

Name _____

Date _____

Mr. Tallman

Do Now**Simplify the following by Combining Like Terms.**

1) $4x - 7x$

$-3x$

2) $5y - 2 - 3y + 8$

$2y + 6$

3) $7x^2 + 3x^2$

$10x^2$

4) $\frac{2}{5}g - \frac{1}{6} + \frac{3}{10}g - \frac{4}{5}$

$\frac{7}{10}g - \frac{29}{30}$

Lesson #51 - Distributive Property

The **Distributive Property** allows us to multiply an expression with two or more terms by a single constant term.

In the **Distributive Property**, we use multiplication.

Example 1) Simplify the following.

A) $-6(-4d)$

$24d$

B) Find the product of 7 and $-2y$.

$7(-2y) = -14y$

Directions: Use the distributive property to simplify the following expressions.

1) $2(x + 5)$	$2x + 10$
2) $3(x + 4)$	$3x + 12$
3) $6(x + 1)$	$6x + 6$
4) $7(x - 3)$	$7x - 21$
5) $5(x + 6)$	$5x + 30$
6) $8(x + 1)$	$8x + 8$
7) $3(x - 4)$	$3x - 12$

Use the distributive property to simplify the following expressions.

8) $3(x - 2)$ $3x - 6$	9) $-2(x + 2)$ $-2x - 4$	10) $-(x + 2)$ $-x - 2$
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Directions: Simplify the following expressions. USE CALCULATORS FOR FRACTIONS.

11) $4(-3x + 2)$ $-12x + 8$	12) $-2(4x - 9)$ $-8x + 18$	13) $\frac{1}{5}(10x - 5)$ $2x - 1$
14) $\frac{3}{4}(5x - 1)$ $\frac{15}{4}x - \frac{3}{4}$	15) $\frac{1}{8}(2x + 4)$ $\frac{1}{4}x + \frac{1}{2}$	16) $\frac{4}{5}(x + 1)$ $\frac{4}{5}x + \frac{4}{5}$
17) $\frac{1}{6}(r - 6)$ $\frac{1}{6}r - 1$	18) $\frac{1}{4}(4x + 8)$ $x + 2$	19) $-(2h - 9)$ $-2h + 9$
20) $-7(-4q + 5)$ $28q - 35$	21) $-3(2p - 3q)$ $-6p + 9q$	22) $-3(1 - 8m - 2n)$ $-3 + 24m + 6n$

Challenge: Simplify the following: $7(m + 6) + 10m + 10$

$$\begin{aligned} & 7(m + 6) + 10m + 10 \\ & 7m + 42 + 10m + 10 \\ & 17m + 52 \end{aligned}$$