DISTRIBUTIVE PROPERTY

The *Distributive Property* tells you how to solve equations that are in the form of a(b+c). The *Distributive Property* is also called the *Distributive Law of Multiplication and Division.*

Formula for Distributive Property:

$$a(b+c) = ab+ac$$

The distributive property is used to multiply each number found in the parentheses. After the numbers are multiplied, the products are then added.

Example 1:

6(2+4)
Multiply 6x2 = 12 → 12+6(4)
Multiply 6x4 = 24 → 12+24
Add 12+24 = 48

Can be written as 6x2+6x4

The distributive property **does not** work for division.

Example:

24 / (4 + 8) = 24 / 12 = 2, but
24 / 4 + 24 / 8 = 6 + 3 = 9

The distributive property **does** work for variables.

Example:

4(3x+1)
Multiply each term in the parentheses by 4. → 4(3x) + 4(1) → 12x + 4
12x and 4 are not like terms, so this is as far as we can go.

However, the distributive property does not work when the variables inside the parentheses are being multiplied or divided.