

Daily Math

Week 9 (2013-2014)

Mon. October 14, 2013

Tues. October 15, 2013

Monday, October 14, 2013

1st

Simplify:

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

Monday, October 14, 2013

1st

Simplify:

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

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

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

$$+4y - 2y + 3x$$

$$2y + 3x$$

Monday, October 14, 2013

2nd

Simplify:

$$\frac{1}{2}a + \frac{3}{2}a$$

Monday, October 14, 2013

2nd

Simplify:

$$\frac{1}{2}a + \frac{3}{2}a$$

Answer:

$$\frac{1}{2}a + \frac{3}{2}a$$

$$\left(\frac{1}{2} + \frac{3}{2}\right)a$$

$$1a = \mathbf{a}$$

Monday, October 14, 2013

3rd

Dylan is making cookies. The recipe calls for 2 cups of flour to make 8 dozen cookies. How many cups of flour does Dylan need to make 24 cookies?

Monday, October 14, 2013

3rd

Dylan is making cookies. The recipe calls for 2 cups of flour to make 8 dozen cookies. How many cups of flour does Dylan need to make 24 cookies?

Answer: Watch out for the units! Dylan wants to make 24 cookies, which is 2 dozen. The recipe calls for 8 dozen. So Dylan needs only $\frac{1}{4}$ of a recipe:

$$\frac{1}{4} (2 \text{ cups}) = \frac{1}{2} \text{ cup of flour}$$

Monday, October 14, 2013

4th

Solve for t :

$$-3t + 6 > 15$$

Monday, October 14, 2013

4th

Solve for t :

$$-3t + 6 > 15$$

Answer: $-3t + 6 > 15$

$$-3t + 6 - 6 > 15 - 6$$

$$-3t > 9$$

$$-3t \div (-3) < 9 \div (-3)$$

(note that sign changes when multiplying or dividing by a negative number)

$$t < -3$$

Monday, October 14, 2013

5th

Three-fourths is equivalent to how many 100ths?

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5th

Three-fourths is equivalent to how many 100ths?

Answer: $\frac{3}{4} = \frac{x}{100}$

$$3 \cdot 100 = 4x$$

$$300 = 4x$$

$$300 \div 4 = 4x \div 4$$

$$75 = x \quad (3/4 = 75/100)$$

Monday, October 14, 2013

6th

Solve for d :

$$2d + 3(d + 1) = 18$$

Monday, October 14, 2013

6th

Solve for d :

$$2d + 3(d + 1) = 18$$

Answer: $2d + 3(d + 1) = 18$

$$2d + 3d + 3 = 18$$

$$5d + 3 = 18$$

$$5d + 3 - 3 = 18 - 3$$

$$5d = 15$$

$$**d = 3**$$

Monday, October 14, 2013

7th

Simplify:

$$\frac{3}{5}x + \frac{2}{3}y - \frac{1}{15}x - y$$

Monday, October 14, 2013

7th

Simplify:

$$\frac{3}{5}x + \frac{2}{3}y - \frac{1}{15}x - y$$

Answer:

$$\begin{aligned} & \frac{3}{5}x + \frac{2}{3}y - \frac{1}{15}x - y \\ & \left(\frac{3}{5} - \frac{1}{15}\right)x + \left(\frac{2}{3} - 1\right)y \\ & \left(\frac{9}{15} - \frac{1}{15}\right)x + \left(\frac{2}{3} - \frac{3}{3}\right)y \\ & \frac{8}{15}x + \left(-\frac{1}{3}\right)y \\ & \frac{8}{15}x - \frac{1}{3}y \end{aligned}$$

Tuesday, October 15, 2013

1st

Solve for x :

$$x = \frac{1}{2}(x + 4) + 1$$

Tuesday, October 15, 2013

1st

Solve for x :

$$x = \frac{1}{2}(x + 4) + 1$$

Answer: $x = \frac{1}{2}(x + 4) + 1$

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

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

$$2(x = \frac{1}{2}x + 3)$$

$$2x = x + 6$$

$$2x - x = x - x + 6$$

$$x = 6$$

Tuesday, October 15, 2013

2nd

A photo is 3 inches wide and 1 inch tall.
If it is enlarged to a width of 6 inches
then how tall will it be?

Tuesday, October 15, 2013

2nd

A photo is 3 inches wide and 1 inch tall.
If it is enlarged to a width of 6 inches
then how tall will it be?

Answer: If width is doubled from 3 to 6 inches,
then the height must also double,
from 1 to 2 inches.

2 inches

Tuesday, October 15, 2013

3rd

Order from **least to greatest**:

$$2, \frac{1}{2}, 4, \sqrt{15}$$

Tuesday, October 15, 2013

3rd

Order from **least to greatest**:

$$2, \frac{1}{2}, 4, \sqrt{15}$$

Answer: $\frac{1}{2}, 2, \sqrt{15}, 4$

Tuesday, October 15, 2013

4th

Solve for y :

$$y + 2 = 4x - 4$$

Tuesday, October 15, 2013

4th

Solve for y :

$$y + 2 = 4x - 4$$

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

$$y + 2 - 2 = 4x - 4 - 2$$

$$**y = 4x - 6**$$

Tuesday, October 15, 2013

5th

Solve for y :

$$y + 4x = 4$$

Tuesday, October 15, 2013

5th

Solve for y :

$$y + 4x = 4$$

Answer:

$$y + 4x = 4$$

$$y + 4x - 4x = 4 - 4x$$

$$y = 4 - 4x$$

Tuesday, October 15, 2013

6th

Solve for y :

$$2y = 4x + 4$$

Tuesday, October 15, 2013

6th

Solve for y :

$$2y = 4x + 4$$

Answer:

$$2y = 4x + 4$$

$$2y \div 2 = (4x + 4) \div 2$$

$$y = 2x + 2$$

Tuesday, October 15, 2013

7th

Simplify:

$$a^2 + 3a + 2a^2 - 5a$$

Tuesday, October 15, 2013

7th

Simplify:

$$a^2 + 3a + 2a^2 - 5a$$

Answer: $a^2 + 3a + 2a^2 - 5a$

$$a^2 + 2a^2 + 3a - 5a$$

$$(1 + 2)a^2 + (3 - 5)a$$

$$3a^2 - 2a$$