## Algebra Properties (SOL 6.19)

Commutative Property of Addition or Multiplication - The order of the addends or factors can be

switched and the sum or \_\_\_\_\_\_ remains the \_\_\_\_\_\_.

Example: 2+5=5+2 3.6=6.3

Associative Property of Addition - Property that states that when grouping of addends is \_\_\_\_\_\_ the sum remains the same.

Example: (2 + 3) + 4 = (3 + 4) + 2

<u>Associative Property of Multiplication</u>- Property that states the way factors are \_\_\_\_\_\_ does not change the

Example: (6 . 4) . 2 = (4 . 2) . 6

<u>Identity Property of Addition</u>- The property that states when you add a \_\_\_\_\_\_ to a number, the result is that number.

Example: 4 + 0 = 4

<u>Identity Property of Multiplication</u>- The property that states that the product of any number and \_\_\_\_\_\_ is that number.

Example: (-6) • 1 = -6 4 • 1 = 4

<u>Multiplicative Property of Zero</u>- The property that states any number \_\_\_\_\_\_ zero is zero.

Example:  $4 \times 0 = 0$   $5 \times 0 = 0$ 

<u>Multiplicative Inverse Property-</u> The property that states the product of a number multiplied by a fraction with one over that number is equal to one.

Example:  $5 \cdot \frac{1}{5} = 1$   $3 \cdot \frac{1}{3} = 1$ 

**Distributive Property**- Property that says multiplying a sum by a number is the same as multiplying each addend in the sum by the number and then adding the products.

Example: 6(8) = 6(3 + 5)  $(3 \cdot 4) + (3 \cdot 2) = 3(4 + 2)$ 

## Directions: Identify each property

1. 
$$6 + 2 = 2 + 6$$
2.  $8 \cdot 1 = 8$ 

3.  $5 + 0 = 5$ 
4.  $(2 + 3) + 7 = 2 + (7 + 3)$ 

5.  $8 + (-3) = (-3) + 8$ 
6.  $-3 + 0 =$ 

7.  $7 \cdot 1 = 7$ 
8.  $2(3 + 4) = 2(3) + 2(4)$ 

9.  $4 \times 0 =$ 
10.  $8 \cdot \frac{1}{8} = 1$