

**1.4 - PROPERTIES:**

**p. 26 - 27 in the Algebra 1 book.**

**Equivalent expressions: The things on one side equal the things on the other side.**

**Key Points:**

**Commutative Property - You change the ORDER of the #s.**

$$3 + 4 = 4 + 3$$

$$5 * 6 = 6 * 5$$

**\*\* Only applies to addition and multiplication.**

**Associative Property - You change the PARENTHESES.**

$$( 2 + 3 ) + 4 = 2 + ( 3 + 4 )$$

$$( 5 * 6 ) * 7 = 5 * ( 6 * 7 )$$

**\*\* Only applies to addition and multiplication.**

**Inverse Properties - the solution gets smaller.**

**Inverse Property of Addition (make it zero):  $6 + \text{inverse} = 0$**

**Inverse Property of Addition (make it = 1):  $5 * \text{inverse} = 1$**

**Identity Properties - the solution stays the same:**

**Identity Property of Addition (add zero):  $6 + \text{zero} = 6$**

**Inverse Property of Addition (multiply by 1):  $5 * \text{one} = 5$**

**Zero Property of Multiplication: The product of anything multiplied by 0 = 0**

$$5 * 0 =$$

**Multiplication Property of -1: The product of anything multiplied by -1 will change the sign.**

$$5 * -1 = -5$$

$$-4 * -1 = 4$$

