

Chapter 4 Review Problems Day 1

Do all work on a **separate paper** and show all work.

DISTRIBUTIVE PROPERTY **#11**

The **DISTRIBUTIVE PROPERTY** shows how to express sums and products in two ways:
 $a(b + c) = ab + ac$. This can also be written $(b + c)a = ab + ac$.

Factored form $a(b + c)$	Distributed form $a(b) + a(c)$	Simplified form $ab + ac$
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To simplify: Multiply each term on the inside of the parentheses by the term on the outside.
 Combine terms if possible.

Example 1

$$\begin{aligned} 2(47) &= 2(40 + 7) \\ &= (2 \cdot 40) + (2 \cdot 7) \\ &= 80 + 14 = 94 \end{aligned}$$

Example 2

$$\begin{aligned} 3(x + 4) &= (3 \cdot x) + (3 \cdot 4) \\ &= 3x + 12 \end{aligned}$$

Example 3

$$\begin{aligned} 4(x + 3y + 1) &= (4 \cdot x) + (4 \cdot 3y) + 4(1) \\ &= 4x + 12y + 4 \end{aligned}$$

Problems

Simplify each expression below by applying the Distributive Property.

1. $6(9 + 4)$

2. $4(9 + 8)$

3. $7(8 + 6)$

4. $5(7 + 4)$

5. $3(27) = 3(20 + 7)$

6. $6(46) = 6(40 + 6)$

7. $8(43)$

8. $6(78)$

9. $3(x + 6)$

10. $5(x + 7)$

11. $8(x - 4)$

12. $6(x - 10)$

Order of Operations and Circling Terms**Example 4**

- Circle the terms.
- Simplify each term until it is one number.
 - Subtract the numerator.
 - Evaluate 3^2 .
 - Divide.
 - Add or subtract the numbers from left to right.

$$18 + \frac{12-2}{5} - 3^2 + 18 \div 6$$

$$\textcircled{18} + \frac{\textcircled{12-2}}{\textcircled{5}} - \textcircled{3^2} + \textcircled{18 \div 6}$$

$$\textcircled{18} + \frac{\textcircled{10}}{\textcircled{5}} - \textcircled{9} + \textcircled{3}$$

$$18 + 2 - 9 + 3$$

$$14$$

Problems

Circle the terms, then simplify each expression.

1. $7 \cdot 3 + 5$

2. $8 \div 4 + 3$

3. $2(12 - 4) + 4$

4. $4(9 + 3) + 10 \div 2$

5. $24 \div 3 + 7(9 + 1) - 4$

6. $\frac{12}{3} + 5 \cdot 4^2 - 2(12 - 5)$