

Agenda

Homework:

- Distributive Property & Combining Like Terms Worksheet

- Materials:
 - Notebook

DO NOW

- Complete the following problems on your DESK:
 1. SIMPLIFY
 $8x + 7 - 3x - 4$
 2. Approximate the square root of 67

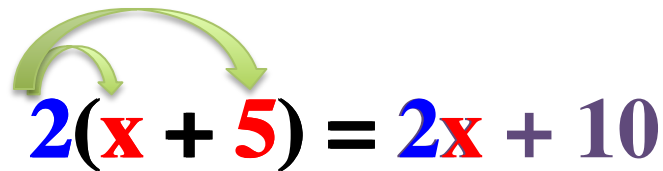
Set Up Cornell Notes

- **Topic:** Distributive Property
- **EQ:** How do you simplify expressions by combining like terms?
- Update Table of Contents

What is the Distributive Property?



The process of “distributing” (**multiplying**) the **number on the outside** of the parentheses to **each TERM on the inside**.

The diagram shows the equation $2(x + 5) = 2x + 10$. The number 2 is blue, x is red, 5 is red, 2x is blue, and 10 is blue. Two green curved arrows originate from the blue 2. One arrow points to the red x, and the other points to the red 5, illustrating the distribution of the 2 to each term inside the parentheses.
$$2(x + 5) = 2x + 10$$

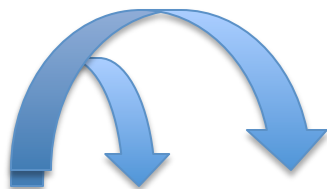
What if there is ONLY a negative outside the parenthesis and NO number? 

Use your math goggles!

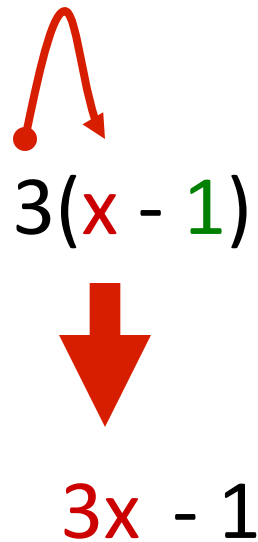
The invisible number when multiplying is

ALWAYS **1**

So:


$$\begin{aligned} -1(x + 4) &= -1(x) + -1(4) = -x + (-4) \\ &= -x - 4 \end{aligned}$$

What is the most common error?


$$3(x - 1)$$
$$\downarrow$$
$$3x - 1$$

THIS IS INCORRECT!

Are we sure it works?

$$5(3 + 2)$$
$$15 + 10 = 25$$

Proof: $5(3+2) = 5(5) = 25$

Try these! 😊

$$3(5x + 2)$$

$$-7(x - 4)$$

$$4(y - 3)$$

$$-(3x + 9)$$

How do you use both distributive property and combining like terms together?



- Example:

$$3x - 4(x - 5) + 2$$

Distribute FIRST, then combine like terms