**Properties of Operations**

**1. Commutative Property-** order in which numbers are added or multiplied does not change the answer

Ex: 2 + 5 = 5 + 2 2(5) = 5(2)

**2. Associative Property-** way numbers are grouped together when adding or multiplying does not change the answer.

Ex: 2 + (3 + 8) = (2 + 3) + 8 3 x (4 x 5) = (3 x 4) x 5

**3. Additive Identity-** when zero is added to any number, the sum is the same number.

Ex: 0 + 7 = 7

**4. Multiplicative Identity-** when any number is multiplied by 1, the product is the number.

Ex: 1(5) = 5

**5. Multiplicative Property of Zero-** when any number is multiplied by zero the answer is zero.

Ex: 8(0) = 0

**Name the property shown by each statement.**

1. 7(1) = 7 2. 4 + (3y + 2) = (4 + 3y) + 2

3. 9(6) = 6(9) 4. m + 0 = m

5. 14(1) = 14 6. 0 + 2x = 2x

7. 3x (0) = 0 8. (ab)c = c(ab)

9. 2p + (3q + 2) = (2p + 3q) + 2 10. m(nr) = (mn)r

11. x + y = y + x 12. 4(8) = 8(4)