Reteaching 2-4

The Distributive Property

**OBJECTIVE:** Using the Distributive Property  
**MATERIALS:** None

You can compare the Distributive Property to distributing paper to the class. Just as you distribute a piece of paper to each person in the class, you distribute the number immediately outside the parentheses to each term inside the parentheses by multiplying.

**Example**

Simplify \(3(2x + 3)\) by using the Distributive Property.

\[
\begin{align*}
3(2x + 3) & \quad \text{Draw arrows to show that 3 is distributed to the } 2x \text{ and to the } 3. \\
3(2x) + 3(3) & \quad \text{Use the Distributive Property.} \\
6x + 9 & \quad \text{Simplify.}
\end{align*}
\]

**Example**

Simplify \(-4x + 7\) by using the Distributive Property.

\[
\begin{align*}
-1(4x + 7) & \quad \text{Rewrite using the Multiplication Property of } -1. \\
-1(4x) + (-1)(7) & \quad \text{Draw arrows to show that } -1 \text{ is distributed to the } 4x \text{ and to the } 7. \\
-4x - 7 & \quad \text{Use the Distributive Property.} \\
-4x - 7 & \quad \text{Simplify.}
\end{align*}
\]

**Exercises**

Draw arrows to show the Distributive Property. Then simplify each expression.

1. \(2(5x + 4)\)  
2. \(\frac{1}{4}(12x - 8)\)  
3. \(4(7x - 3)\)

4. \(5(4 + 2x)\)  
5. \(6(5 - 3x)\)  
6. \(0.1(30x - 50)\)

7. \((2x - 4)3\)  
8. \((3x + 4)7\)  
9. \(8(x + y)\)

10. \(-(4x + 3)\)  
11. \(-(2x + 1)\)  
12. \(-(-6x - 3)\)

13. \(-(14x - 3)\)  
14. \(-(7x - 1)\)  
15. \(-(3x + 4)\)