Good Morning!

Today you will need:
- corrected homework
- highlighters
- vocab sheet
- graph spiral
- pencil
- NO calculator

Warm-Up

In your graph spiral, answer the following question:

WITHOUT using a calculator, distribute the expression below:

$$8(9x + 6) + 8$$

What else could you do to make the new expression simpler?

simplify

	ex:
Making an expression or equation simpler.	Simplify *2(x + 4) + 3x − 7* *2x + 8 + 3x − 7* *5x + 1*

Associative Property

	ex:
A property used to regroup numbers or variables in an expression or equation, without changing the answer: a + (b + c) = (a + b) + c a • (b • c) = (a • b) • c	regrouping using Associative Property 2 + (3 + 4) = (2 + 3) + 4 2 + 7 = 5 + 4 9 = 9 2 • (3 • x) (2 • 3) • x 6 • x 6x

Commutative Property

	ex:
A property used to change the order of numbers or variables in an expression or equation, without changing the answer: a + b = b + a a • b = b • a	rearranging using Commutative Property 2 + 3 = 3 + 2 5 = 5 3 • x • 4 3 • 4 • x 12 • x 12x

Combining Like Terms

term:

ex: $5x + 3y - 7 + 2x$

the terms in the expression are_____

like terms:

**It can help to highlight, underline, or box like terms.

ex: $y + 3x - 2 + 4y - 10x + 8 - x$

Practice Problems...
Simplify the following expressions by distributing and combining like terms.

1) $-3n + 4 + 10n - 8$

$7n - 4$

2) $5x + 3 - 2x + 7 - 1 + 6x$

$9x + 9$

3) $-8(-9 + 3m) + 4m - 11$

$72 + -24m + 4m - 11$

$-20m + 61$

4) $6(1 + 10p) + 9(1 - 3p)$

$6 + 60p + 9 - 27p$

$33p + 15$

Homework:

Distribute and Combine Like Terms worksheet

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simplify

ex:

Making an expression or equation simpler.

Simplify $2(x + 4) + 3x - 7$

$2x + 8 + 3x - 7$

$5x + 1$

Associative Property

ex:

A property used to regroup numbers or variables in an expression or equation, without changing the answer:

regrouping using Associative Property

$2 + (3 + 4) = (2 + 3) + 4$

$2 + 7 = 5 + 4$

$9 = 9$

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

$a \cdot (b \cdot c) = (a \cdot b) \cdot c$

$2 \cdot (3 \cdot x)$

$(2 \cdot 3) \cdot x$

$6 \cdot x$

$6x$

Commutative Property

ex:

A property used to change the order of numbers or variables in an expression or equation, without changing the answer:

rearranging using Commutative Property

$2 + 3 = 3 + 2$

$5 = 5$

$a + b = b + a$

$a \cdot b = b \cdot a$

$3 \cdot x \cdot 4$

$3 \cdot 4 \cdot x$

$12 \cdot x$

$12x$