

# Good Morning!

Today you will need:

- corrected homework
- graph spiral
- pencil
- calculator

# Warm-Up

In your graph spiral, answer the following questions:

Expand the following expressions using the Distributive Property.

$$3(x - 4)$$

$$4(3x + 2)$$

## Solving Equations with the Distributive Property

Steps:

- 1.) Use the Distributive Property to eliminate parentheses.
- 2.) Eliminate the constant using addition/subtraction.
- 3.) Eliminate the coefficient using multiplication/division.
- 4.) Check your answer.

Remember:

*The Golden Rule of Algebra*

*Do unto one side as you do to the other*

To solve, you must get the variable alone on one side.

\*\* You must always show all your steps to receive full credit.

**Solve**

$$3(x + 5) = 18$$

**Check Your Work**

by putting your answer back into the equation

$$129 = 3(3 - 5y)$$

### Practice Problems...

Solve the following equations, show your steps, and check your answer.

1.  $3(x + 1) = 12$

2.  $84 = 4(4x - 7)$

## Homework:

Write and Solve Distributive Property Equations worksheet, #1-6 ONLY

# Homework:

finish Practice Problems #1-4 on  
Distributive Property notes page

## Practice Problems...

Solve the following equations, show your steps,  
and check your answer.

1.  $3(x + 1) = 12$

2.  $4(x - 5) = 20$

3.  $84 = 4(4x - 7)$

4.  $-160 = -8(3x + 8)$

## Practice Problems...

Solve the following equations, show your steps,  
and check your answer.

1.  $3(x + 1) = 12$

$x = 3$

2.  $4(x - 5) = 20$

$x = 10$

3.  $84 = 4(4x - 7)$

$x = 7$

4.  $-160 = -8(3x + 8)$

$x = 4$

## Practice Problems...

Solve the following equations, show your steps,  
and check your answer.

1.  $3(x + 1) = 12$

$$\begin{array}{r} 3x + 3 = 12 \\ -3 \quad -3 \\ \hline 3x = 9 \\ \div 3 \quad \div 3 \\ \hline x = 3 \end{array}$$

$3(3+1) = 12$

$$\begin{array}{r} 3(4) = 12 \\ 12 \neq 12 \end{array}$$

2.  $4(x - 5) = 20$

$$\begin{array}{r} 4x - 20 = 20 \\ +20 \quad +20 \\ \hline 4x = 40 \\ \div 4 \quad \div 4 \\ \hline x = 10 \end{array}$$

$4(10-5) = 20$

$$\begin{array}{r} 4(5) = 20 \\ 20 \neq 20 \end{array}$$

3.  $84 = 4(4x - 7)$

$$\begin{array}{r} 84 = 16x - 28 \\ +28 \quad +28 \\ \hline 112 = 16x \\ \div 16 \quad \div 16 \\ \hline 7 = x \end{array}$$

$84 = 4(4 \cdot 7 - 7)$

$$\begin{array}{r} 84 = 4(28 - 7) \\ 84 = 4(21) \\ 84 \neq 84 \end{array}$$

$$\begin{array}{r} -160 = -8(3 \cdot 4 + 8) \\ -160 = -8(12 + 8) \\ -160 = -8(20) \\ -160 \neq -160 \end{array}$$

4.  $-160 = -8(3x + 8)$

$$\begin{array}{r} -160 = -24x + -64 \\ +64 \quad +64 \\ \hline -96 = -24x \\ \div -24 \quad \div -24 \\ \hline 4 = x \end{array}$$

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