

Daily Math

Week 7 (2013-2014)

Mon. September 30, 2013

Tues. October 1, 2013

Wed. October 2, 2013

Thurs. October 3, 2013

Fri. October 4, 2013

Monday, September 30, 2013

1st

Simplify:

$$3x(3x - 1)$$

Monday, September 30, 2013 1st

Simplify:

$$3x(3x - 1)$$

Answer: $9x^2 - 3x$

Monday, September 30, 2013 2nd

Solve for x :

$$\frac{2}{7} = \frac{x}{21}$$

Monday, September 30, 2013 2nd

Solve for x:

$$\frac{2}{7} = \frac{x}{21}$$

Answer:

$$\frac{2}{7} = \frac{x}{21}$$
$$(2)(21) = 7x$$
$$42 = 7x$$
$$x = 6$$

Monday, September 30, 2013 3rd

Solve for x :

$$\frac{4}{9} = \frac{20}{x}$$

Monday, September 30, 2013

3rd

Solve for x :

$$\frac{4}{9} = \frac{20}{x}$$

Answer:

$$\frac{4}{9} = \frac{20}{x}$$

$$4x = (9)(20)$$

$$4x = 180$$

$$**x = 45**$$

Monday, September 30, 2013 4th

In preparing school lunch, the lunch ladies cook 9 pounds of potatoes for 40 students. How many pounds of potatoes will they need to prepare for 180 students?

Monday, September 30, 2013 4th

In preparing school lunch, the lunch ladies cook 9 pounds of potatoes for 40 students. How many pounds of potatoes will they need to prepare for 180 students?

Answer: $\frac{9 \text{ pounds}}{40 \text{ students}} = \frac{x \text{ pounds}}{180 \text{ students}}$

$$(9)(180) = 40x$$

$$1620 = 40x$$

$$x = 40.5 \text{ pounds}$$

Monday, September 30, 2013 5th

Simplify:

$$3x \cdot x$$

Monday, September 30, 2013 5th

Simplify:

$$3x \cdot x$$

Answer: $3x^2$

Monday, September 30, 2013 6th

Simplify:

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

Monday, September 30, 2013 6th

Simplify:

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

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

$$2x + 2 + 7x$$

$$**9x + 2**$$

Monday, September 30, 2013 7th

Evaluate:

$$6^2 - 4(-2 - 3)$$

Monday, September 30, 2013

7th

Evaluate:

$$6^2 - 4(-2 - 3)$$

Answer: $6^2 - 4(-2 - 3)$

$$6^2 - 4(-5)$$

$$36 - 4(-5)$$

$$36 - (-20)$$

56

Tuesday, October 1, 2013 1st

Evaluate:

$$|14 - 6x| \text{ for } x = -3$$

Tuesday, October 1, 2013

1st

Evaluate:

$$|14 - 6x| \text{ for } x = -3$$

Answer:

$$|14 - 6x|$$

$$|14 - 6(3)|$$

$$|14 - 18|$$

$$|-4| = 4$$

Tuesday, October 1, 2013

2nd

Simplify:

$$2x \cdot x + 3$$

Tuesday, October 1, 2013

2nd

Simplify:

$$2x \cdot x + 3$$

Answer: $2x^2 + 3$

Tuesday, October 1, 2013

3rd

Simplify:

$$-(-(-2))$$

Tuesday, October 1, 2013

3rd

Simplify:

$$-(-(-2))$$

Answer: $-(-(-2))$
 $-(2)$

-2

Tuesday, October 1, 2013

4th

Simplify:

$$x^2 x^3$$

Tuesday, October 1, 2013

4th

Simplify:

$$x^2 x^3$$

Answer: $x^{2+3} = x^5$

Tuesday, October 1, 2013

5th

Simplify:

$$(x^2)^3$$

Tuesday, October 1, 2013

5th

Simplify:

$$(x^2)^3$$

Answer: $x^2 \cdot x^2 \cdot x^2$

$$x^{2+2+2} = x^6$$

Tuesday, October 1, 2013

6th

Simplify:

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

Tuesday, October 1, 2013

6th

Simplify:

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

Answer: $\frac{x^3}{x^2} = x^{3-2}$

X

Tuesday, October 1, 2013

7th

Simplify:

$$x^2 + x^3$$

Tuesday, October 1, 2013

7th

Simplify:

$$x^2 + x^3$$

Answer: Can't be simplified because x^2 and x^3 are not like terms.

$$x^2 + x^3$$

Wednesday, October 2, 2013

1st

Simplify:

$$2x^2 \cdot 3x$$

Wednesday, October 2, 2013

1st

Simplify:

$$2x^2 \cdot 3x$$

Answer: $2 \cdot 3 \cdot x^2 \cdot x$

$$6x^3$$

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

Simplify:

$$2x^2 + 3x$$

Wednesday, October 2, 2013 2nd

Simplify:

$$2x^2 + 3x$$

Answer: Can't be simplified because $2x^2$
and $3x$ are not like terms.

$$2x^2 + 3x$$

Wednesday, October 2, 2013 **3rd**

Simplify:

$$2(x^2)^3$$

Wednesday, October 2, 2013 3rd

Simplify:

$$2(x^2)^3$$

Answer: $2x^6$

Wednesday, October 2, 2013

4th

Simplify:

$$(2x^2)^3$$

Wednesday, October 2, 2013

4th

Simplify:

$$(2x^2)^3$$

Answer: $2x^2 \cdot 2x^2 \cdot 2x^2$

$$8x^6$$

Wednesday, October 2, 2013

5th

Solve for x :

$$3x + 5 = 17$$

Wednesday, October 2, 2013

5th

Solve for x :

$$3x + 5 = 17$$

Answer: $3x + 5 = 17$

$$3x + 5 - 5 = 17 - 5$$

$$3x = 12$$

$$3x \div 3 = 12 \div 3$$

$$x = 4$$

Wednesday, October 2, 2013

6th

Solve for x :

$$5x - 4 = 8 - x$$

Wednesday, October 2, 2013

6th

Solve for x :

$$5x - 4 = 8 - x$$

Answer:

$$5x - 4 = 8 - x$$

$$5x + x - 4 = 8 - x + x$$

$$6x - 4 = 8$$

$$6x - 4 + 4 = 8 + 4$$

$$6x = 12$$

$$x = 2$$

Wednesday, October 2, 2013

7th

Solve for x :

$$\frac{5}{x} = \frac{15}{9}$$

Wednesday, October 2, 2013

7th

Solve for x :

$$\frac{5}{x} = \frac{15}{9}$$

Answer:

$$\frac{5}{x} = \frac{15}{9}$$

$$45 = 15x$$

$$**x = 3**$$

Thursday, October 3, 2013

1st

Summer bowling at Alley Lanes costs \$2.50 for shoes and \$1.50 for each game. Jack spent \$7.00 total to go bowling. How many games did he play?

Thursday, October 3, 2013

1st

Summer bowling at Alley Lanes costs \$2.50 for shoes and \$1.50 for each game. Jack spent \$7.00 total to go bowling. How many games did he play?

Answer: $\$2.50 + \$1.50 (\# \text{ games}) = \7.00

$$2.5 + 1.5x = 7$$

$$2.5 - 2.5 + 1.5x = 7 - 2.5$$

$$1.5x = 4.5$$

$$x = 3 \text{ games}$$

Thursday, October 3, 2013

2nd

Maggie spent \$30 at the county fair and all she did was go on the rides. If the cost of admission was \$8 and each ride cost \$2, how many rides did Maggie go on?

Thursday, October 3, 2013

2nd

Maggie spent \$30 at the county fair and all she did was go on the rides. If the cost of admission was \$8 and each ride cost \$2, how many rides did Maggie go on?

Answer: $\$8 + \$2 (\# \text{ rides}) = \$30$

$$8 + 2x = 30$$

$$8 - 8 + 2x = 30 - 8$$

$$2x = 22$$

$$x = 11 \text{ rides}$$

Thursday, October 3, 2013

3rd

Simplify:

$$a^2 + 3a + 2a^2$$

Thursday, October 3, 2013

3rd

Simplify:

$$a^2 + 3a + 2a^2$$

Answer: $3a^2 + 3a$

Thursday, October 3, 2013

4th

Simplify:

$$a^2 \cdot 3a \cdot 2a^2$$

Thursday, October 3, 2013

4th

Simplify:

$$a^2 \cdot 3a \cdot 2a^2$$

Answer: $6a^5$

Thursday, October 3, 2013

5th

Simplify:

$$(x^2 + 1)^0$$

Thursday, October 3, 2013

5th

Simplify:

$$(x^2 + 1)^0$$

Answer: Any number raised to the “zero” power equals 1.

$$(x^2 + 1)^0 = \mathbf{1}$$

Thursday, October 3, 2013

6th

If $x = 4$, $y = 3$, and $z = 1$,

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

Thursday, October 3, 2013

6th

If $x = 4$, $y = 3$, and $z = 1$,
then $y(\sqrt{x} + z) =$

Answer: $y(\sqrt{x} + z)$
 $3(\sqrt{4} + 1)$
 $3(2 + 1) = 3(3)$
9

Thursday, October 3, 2013

7th

Consider the expression:

$$-\left(-\left(-\left(-\left(-\left(-56\right)\right)\right)\right)\right)\right)$$

Is this a positive or negative number?
Explain how you can tell.

Thursday, October 3, 2013

7th

Consider the expression:

$$-\left(-\left(-\left(-\left(-56\right)\right)\right)\right)$$

Is this a positive or negative number? Explain how you can tell.

Answer: There are an odd number of negative signs, so the result is negative (an even number would result in a positive number).

-56

Friday, October 4, 2013

1st

Simplify:

$$\left(3x + \frac{4x^2}{x}\right)^0$$

Friday, October 4, 2013

1st

Simplify:

$$\left(3x + \frac{4x^2}{x}\right)^0$$

Answer: Any expression raised to the zero power equals 1.

1

Friday, October 4, 2013

2nd

Simplify:

$$\frac{2x}{7} \cdot \frac{3x}{4}$$

Friday, October 4, 2013

2nd

Simplify:

$$\frac{2x}{7} \cdot \frac{3x}{4}$$

Answer:

$$\frac{2x}{7} \cdot \frac{3x}{4}$$
$$\frac{6x^2}{28} = \frac{3x^2}{14}$$

Friday, October 4, 2013

3rd

Evaluate:

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

Friday, October 4, 2013

3rd

Evaluate:

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

Answer:

$$\begin{array}{r} \frac{5}{21} - \frac{6}{7} \\ \frac{5}{21} - \frac{18}{21} \\ \hline \frac{13}{21} \end{array}$$

Friday, October 4, 2013

4th

Find the next two numbers in the following pattern:

3, 5, 9, 17, _____, _____

Friday, October 4, 2013

4th

Find the next two numbers in the following pattern:

3, 5, 9, 17, _____, _____

Answer: 3, 5, 9, 17, **33**, **65**

Friday, October 4, 2013

5th

Kiko traveled 250 miles to see his grandmother. It took him about 4 hours to arrive at her house. How fast did Kiko travel?

Friday, October 4, 2013

5th

Kiko traveled 250 miles to see his grandmother. It took him about 4 hours to arrive at her house. How fast did Kiko travel?

Answer: 250 miles in 4 hours

$$\frac{250 \text{ miles}}{4 \text{ hours}}$$

62.5 miles per hour

Friday, October 4, 2013

6th

The $\frac{5}{8}$ -inch socket wrench is too small for a bolt, and the $\frac{3}{4}$ -inch socket wrench is too big. What size socket wrench would work?

Friday, October 4, 2013

6th

The $\frac{5}{8}$ -inch socket wrench is too small for a bolt, and the $\frac{3}{4}$ -inch socket wrench is too big. What size socket wrench would work?

Answer: $\frac{5}{8} < x < \frac{3}{4}$

$$\frac{10}{16} < x < \frac{12}{16}$$

$$x = \frac{11}{16} \text{ inch (one possibility)}$$

Friday, October 4, 2013

7th

Simplify:

$$2x^3 \cdot 3x^2 + 4x^5$$

Friday, October 4, 2013

7th

Simplify:

$$2x^3 \cdot 3x^2 + 4x^5$$

Answer: $2x^3 \cdot 3x^2 + 4x^5$

$$6x^5 + 4x^5$$

$$**10x^5**$$