

# Daily Math

## Week 10 (2013-2014)

Mon. October 21, 2013

Tues. October 22, 2013

Wed. October 23, 2013

Thurs. October 24, 2013

Fri. October 25, 2013

Monday, October 21, 2013

1<sup>st</sup>

Solve

$$2x + 4x - 2 = 26$$

Monday, October 21, 2013

1<sup>st</sup>

Solve

$$2x + 4x - 2 = 26$$

Answer:  $2x + 4x - 2 = 26$

$$4x - 2 = 26$$

$$4x - 2 + 2 = 26 + 2$$

$$4x = 28$$

$$4x \div 4 = 28 \div 4$$

$$x = 7$$

Monday, October 21, 2013

2<sup>nd</sup>

A photo is 3 inches wide and 2 inches tall. If it is enlarged to a width of 9 inches, then how tall will it be?

Monday, October 21, 2013

2<sup>nd</sup>

A photo is 3 inches wide and 2 inches tall. If it is enlarged to a width of 9 inches, then how tall will it be?

Answer: The width is tripled, so the height will be tripled: 2 inches  $\times$  3 =

**6 inches**

Monday, October 21, 2013

3<sup>rd</sup>

Simplify:

$$4x - 7x + 3z$$

Monday, October 21, 2013

3<sup>rd</sup>

Simplify:

$$4x - 7x + 3z$$

Answer:  $4x - 7x + 3z$

$$**-3x + 3z**$$

Monday, October 21, 2013

4<sup>th</sup>

Order from **greatest to least**:

$$-\sqrt{20}, -4, 5, -\sqrt{30}$$



Monday, October 21, 2013

4<sup>th</sup>

Order from **greatest to least**:

$$-\sqrt{20}, -4, 5, -\sqrt{30}$$

Answer:  $-\sqrt{30}, -\sqrt{20}, -4, 5$

Monday, October 21, 2013

5<sup>th</sup>

On a map 0.5 inches equals one mile.  
If two cities are 3 inches away how  
many miles is this?

# Monday, October 21, 2013

# 5<sup>th</sup>

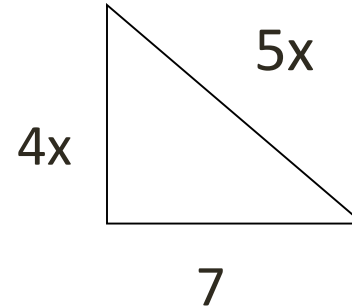
On a map 0.5 inches equals one mile. If two cities are 3 inches away how many miles is this?

Answer: 
$$\frac{0.5 \text{ inches}}{1 \text{ mile}} = \frac{3 \text{ inches}}{x \text{ miles}}$$
$$(0.5)x = 3$$
$$0.5x \div 0.5 = 3 \div 0.5$$
$$x = 6 \text{ miles}$$

Monday, October 21, 2013

6<sup>th</sup>

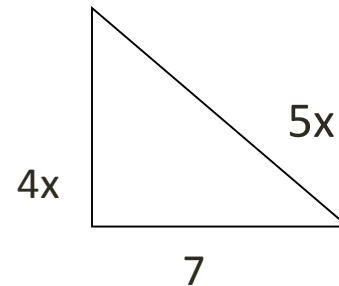
If the perimeter of this right triangle is 34 units, find the value of  $x$ .



# Monday, October 21, 2013

# 6<sup>th</sup>

If the perimeter of this right triangle is 34 units, find the value of  $x$ .



Answer: Perimeter = total of side lengths

$$34 = 4x + 5x + 7$$

$$34 = 9x + 7$$

$$34 - 7 = 9x + 7 - 7$$

$$27 = 9x$$

$$27 \div 9 = 9x \div 9$$

$$\mathbf{3 = x}$$

Monday, October 21, 2013

7<sup>th</sup>

If  $a = -3$  and  $b = 4$ , then

$$2a^2 + \frac{1}{2}b = ?$$

Monday, October 21, 2013

7<sup>th</sup>

If  $a = -3$  and  $b = 4$ , then

$$2a^2 + \frac{1}{2}b = ?$$

Answer:  $2(-3)^2 + \frac{1}{2}(4)$

$$2(9) + \frac{1}{2}(4)$$

$$18 + 2 = \mathbf{20}$$

Tuesday, October 22, 2013

1<sup>st</sup>

Simplify:

$$1\frac{5}{21} - \frac{6}{7}$$



Tuesday, October 22, 2013

1<sup>st</sup>

Simplify:

$$1\frac{5}{21} - \frac{6}{7}$$

Answer:

$$1\frac{5}{21} - \frac{6}{7}$$

$$\frac{26}{21} - \frac{6}{7} = \frac{26}{21} - \frac{18}{21}$$

$$\frac{8}{21}$$

Tuesday, October 22, 2013

2<sup>nd</sup>

Simplify:

$$|-3 + 2(5)|$$

Tuesday, October 22, 2013

2<sup>nd</sup>

Simplify:

$$|-3 + 2(5)|$$

Answer:

$$|-3 + 2(5)|$$

$$|-3 + 10|$$

$$|7| = 7$$

Tuesday, October 22, 2013

3<sup>rd</sup>

Solve and round your answer to the nearest tenth:

$$\frac{3.5}{p} = \frac{8}{9}$$

# Tuesday, October 22, 2013

# 3<sup>rd</sup>

Solve and round your answer to the nearest tenth:

$$\frac{3.5}{p} = \frac{8}{9}$$

Answer:  $(3.5)(9) = (8)(p)$

$$31.5 = 8p$$

$$31.5 \div 8 = 8p \div 8$$

$$31.5 = 8p$$

$$3.9 \approx p$$

Tuesday, October 22, 2013

4<sup>th</sup>

If  $x = 9$ ,  $y = -3$ , and  $z = 4$

then  $y(\sqrt{x} + z) = ?$

Tuesday, October 22, 2013

4<sup>th</sup>

If  $x = 9$ ,  $y = -3$ , and  $z = 4$   
then  $y(\sqrt{x} + z) = ?$

Answer:  $y(\sqrt{x} + z)$

$$(-3)(\sqrt{9} + 4)$$

$$-3(3 + 4) = -3(7)$$

**-21**

Tuesday, October 22, 2013

5<sup>th</sup>

Tom sells baseball cards at 10 for 35 cents. How much would you pay Tom for 12 baseball cards?



Tuesday, October 22, 2013

5<sup>th</sup>

Tom sells baseball cards at 10 for 35 cents. How much would you pay Tom for 12 baseball cards?

Answer:  $\frac{10 \text{ cards}}{35 \text{ cents}} = \frac{12 \text{ cards}}{x \text{ cents}}$

$$10x = (35)(12)$$

$$10x = 420$$

$$x = 42 \text{ cents}$$

Tuesday, October 22, 2013

6<sup>th</sup>

$\sqrt{75}$  is between what two whole numbers?

Tuesday, October 22, 2013

6<sup>th</sup>

$\sqrt{75}$  is between what two whole numbers?

Answer:  $\sqrt{64} < \sqrt{75} < \sqrt{81}$

$$8 < \sqrt{75} < 9$$

Tuesday, October 22, 2013

7<sup>th</sup>

If you travel 228 miles in 6 hours what is your average speed?

Tuesday, October 22, 2013

7<sup>th</sup>

If you travel 228 miles in 6 hours what is your average speed?

Answer:  $\frac{228 \text{ miles}}{6 \text{ hours}}$

**38 miles per hour**

Wednesday, October 23, 2013

1<sup>st</sup>

Solve:

$$\frac{2.8}{7} = \frac{x}{10}$$

Wednesday, October 23, 2013

1<sup>st</sup>

Solve:

$$\frac{2.8}{7} = \frac{x}{10}$$

Answer:

$$2.8 \cdot 10 = 7x$$

$$28 = 7x$$

$$28 \div 7 = 7x \div 7$$

$$4 = x$$

Wednesday, October 23, 2013 **2nd**

If  $a = -1$  then  $a^3 + a^2 = ?$



Wednesday, October 23, 2013 **2nd**

If  $a = -1$  then  $a^3 + a^2 = ?$

Answer:  $a^3 + a^2$   
 $(-1)^3 + (-1)^2$   
 $-1 + 1 = 0$

Wednesday, October 23, 2013 **3rd**

If you can buy 24 ounces of applesauce for \$1.25 how much are you paying per ounce?

Wednesday, October 23, 2013 3rd

If you can buy 24 ounces of applesauce for \$1.25 how much are you paying per ounce?

Answer:  $\$1.25 \div 24$  ounces

$\approx \$0.052$  per ounce

Wednesday, October 23, 2013 4th

Solve:

$$\frac{1}{1.25} = \frac{100}{t}$$

Wednesday, October 23, 2013 4th

Solve:

$$\frac{1}{1.25} = \frac{100}{t}$$

Answer:  $1t = 100 \cdot 1.25$

$$**t = 125**$$

Wednesday, October 23, 2013

5<sup>th</sup>

Simplify:

$$2^{-1}$$

Wednesday, October 23, 2013

5<sup>th</sup>

Simplify:

$$2^{-1}$$

Answer:  $2^{-1} = \frac{1}{2^1}$

$$\frac{1}{2}$$

Wednesday, October 23, 2013

6<sup>th</sup>

Simplify:

$$a^2 \cdot 3a \cdot 2a^{-2}$$



Wednesday, October 23, 2013

6<sup>th</sup>

Simplify:

$$a^2 \cdot 3a \cdot 2a^{-2}$$

Answer:  $a^2 \cdot 3a \cdot 2a^{-2}$

$$3 \cdot 2 \cdot a^2 \cdot a^1 \cdot a^{-2}$$

$$6a^{2+1-2} = \mathbf{6a}$$

Wednesday, October 23, 2013

7<sup>th</sup>

Simplify:

$$(3^2)^{-2}$$

Wednesday, October 23, 2013

7<sup>th</sup>

Simplify:

$$(3^2)^{-2}$$

Answer:  $(3^2)^{-2}$

$$9^{-2}$$

$$\frac{1}{9^2} = \frac{1}{81}$$

Thursday, October 24, 2013

**1st**

Find the previous number and the next number in the following pattern: \_\_\_\_\_,  
1, 3, 9, 27, \_\_\_\_\_

Thursday, October 24, 2013

1st

Find the previous number and the next number in the following pattern: \_\_\_\_, 1, 3, 9, 27, \_\_\_\_

Answer:  $\frac{1}{3}$ , 1, 3, 9, 27, **81**

(common ratio of 3)

Thursday, October 24, 2013

2nd

Simplify:

$$\sqrt{9} + \sqrt{16}$$

Thursday, October 24, 2013

2nd

Simplify:

$$\sqrt{9} + \sqrt{16}$$

Answer:  $\sqrt{9} + \sqrt{16}$

$$3 + 4$$

**7**

Thursday, October 24, 2013

3rd

Simplify:

$$\sqrt{16 + 9}$$



Thursday, October 24, 2013

3rd

Simplify:

$$\sqrt{16 + 9}$$

Answer:

$$\sqrt{16 + 9}$$

$$\sqrt{25}$$

**5**

Thursday, October 24, 2013

4th

Simplify:

$$\sqrt{\frac{9}{16}}$$

Thursday, October 24, 2013

4th

Simplify:

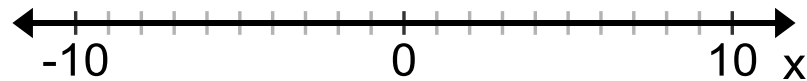
$$\sqrt{\frac{9}{16}}$$

Answer:

$$\sqrt{\frac{9}{16}} = \frac{3}{4}$$

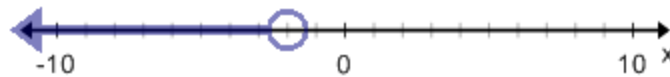
Thursday, October 24, 2013 5th

Solve and graph on the real number line:  
 $3x + 6 < 0$



Thursday, October 24, 2013 5th

Solve and graph on the real number line:  
 $3x + 6 < 0$



Thursday, October 24, 2013 **6th**

Stan typed 90 pages in 8 hours. Jan typed 100 pages in 9 hours. Who has the higher rate?

# Thursday, October 24, 2013

# 6th

Stan typed 90 pages in 8 hours. Jan typed 100 pages in 9 hours. Who has the higher rate?

$$\text{Answer: } \frac{90 \text{ pages}}{8 \text{ hours}} = 11.25 \frac{\text{pages}}{\text{hour}}$$
$$\frac{100 \text{ pages}}{9 \text{ hours}} \approx 11.11 \frac{\text{pages}}{\text{hour}}$$

**Stan types at a faster rate**

Thursday, October 24, 2013

7th

What is 12% of  $10x$ ?



Thursday, October 24, 2013

7th

What is 12% of  $10x$ ?

Answer: 12% of  $10x$

$$0.12 \cdot 10x$$

$$**1.2x**$$

Friday, October 25, 2013

**1st**

What is one half of  $\frac{3}{8}$ ?

Friday, October 25, 2013

**1st**

What is one half of  $\frac{3}{8}$ ?

Answer:  $\frac{1}{2} \cdot \frac{3}{8} = \frac{3}{16}$

Friday, October 25, 2013

2nd

Simplify:

$$2(x + 1) - (-7x)$$

Friday, October 25, 2013

2nd

Simplify:

$$2(x + 1) - (-7x)$$

Answer:  $2(x + 1) - (-7x)$

$$2x + 2 + 7x$$

$$9x + 2$$

Friday, October 25, 2013

3rd

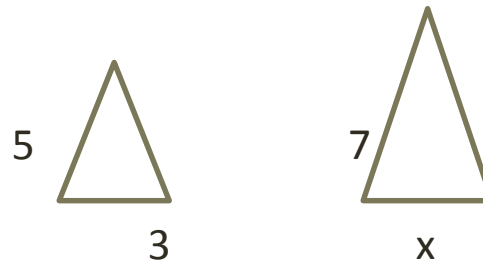
If the figures are proportional, find the missing side. Round your answer to the nearest tenth. (Pictures not drawn to scale).



Friday, October 25, 2013

3rd

If the figures are proportional, find the missing side. Round your answer to the nearest tenth. (Pictures not drawn to scale).



Answer:  $\frac{5}{3} = \frac{7}{x}$

$$5x = 21$$
$$5x \div 5 = 21 \div 5$$
$$x = 4.2$$

Friday, October 25, 2013

**4th**

What two whole numbers is  $-\sqrt{18}$   
between?



Friday, October 25, 2013

4th

What two whole numbers is  $-\sqrt{18}$  between?

Answer:  $-\sqrt{25} < -\sqrt{18} < -\sqrt{16}$

$$-5 < -\sqrt{18} < -4$$

Friday, October 25, 2013

5th

Solve for  $x$ :

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

Friday, October 25, 2013

5th

Solve for  $x$ :

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

Answer:  $x + \frac{3}{2} = 2x$

$$x - x + \frac{3}{2} = 2x - x$$

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

Friday, October 25, 2013

6th

Simplify:

$$3 - (x + 1)$$

Friday, October 25, 2013

6th

Simplify:

$$3 - (x + 1)$$

Answer:  $3 - (x + 1)$

$$3 - x - 1$$

$$**2 - x**$$

Friday, October 25, 2013

7th

Classify each as **rational or irrational**:

$$\frac{2}{3}, 0.\overline{33}, \sqrt{6}, \pi$$

Friday, October 25, 2013

7th

Classify each as **rational or irrational**:

$$\frac{2}{3}, 0.\overline{33}, \sqrt{6}, \pi$$

Answer:  $\frac{2}{3}, 0.\overline{33}$  are rational

$\sqrt{6}, \pi$  are irrational