

**3.4**

# **Distributive Property (Day 2)**

## Practice

Use the **Distributive Property** to simplify the expression.

1)  $8(5 + w)$

2)  $11(9 + d)$

3)  $15(p - 4 + 2)$

# Mental Multiplication

4) Multiply the following mentally. Afterwards, check by showing work.

$$4 \times 36$$

# Mental Multiplication

5) Multiply the following mentally. Afterwards, check by showing work.

$$7(56)$$

# What's a Term?

**Terms in algebra are the part of an expression that you add together.**

$$4x + 5 + 9x$$

# Parts of Terms

$$3x + 7$$

Something special...

*x*

# Like Terms

These are terms with the \_\_\_\_\_.

$$\begin{array}{ccc} 8x & 12x & -3x \\ & 5x & \end{array}$$



# Unlike Terms

These are terms with the \_\_\_\_\_

$$8 \quad 12x \quad -3a$$
$$5x^2$$

# Simplifying

$$5n + 3n$$

Simplifying

$$7p + 2p$$

You try some.

$$4x + 12x =$$

$$5b + 14b =$$

$$15c - 9c =$$

$$10f - 2f =$$

Now, what if you were asked to simplify an expression like this:

$$2a + 3a + 4a$$

How in the world would you simplify an expression like this?

$$2a + 3a + 4d$$

Let's do some more.

$$3a + 4a + 5x =$$

$$5a + 2a + 7g =$$

$$6b + 2a + 2b =$$

$$10x + 3y + 4x =$$

How did you do? Did you remember  
to just combine the like terms?

# Practice

Simplify the following.

$$\underline{4x} + 8y + \underline{3x} = 7x + 8y$$

↑ like terms ↓

$$\underline{5y} + \underline{8y} + 4z =$$

↑ like ↓

$$\underline{3} + 9b + \underline{10} =$$

$$\underline{8x^2} + \underline{2x^2} + 7x =$$

$$6xy + 3xy + 3x =$$

$$3ab + 10a + 8a =$$

$$6a + 7b + 5a + 7b = 11a + 14b$$

$$3x + 6y + 2y + 8x =$$

$$9x^2 + 10 + 4x^2 + 7 =$$



# Practice

**Simplify the following.**

$$4x + x + 3x + 8y =$$

$$7x^2y + 8 + 5x^2y + 4 =$$

$$5a + 3b + 4c + 2a =$$

$$6x^3 + 9x + 10x^3 + 4x^2 =$$

$$8a^2 + 4ab + 6a + 8a^2 =$$

$$7a + 5b + c + 4a + 3b =$$

# Simplifying Using the Distributive Prop.

Use the Distributive Property to simplify the expression.

$$1) \ 5(w + 4) + w + 8$$

$$2) \ 18 + 8(k + 9)$$

## Simplifying Using the Distributive Prop.

Use the Distributive Property to simplify the expression.

$$3) \quad 6(a + 18) + 1 + 7a$$

$$4) \quad 7(m + 5) - 2m$$

# Applying the Distributive Property

Find the perimeter and area of the following:

