

Math 0989  
Spring 2016  
Quiz #3

Name: Key Date: \_\_\_\_\_

1. Use the chart below to place a check mark indicating which sets the item on the left is a member of.

	N	W	Z	Q	Q'	R
-3			✓	✓		✓
$0.\overline{23}$				✓		✓
$\frac{0}{71}$		✓	✓	✓		✓
$-\pi$					✓	✓
5	✓	✓	✓	✓		✓

Note: Q' means the set of not Rational Numbers or Irrational!

Simplify the following using *Order of Operations*

2.  $-8 - |5 - 11|$

$$-8 - |-6|$$

$$-8 - 6$$

$$\boxed{-14}$$

3.  $9 - (12 - 11)^8 + 4$

$$9 - (1)^8 + 4$$

$$9 - 1 + 4$$

$$8 + 4$$

$$\boxed{12}$$

Evaluate the expression given the values of  $x$  and  $y$ .

4.  $3x^2 - 2y^2; x = -3 \text{ \& } y = -2$

$$3(-3)^2 - 2(-2)^2$$

$$3(9) - 2(4)$$

$$27 - 8$$

$$\boxed{19}$$

5. The surface area of a cardboard box is given by the formula:

$$S = 2WH + 2LH + 2LW$$

where  $W$  and  $L$  are the width and length of the base of the box and  $H$  is its height. If  $W = 2$  centimeters,  $L = 8$  centimeters, and  $H = 2$  centimeters, find the surface area of the box.

$$S = 2(2)(2) + 2(8)(2) + 2(8)(2)$$

$$= 8 + 32 + 32$$

$$= 40 + 32$$

$$S = \boxed{72}$$