

Warm Up

Open your chrome books and if go to my website (if you can), otherwise just log in and wait

*Take out your homework from yesterday

msengbrecht.weebly.com

Hand Back Quiz

Warm Up

*On new piece of paper put Week 3 Warm Ups on top and label today's work Monday

Find The Product:

1. $(4)(-4)$

-16

2. $(-12)(2)$

-24

3. $13(-2)(-3)$

$$13 \cdot (-2) \cdot (-3)$$

$$-26 \cdot (-3)$$

$$78$$

Simplify the variable expression:

4. $(7)(-x)$

$-7x$

5. $-(-4)^2(y)$

$$-1 \cdot 16 \cdot -4 \cdot y$$

$$-16y$$

6. $3(-w^2)(2w)$

$$3 \cdot -1 \cdot w \cdot w \cdot 2w$$

$$-6w^3$$

Homework Questions?

911) $(7t)^3$ $t = -\frac{3}{7}$

$$\left(7 \left(-\frac{3}{7}\right)\right)^3$$

$$(-3)^3 = -3 \cdot -3 \cdot -3$$

$$-27$$

$$\begin{aligned} 97) \quad & 23 - [(12 \div 3)^2 + 8] \\ & 23 - [4^2 + 8] \\ & 23 - [16 + 8] \\ & 23 - 24 = \ominus 1 \end{aligned}$$

On the top of your paper (by your name) rate yourself for this section:

- 4 - I can summarize the concepts and explain it to others**
- 3 - I can apply the concept to answer questions correctly**
- 2 - I can apply the concepts but with some mistakes**
- 1 - I need help and know how to apply the concept**
- 0 - I can't apply the concept, even with help**

Rating of 0-2 is a warning signal to me that you need help

The Unit Organizer			④ BIGGER PICTURE		NAME _____
			Algebra 9/Algebra 9 Concepts		DATE _____
② LAST UNIT/Experience	① CURRENT UNIT	③ NEXT UNIT/Experience			
None	Properties of Real Numbers	Solving Linear Equations			
⑧ Student Activities or Assignments	⑤ UNIT MAP				
2.1 2.2 2.3 2.5 2.6					
⑦ UNIT SELF-TEST QUESTIONS	<ol style="list-style-type: none"> How do you add, subtract, and multiply integers? How do you use the distributive property to evaluate and simplify variable expressions? How do you simplify a variable expression by combining like terms? How can absolute value be used to evaluate expressions? 			Simplify Calculate Compare and contrast	
					⑥ UNIT RELATIONSHIPS

2.6 The Distributive Property

- Goals:**
- Use the distributive property.
 - Simplify expressions by combining like terms.

EQ: What does $a(b - c)$ become if you use the distributive property?



Vocabulary

Distributive property:

The distributive property lets you multiply a sum by multiplying each addend separately and then adding the products.

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

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

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

$$(b - c)a = ba - ca$$

coefficient: The number in front of the letter.

ex: $\underline{3}x$

Like Terms: terms with same letter and same power

ex: $\underline{3x^2} + 2x + \underline{4x^2} + 2y$
 $7x^2 + 2x + 2y$

Constant Terms: Terms that do not contain a variable.

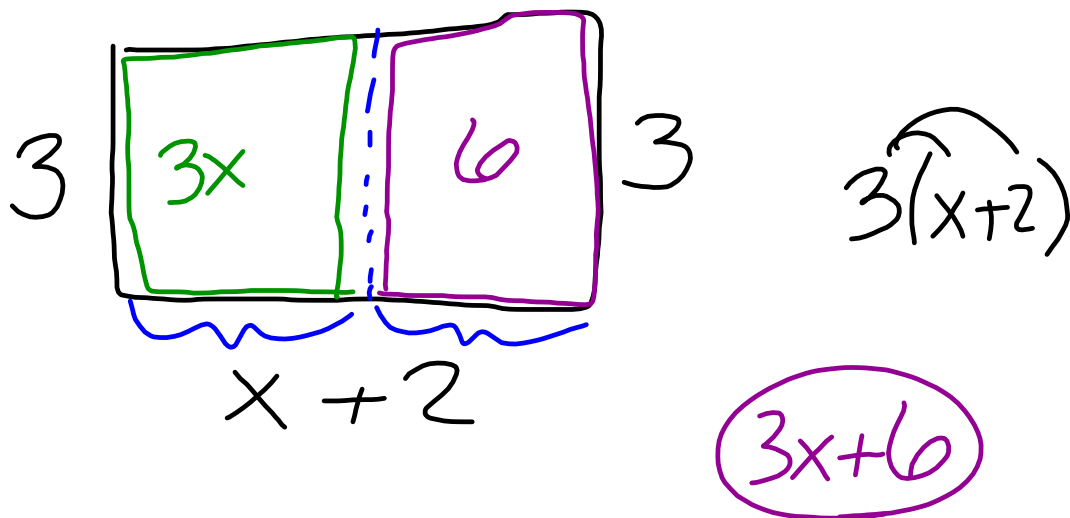
ex: $3x^2 - 2x + \textcircled{5}$

Simplified:

No () left in the expression and like terms are together.

Demonstration of Distributive Property

Find the area of a rectangle whose width is 3 and whose length is $x + 2$.



Using the Distributive Property

Find the product.

$$2(x + 7) = 2x + 14$$

$$(x - 4)x = x^2 - 4x$$

$$10 - (x + 3) = 10 - 1(x + 3)$$

$$10 - x - 3 = 7 - x$$

$$2(3x + 4) + 3(1 - 2x)$$

$$6x + 8 + 3 - 6x$$

$$\therefore 0x + 11 = 11$$

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

$$x + -6x + 10 - 2$$

$$-5x + 8$$

Using the Distributive Property

Find the product.

$6(x + 4)$

$6x + 24$

$(3 + 2x)9$

$27 + 18x$

$18x + 27$

$(t + 10)(-3)$

$-3t + -30$

$-3t - 30$

$(2x - 3)(-2x)$

$-4x^2 + 6x$

$-4x^2 + 6x$

Real World Application

You are shopping for CD's. You want to buy six CD's for \$11.95 each. Use the distributive property to calculate the total cost mentally (NO CALCULATORS).

$$6(12 - 0.05) = 72 - 0.30$$

$$= \$71.70$$

You are sending flowers for Valentine's Day to four of your friends. Each bouquet costs \$7.98. Use the distributive property to calculate the total cost mentally (NO CALCULATORS).

$$4(8 - 0.02) = 32 - 0.08$$

$$= \$31.92$$

Combining Like Terms

Simplify the expression.

$$\underline{10x} + \underline{(-15x)}$$

$$-5x$$

$$\underline{8b^3} - \underline{3b^3} - 2$$

$$5b^3 - 2$$

$$\underline{y^2} + \underline{2} + \underline{3x} + \underline{4y^2} + \underline{(+3)} + \underline{(-7x)}$$

$$5y^2 + 5 - 4x$$

Combining Like Terms

Simplify the expression.

$$-6x - 7x$$

$$-13x$$

$$\underline{-2} + \underline{y} + \underline{8}$$

$$6 + y$$

$$\underline{w^2} - \underline{3w^2} + 8w$$

$$-2w^2 + 8w$$

Use the Distributive Property to Simplify

It takes you 45 minutes to get to school. You spend t minutes walking to the bus stop, and the rest of the time riding the bus. You walk 0.06 miles/minute and the bus travels 0.5 miles/minute. The total distance you travel is given by the function $D = 0.06t + 0.5(45 - t)$. Simplify this function.

$$D = 0.06t + 0.5(45 - t)$$

$$0.06t + 22.5 - 0.5t$$

$$D = -0.44t + 22.5$$

2.6 Summary

EQ: What does $a(b - c)$ become if you use the distributive property?

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

2.6 Homework



*Combine Like Terms wkst

*2.6 p.103 #26-60even

Add p.104 #61-69,

79, 80

Due 2:42pm

$$2 + 3x + 7 + 3x$$

$$\textcircled{6x + 4}$$

$$2 \begin{array}{|c|} \hline 3x \\ \hline \end{array} 2$$

$$3x$$