Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math 7
Chapter 4 – Expressions & Equations Notes #13

**The Distributive Property**

What is the Distributive Property?

First, what does distribute mean? “distribute” means to "\_\_\_\_\_\_ something \_\_\_\_\_\_" or "\_\_\_\_\_\_ something \_\_\_\_\_", so what does that have to do with math?

 Let’s see what Tim and Moby have to say.

What does it look like?

**PEMDAS**

4(3 + 6)

\_\_\_\_\_\_

\_\_\_\_\_\_

**DISTRIBUTIVE PROPERTY**

4(3 + 6)

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

When would we use it?

To help with \_\_\_\_\_\_\_ \_\_\_\_\_\_\_

**PEMDAS**

6(57)

6(50 + 7)

6(50) + 6(7)

300 + 42

342

When you have a \_\_\_\_\_\_\_in your \_\_\_\_\_\_\_

**PEMDAS**

2(x + 7)

\_\_\_\_\_\_\_\_\_\_\_\_

**DISTRIBUTIVE PROPERTY**

2(x + 7)

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

Why would we use it? We use the distributive property in algebra to \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ long algebraic terms or equations.

**Steps:**

* \_\_\_\_\_\_\_\_\_\_\_\_ - pass out - the \_\_\_\_\_\_\_\_\_\_\_\_ term with \_\_\_\_\_\_\_\_\_\_\_\_ term \_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_.
* IMPORTANT**:** Make sure you are paying attention to the \_\_\_\_\_\_\_\_\_\_\_\_ that is \_\_\_\_\_\_\_\_\_\_\_\_ of the term. We will discuss a short-cut today.

**Examples:**

Let's **simplify** these expressions by using the distributive property.

IMPORTANT**:** Make sure you are paying attention to the sign that is in front of the term.

1. 4(x + 2)

1. 3(y – 3)
2. 9(2x + 4)

1. 2($\frac{1}{2}$ + p)
2. 6(5 – 2x)
3. (w + 4)10

1. $\frac{3}{4}$ (4a – 20)

1. 9(a + b – 2)
2. (a + 3.5)10
3. $\frac{10}{3}$($\frac{1}{ 10}$ a +$ \frac{ 3}{20}$)

1. -3(-2s + 3t)

1. $\frac{ 2}{3}$ (4w - 3)

**You try these:**

1. 3(a + 2b - 5)
2. $\frac{2}{3}(\frac{1}{3}x+\frac{2}{5})$
3. -9(-2x - 3)

1. (4r - 3)8
2. $\frac{1}{3}(4x+2)$

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math 7
Chapter 4 – Expressions & Equations Notes #13.5

 **More with the Distributive Property!!!**

**Let’s do a challenge! Let’s now work BACKWARDS!**

For 1-4, factor each of the following terms. To factor, you must work backwards and DIVIDE a factor by each term to “pull it out.” Let’s try some examples!

 **EXAMPLE: 4y + 8 = 4(y + 2)**

1) 2x + 8 = \_\_\_\_\_\_\_\_\_\_\_\_ \*\*5) Which of the following is

 equivalent to $\frac{3}{2}s-6$ ?

2) 10y + 16 = \_\_\_\_\_\_\_\_\_\_\_\_ A) $\frac{1}{2}(\frac{2}{3}s-1)$

 B) $3(\frac{1}{2}s+2)$

3) 20a - 25 = \_\_\_\_\_\_\_\_\_\_\_\_ C) $ \frac{1}{2}(2s-4)$

 D) $3(\frac{1}{2}s-2)$

4) 6b - 3 = \_\_\_\_\_\_\_\_\_\_\_\_



**YOU TRY – COMMON CORE SAMPLE QUESTION:**

**6)**