

The following are a review of Algebra1 concepts.

1. Solve  $x^2 + 9x + 20 = 0$

2. Solve  $x^2 - 6x = 16$

3. Solve  $x^2 - 81 = 0$

4. Solve  $y^2 = y + 42$

5. Solve 
$$\begin{cases} 3x + 7y = 15 \\ 5x + 2y = -4 \end{cases}$$

6. Solve 
$$\begin{cases} 4x + 3y = 4 \\ 2x - y = 7 \end{cases}$$

7. Oh NO!!! You forgot about Valentine's Day! How are you going to make it up to your Valentine?!?! Since you and your Valentine both LOVE Math you decide to use it to write him/her a special Valentine note.

Write a short Valentine letter/poem that includes at least five of the Geometry vocabulary terms we have learned this year.

Example: My love for you is like a LINE – it extends forever.

8. Solve each proportion using cross products.

a)

$$\frac{x+1}{6} = \frac{x-1}{x}$$

x = \_\_\_\_\_

b)

$$\frac{3}{4} = \frac{9}{x-7}$$

x = \_\_\_\_\_

c)

$$\frac{x-9}{x} = \frac{2}{5}$$

x = \_\_\_\_\_

d)

$$\frac{x}{5} = \frac{4}{16}$$

x = \_\_\_\_\_

9. Solve the following problems. (Show all work)

a) A picture is 3 in. wide by 5 in. high was enlarged so that the width was 15 inches. How high is the enlarged picture?

b) Cameron has been eating 2 dollar menu burgers every week (7 days). At that rate, how many hamburgers will he in 4 weeks?

c) A triangle's three angles are in the ratio of 5:7:8. What is the measure of the smallest angle?

d) A 6 foot high school boy casts a shadow of 24 inches. At the same time of day a girl at the elementary school park casts a shadow of 14 inches. How tall is she (in feet)?