

$$\mathbf{\$100 = R}$$

Friday, November 1, 2013

6th

Ms. Yamamoto has a pizza parlor with monthly expenses of \$1800. She charges her customers \$12 per pizza they order. If her total profit was \$2400 in January, how many pizzas did she sell in January?

Friday, November 1, 2013

6th

Ms. Yamamoto has a pizza parlor with monthly expenses of \$1800. She charges her customers \$12 per pizza they order. If her total profit was \$2400 in January, how many pizzas did she sell in January?

Answer: Profit = Income – Expenses

$$\$2400 = \$12(\# \text{ of pizzas}) - \$1800$$

$$2400 = 12p - 1800$$

$$2400 + 1800 = 12p - 1800 + 1800$$

$$4200 = 12p$$

$$4200 \div 12 = 12p \div 12$$

$$350 = p$$

She sold **350** pizzas in January

Friday, November 1, 2013

7th

Solve for w :

$$3w - 6 = 5w + 10$$

Friday, November 1, 2013

7th

Solve for w :

$$3w - 6 = 5w + 10$$

Answer: $3w - 6 = 5w + 10$

$$3w - 6 + 6 = 5w + 10 + 6$$

$$3w = 5w + 16$$

$$3w - 5w = 5w - 5w + 16$$

$$-2w = 16$$

$$-2w \div (-2) = 16 \div (-2)$$

$$w = -8$$