

## Pick up Warm Up Sheet (on table)

\*This is WEEK 4 (put on top by your name)

### Warm Up

Find the Product:

$$1) 5(w + 6) \quad 5(w) + 5(6) \quad 2) 2(x - 3)$$

$$= 5w + 30$$

$$2x - 6$$

$$3) (y + 6)(-3)$$

$$-3y + -18$$

$$4) -1(x - 4)$$

$$-1x + +4 = -x + 4$$

### Homework Questions?

$$52) \quad -\frac{3}{8}(x + 24)$$

$$-\frac{3}{8}x + \frac{-3}{8} \cdot \frac{24}{1}$$

$$\begin{array}{r} 24 \\ \times 3 \\ \hline 72 \end{array}$$

$$-\frac{3}{8}x + \frac{-72}{8}$$

$$-\frac{3}{8}x + -9$$

40)

$$5 \left( \frac{1}{10}x - \frac{2}{15} \right)$$
$$\frac{5}{1} \cdot \frac{1}{10}x - \frac{5}{1} \cdot \frac{2}{15}$$
$$\frac{5 \div 5}{10 \div 5}x - \frac{10 \div 5}{15 \div 5}$$
$$\frac{1}{2}x - \frac{2}{3}$$

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\*

## 2.5 Quiz Retake

\*If you scored BELOW 15, you can opt to retake the quiz by **THURSDAY** this week

\*Do POL Assignment, SHOW ME, then can Retake before/after school

**2.5 POL**

p.784 #10-34even

\*No Calculator

# 2.7 Combining Like Terms

## Goals:

- Simplify an expression by combining terms.

**EQ:** What is a like term?

Algebra 9/Algebra 9 Concepts	
② LAST UNIT Experience <b>None</b>	① CURRENT UNIT <b>Properties of Real Numbers</b>
	③ NEXT UNIT Experience <b>Solving Linear Equations</b>
⑥ Student Activities or Assignments  2.1 2.2 2.3 2.4 2.5 2.6 2.7	⑤ UNIT MAP 
⑦ UNIT SELF-TEST QUESTIONS  1. How do you add, subtract, and multiply integers? 2. How do you use the distributive property to evaluate and simplify variable expressions? 3. How do you simplify a variable expression by combining like terms? 4. How can absolute value be used to evaluate expressions?	UNIT RELATIONSHIPS  Simplify Calculate Compare and contrast

## Vocabulary

### Coefficient:

Number in front of the letter  
ex: 3x

### Like terms:

Same letter & same power

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

### Simplified expression:

- No ( ) left in expression
- Like terms are together

### Example 1: Identify Like Terms

Simplify the like terms in the expression

$$\underline{x^2} + \underline{3x} - \underline{7x^2} - \underline{3} \cdot \underline{x}$$

$$-6x^2 + 2x - 3$$

\*Note: -x has a coefficient of -1 even though the 1 isn't written. Similarly, x has a coefficient of 1.

**Try It** Identify the like terms in the expression and simplify.

1.  $\underline{5x^2} - \underline{2x} + \underline{10x^2}$

$$15x^2 + -2x$$

$$15x^2 - 2x$$

2.  $\underline{-4b} + \underline{9} - \underline{6b}$

$$-10b + 9$$

3.  $\underline{13} - \underline{4h^2} - \underline{3h} + \underline{8} + \underline{5h}$

$$2h + 21 - 4h^2$$

$$21 - 4h^2 + 2h$$

4.  $\underline{6y} + \underline{10} - \underline{5y^2} - \underline{4} - \underline{y^2}$

$$-6y^2 + 6y + 6$$

### Example 2: Combine Like Terms

Simplify the expression.

a.  $\underline{7x^2} - \underline{3x^2}$

$$4x^2$$

b.  $\underline{4x} - \underline{2x} + \underline{6x} - 3$

$$\underline{4x} + \underline{4x} - \underline{3}$$

$$8x - 3$$

\*\*Note: In Example 2(b), the distributive property has been extended to three terms:  $(b + c + d)a = ba + ca + da$

# More Practice Wkst

(on Doc Camera)

## 2.7 Homework

Combining Like Terms wkst

**Warm Up - Day 2** Simplify the expression.

$$1) \quad \underline{7x} + \underline{4x} - \underline{3y} + \underline{3x^2}$$

$$11x - 3y + 3x^2$$

$$2) \quad \underline{2xy} - \underline{3xy^2} + \underline{5xy} + \underline{10x^2y} + \underline{(-2xy^2)}$$

$$7xy - 5xy^2 + 10x^2y$$

$$3) \quad -\underline{(3x + 5)}$$

$$\underline{-3x} + \underline{-5}$$

$$-3x - 5$$

$$4) \quad \underline{(x - 8)^2}$$

$$2x - 16$$

$$20) \quad \underline{4x^2} + \underline{(-7y)} + \underline{(-4xy)} + \underline{9x^2} + \underline{2xy}$$

$$13x^2 - 7y - 2xy$$

$$k + (-8k)$$

$$k + 8k$$



**Example 3: Simplify Expressions with Grouping Symbols**

Simplify the expression.

p.13

a.  $6 - 4(x - 2)$

$$\underline{6} - \underline{4x} + \underline{8}$$

$$\underline{14 - 4x}$$

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

$$\underline{5x} + \underline{10} - \underline{3x} + \underline{12}$$

$$\underline{2x + 22}$$

**Try It**

Simplify the expression.

5.  $\underline{4y} + \underline{5y} - 4$

$$\underline{9y - 4}$$

6.  $\underline{6x} + \underline{3} - \underline{4x} + \underline{2x}$

$$\underline{4x + 3}$$

7.  $7m - 2 + 4(4 - m)$

$$\underline{7m} - \underline{2} + \underline{16} - \underline{4m}$$

$$\underline{3m + 14}$$

8.  $-5(n - 3) + 7(1 - n)$

$$\underline{-5n} + \underline{15} + \underline{7} - \underline{7n}$$

$$\underline{-12n + 22}$$

A few more examples...

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

$$-x + \underline{-3} + \underline{-4}$$

$$\underline{-x - 7}$$

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

$$\underline{3} - \underline{x} - \underline{2} + \underline{5x}$$

$$\underline{4x + 1}$$

## Summary

**EQ:** What is a like term?

Same letter & same power  
 (variable) (exponent)

## 2.7 Homework (Day 2)

Finish 😊 wkst &

2.7 p. 110 #30-38 ALL  
 EC #16-28 even