

## **DAY 5**

**Warm Up**  
**Review**  
**Homework**  
**Cornell Notes**  
**Distribution**  
**Word**  
**Problems**  
**Practice**  
**Handout**  
**Exit Ticket**

**Quiz**  
**Thursday!**

### **Warm Up**

**Simplify each expression by Combining Like Terms.**

$$3a + 5a$$

$$4a - 5a + 6a$$

$$6b - 5 - 7b$$

$$-2b - 8 - b + 9$$

## DAY 5 (H)

### Warm-Up

Evaluate the expression.

1.  $9y - 4y$ ,  $y = \frac{1}{5}$

2.  $\frac{2k^2 - 3k^2 + 4}{k}$ ,  $k = 2$

### AGENDA

- Welcome
- Warm-Up
- Cornell

Notes:

Distributive  
Property

Simplify each expression by combining like terms.

3.  $a^2 + 2b + 3a^2 - c + b$

4.  $16m^2 + 8n^2 - 17m^2 + 5n - 3$

5. Write an expression for the perimeter of the square.




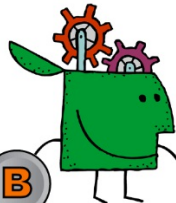
$2 + 3a$

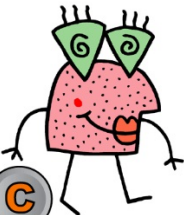
**Flashback!**

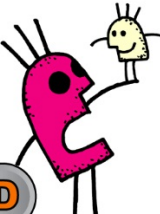
**Which three options represent equivalent fractions?**

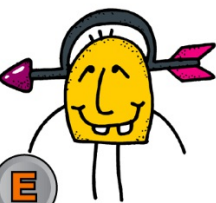
*Response category: Enhanced multiple choice*

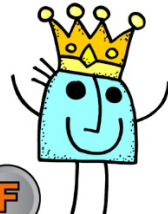
**A**   $\frac{3}{9}$

**B**   $\frac{9}{18}$

**C**   $\frac{6}{18}$

**D**   $\frac{1}{9}$

**E**   $\frac{1}{3}$

**F**   $\frac{2}{3}$

**ANSWER**

## DISTRIBUTIVE PROPERTY

Definition

Distributive Property

If I multiply a number by a sum, it is the same as multiplying that number by each number in the sum and adding their products together.

**Example:**  $2(4 + 6)$

$$\begin{array}{l} \blacksquare = \square \\ \blacksquare = \square \\ \blacksquare = \square \end{array}$$

**Example:**  $2(x + 6)$

$$\begin{array}{l} \blacksquare = \square \\ \blacksquare = \square \end{array}$$

Think: Can we  
ADD a variable  
and constant?

Additional Examples **DISTRIBUTIVE PROPERTY**

**Example:**  $2(3 - p)$

$$2(3 - p) = 2(3) - 2(p)$$

$$2(3 - p) = 6 - 2p$$

**Example:**  $x(y + 2y)$

$$x(y + 2y) = x(y) + x(2y)$$

$$x(y + 2y) = xy + 2xy$$

$$x(y + 2y) = 3xy$$

**SIDE NOTE:**

$2(3 - p)$   
is the same as  
 $(3 - p) \bullet 2$   
or  
 $(3 - p)^2$

Example:  $3a - 2(3 + a)$

$$\begin{aligned} 3a + -2(3 + a) &= 3a + -2(3) + -2(a) \\ &= \boxed{3a} + -6 + \boxed{-2a} \\ &= \end{aligned}$$

Same-Change-Change  
for  
SUBTRACTION

**Your turn...**

$$2(4 + 9w)$$

$$-4(-4d - 5)$$

$$2(3v - 8)$$

$$4(-6z + 4)$$

*How is this related to our topic today?*

**Find the area...**

**$b + 2$**

**a**





# Commercial Break

## *Positions On A Grid*

(6,3)



**Coordinate  
Plane**

**LEQ: How can we graph points on a Coordinate Plane?**

**Quadrants**

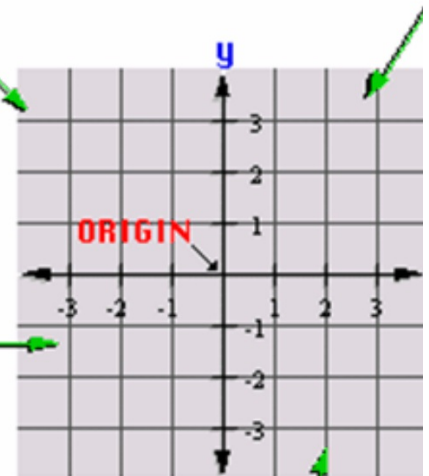
**Ordered Pairs: Quadrants and Cartesian Plane**

A grid can be used to locate and describe precise positions

This is the **First** Quadrant.

This is the **Second** Quadrant.

This is the **Third** Quadrant.



This is the **Fourth** Quadrant.

**Coordinate  
Plane**

**LEQ: How can we graph points on a Coordinate Plane?**

**Graphing  
Points**

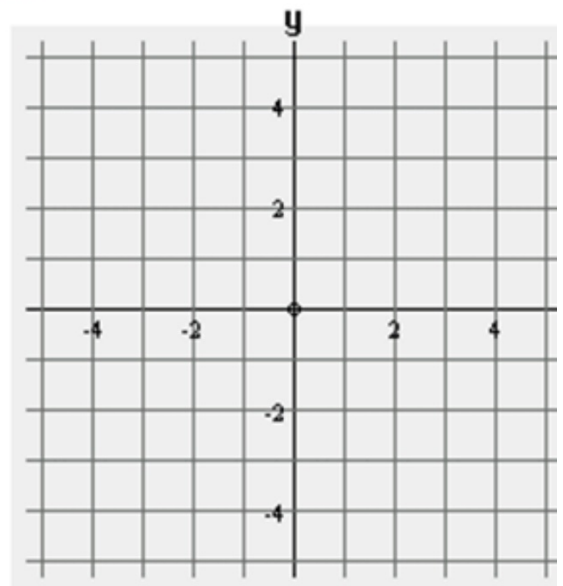
**Ordered Pairs: Finding a Point**

**(3,5)**

**(4,-2)**

**(-1,-3)**

**(-2,1)**



Copy  
These

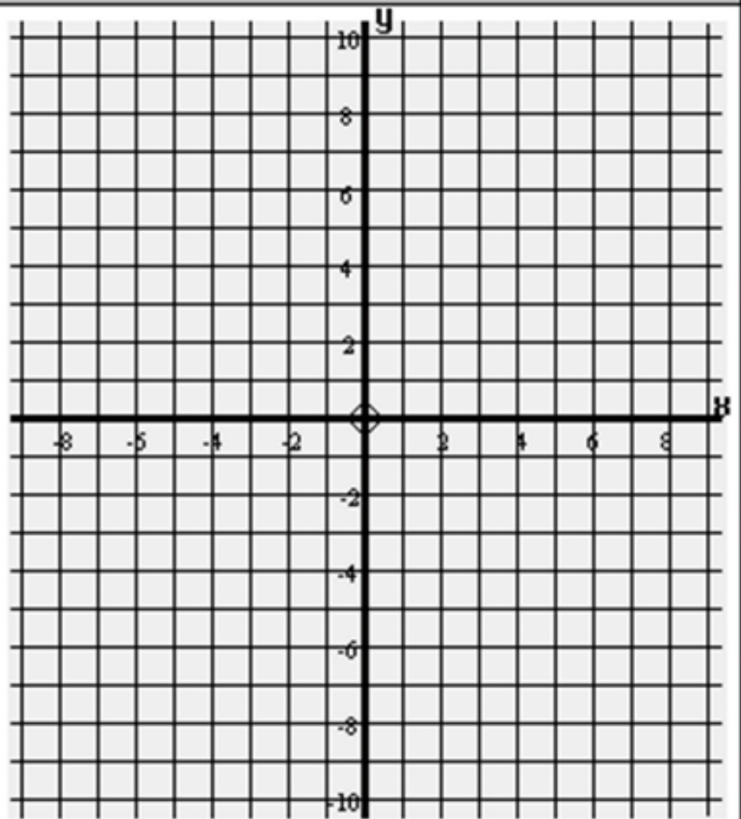
$(4,5)$

$(-8,+3)$

$(-5,-1)$

$(-6,3)$

$(0,-7)$



Positions on A Grid

Proceed

## **WORD PROBLEM PRACTICE**

**Sophie caught twice as many fish as her dad. If her dad caught  $F$  fish, how many did Sophie catch?**

**Which is the equivalent of the following  $7(5n + 1)$ ?**

**A  $36n$**

**B  $42n$**

**C  $35n + 1$**

**D  $35n + 7$**

**Which of the following is equivalent to  $3(8x + 2)$ ?**

**A  $26x$**

**B  $30x$**

**C  $24x + 2$**

**D  $24x + 6$**

**Erica volunteered to go to yhe board to show how to correctly add  $(x - 1)$  and  $3(x + 2)$ . What should Erica's answer be?**

**Simplify.**

$$5b - 2(7 - b)$$

**What is the simplified form of  
 $4(2x - 5y) - 3x$ ?**

**Copy the given expression and chart. Choose the correct answer. in complete sentences explain why your selection is correct and why each of the others are not.**

$$4(2x + 10y)$$

$8(x + 5y)$	$8x + 10y$
$8(x + 10y)$	$8x + 14y$



## EXIT TICKET

**Simplify each expression by using the Distributive Property.**

$$2(a + b)$$

$$2(a + b) + 7$$

$$3(x + 5)$$

$$3(x - 5)$$

me \_\_\_\_\_

BLOCK \_\_\_\_\_

Simplify by distributing and collecting like terms. Show your work. The 1<sup>st</sup> one is done for you.

$$3(4x + 6) + 7x =$$
$$2x + 18 + 7x = \underline{19x + 18}$$

$$7. 6m + 3(2m + 5) + 7 =$$

$$7(2 + 3x) + 8 =$$

$$8. 5(m + 9) - 4 + 8m =$$

$$9 + 5(4x + 4) =$$

$$9. 3m + 2(5 + m) + 5m =$$

$$12 + 3(x + 8) =$$

$$10. 6m + 14 + 3(3m + 7) =$$

$$3(7x + 2) + 8x =$$

$$11. 4(2m + 6) + 3(3 + 5m) =$$

**Challenge Problem**

$$3(4x^2y^3 + 2x^2) + 4(2x^2 + 3x^2y^3) =$$

**Challenge Problem**

$$12. 2(1x^3y + 5x^2 + 3xy) + 3(4xy + 2x^2 + 5x^3y) =$$