

Math 0097
University of North Georgia
Spring 2015
Quiz #4

Name: Key Date: February 6, 2015

1. State and give an example of the *Associative Power Tool*.

$$a + (b + c) = (a + b) + c \quad \text{or} \quad a(bc) = (ab)c$$

$$4 + (5 + 2) = (4 + 5) + 2 \qquad 4(5 \cdot 2) = (4 \cdot 5)2$$

$$4 + 7 = 9 + 2 \qquad 4(10) = 20 \cdot 2$$

$$11 = 11 \qquad 40 = 40$$

2. Consider the following: $x - 6 = 8$. What *Algebraic Power Tool* would we use to move the "6" to the other side of the equation?

additive inverse

$$\begin{array}{r} x - 6 = 8 \\ +6 \quad +6 \\ \hline x = 14 \end{array}$$

3. What is the result when we use the *Multiplicative Inverse Tool*?

one $\frac{2}{3} \cdot \frac{3}{2} = \frac{6}{6} = 1$

4. Find the Sum.

$$\begin{array}{r} -|37| + |-9| + (-8) + 3 \\ -37 + 9 + (-8) + 3 \\ -28 + (-8) + 3 \\ -36 + 3 \\ -33 \end{array}$$

5. If $x + y = 0$, then x and y are opposites, i.e. *Additive Inverses*. True or False? Give an example to explain your response.

True. $x = -15$

$$\left. \begin{array}{r} -15 + y = 0 \\ +15 \qquad +15 \\ \hline y = 15 \end{array} \right\} \begin{array}{r} -15 + 15 = 0 \\ 0 = 0 \end{array}$$