Algebra Notes – Distributive Property

Reminder If an equation has a variable on both sides, rearrange the equation so that the variables are on the same side of the equation then isolate the variable.

$3x + 4 = 2x - 9$

The distributive property tells us how to solve expressions in the form of a $(b + c)$

When we see an expression like 2(3+4) we typically we just evaluate what's in the parentheses first, then solve it: ex.   2(7) = 14
With the distributive property, we multiply the '2' first:

To "distribute" means to divide something or give a share or part of something.

$$2(3+4)$$
We **distribute** the 2 to the 3 then to the 4

Then we need to remember to multiply first, before doing the addition.
$$2*3 + 2*4$$
$$= \quad 6 \; + \; 8$$
$$= \quad \underline{\hspace{2cm}}$$

This is preparation for when we have variables instead of numbers inside the parentheses.
We usually use the distributive property because the two terms inside the parentheses can't be added because they're **not _____ terms**

Example: a(b+c) = ab + ac

   Example: 3(4x + 5)

Example: -2 (-x + 7)

Example: $\frac{1}{2}(3 + 4x)$

Example: Solve 4(x+2) = 3 (x+5)