Oven starting was messed up...

We don't go to lunch until 10:17.

12/4/17 CCM6+

- Identify parts of algebraic expressions.
- Identify and use properties to simplify algebraic expressions.

HW: Combine Like Terms Practice page

√ HW

Name: _____ Score:

Property Chart

Addition Properties		
Properties	Example	Set your own example
Commutative	$2 + 3 = 3 + 2$	
Associative	$2 + (3 + 4) = (2 + 3) + 4$	
Identity	$2 + 0 = 2$	
[redacted]	[redacted]	

Notes: _____

_____

Multiplication Properties		
Properties	Example	Set your own example
Commutative	$2 \times 3 = 3 \times 2$	
Associative	$2 \times (3 \times 4) = (2 \times 3) \times 4$	
Distributive	$2 \times (3 + 4) = (2 \times 3) + (2 \times 4)$	
Identity	$2 \times 1 = 2$	
[redacted]	[redacted]	

Notes: Zero prop $8 \cdot 0 = 0$

_____

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Name:_____ Score:

Frame the Equation

Use the numbers and the property to create the equation.

1) 4, 6 *and* 9 Associative property of addition: $4+(6+9)=(4+6)+9$	2) 11 *and* 3 Commutative property of multiplication: $11 \cdot 3 = 3 \cdot 11$
3) 7 *and* 5 Commutative property of multiplication: $7 \cdot 5 = 5 \cdot 7$	4) 8, 5 *and* 9 Associative property of multiplication: $8(5 \cdot 9) = (8 \cdot 5)9$
5) 12 *and* 3 Commutative property of addition: $12+3=3+12$	6) 5 *and* 2 Commutative property of multiplication: $5 \cdot 2 = 2 \cdot 5$
7) 6, 4 *and* 8 Associative property of addition: $6+(4+8)=(6+4)+8$	8) 8 *and* 13 Commutative property of addition: $8+13=13+8$
9) 10, 5 *and* 7 Associative property of multiplication:	10) 6, 12 *and* 4 Associative property of addition:
11) 9 *and* 15 Commutative property of addition:	12) 11, 4 *and* 9 Associative property of multiplication:
13) 10, 2 *and* 5 Associative property of addition:	14) 15 *and* 3 Commutative property of multiplication:
15) 14 *and* 3 Commutative property of addition:	16) 8, 12 *and* 6 Associative property of multiplication:

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$$3x + 8 + 2y$$

Variable: x, y

Constant: 8

Coefficient: 3, 2

Factor: 3, x 2, y

Product: 3x 2y

Term: 3x, 8, 2y

$$4(a + 3) + 5$$

Variable: a, ?

Constant: $5, 3, 12$

Coefficient: 4

Factor: $4, a, 3, (a+3)$

Product: $4a, 12, 4(a+3)$

Quantity: $(a+3)$

For each example below, **Name the Property**

$4 + 8 = 8 + 4$ Comm.

$4(x + 2) = 4x + 8$ Dist.

$15 + (9 - 3^2) = 15$ ID

$5 + (9 + 15) = (15 + 5) + 9$ Assoc.

$11(4^0) = 11$ ID

$8(11 \bullet 5) = 11(8 \bullet 5)$ Assoc.

$5(7 + 2) = 35 + 10$ Dist.

$8 + (7 + 3) = 8 + (3 + 7)$ Comm.

$42(4 - 8 \div 2) = 0$ Zero

What property can you use to make this problem easier?

$12 + 35 + 8$ $= 12 + 8 + 35$

Comm.

What property can you use to make this problem easier?

$5(8 \cdot 2)$

$(5 \cdot 8)2$

$(5 \cdot 2)8$

Assoc.

What property can you use to make this problem easier?

$0(36 + 5^3 - 8) = 0$

zero

What property can you use to make this problem easier?

$$\left(\frac{3}{4} \cdot 7\right)\left(2 \cdot \frac{4}{3}\right)$$

Assoc. $(7 \cdot 2)\left(\frac{3}{4} \cdot \frac{4}{3}\right)$

COMBINING LIKE TERMS...TAKE NOTES

1. Finish all ● and ÷ FIRST
2. When all are + or -, combine the SAME kind
3. You don't need like terms to ● and ÷

   You DO need like terms to + and -.

$4x + 8 + 3x$

$7x + 8$

$1x + 1x + 1x + 4$

$3x + 4$

$7a + 3b + 8a$

$15a + 3b$

$4x + 12x^2 + 11$ no like terms

$\frac{10}{2} + 5x + 2$

$7 + 5x$

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

$10x + 3x + 8$

$13x + 8$

HW

Homework: Combine Like Terms

Directions: Simplify each expression by combining like terms.

1. $4x + 2x + 7x$ 1. _____

2. $5y + 7x + 3 + 4x + 2$ 2. _____

3. $4s + 8 + 2d + 3s + 3$ 3. _____

4. $7b + 8n - 4b - 8 + 1n$ 4. $3b + 9n - 8$

5. $15ab - 6a + 7b - 2b$ 5. _____

6. $x + 4x + x + 4y$ 6. _____

7. $58y - 34y + x + x$ 7. _____

8. $6 + 7t + 4 - 2t$ 8. _____

9. $5y + 3x + 4 + 4x + y + 2$ 9. _____

10. $8s + 8 + 3st + 4s$ 10. _____

11. $14t + 32 - 7t - 18$ 11. $7t + 14$

12. $10x + 12 - 4x - 5$ 12. _____