

Algebra Review #12 *SHOW HOW YOU SOLVED EACH PROBLEM*

1. Fill in the properties that justify each step:

$6 + 2(x - 3) = -8 - 2x$	Given
$6 + 2x - 6 = -8 - 2x$	
$6 - 6 + 2x = -8 - 2x$	
$0 + 2x = -8 - 2x$	
$2x = -8 - 2x$	
$4x = -8$	
$x = -2$	

2. Solve using the order of operations.

If $x = -5$ and $y = \frac{1}{2}$, then:

$$4y - x^3$$

3. Tell whether the equation has one, none, or infinite solutions:

$$5(2 + c) = 45 + 5c$$

NAME _____

4. Suzanne received 6 points for each correct question on a test. She also got a 4-point bonus problem correct. If she got a score of 82, how many problems did she get correct?

5. Solve the equation IN TWO DIFFERENT WAYS (Hint: Use the distributive property on one, and divide first on the other):

$104 = -4(x - 10)$	$104 = -4(x - 10)$

For this problem, which way do you feel was the best way to solve? Why?

6. Translate the following into either algebraic expressions or verbal expressions:

The quotient of 4 and the square of a number

$$\sqrt[3]{x + 9}$$

7. What is the value of the following:

$$2\sqrt{150} - 3\sqrt{24}$$

8. Simplify the radical.

$$\sqrt{180r^3s^5}$$

9. Solve for variable y:

$$8 = \frac{y - x}{2z}$$

10. Solve for variable r

$$C = \pi r^2$$