

# Using the Distributive Principle

Name \_\_\_\_\_

The terms  $x$  and  $3$  are not like terms, so we cannot simplify  $5(x + 3)$  by adding the terms in the parentheses. Instead, we use the Distributive Principle.

$$5(x + 3) = 5x + 5 \cdot 3 = 5x + 15$$

$$5(x - 3) = 5x - 5 \cdot 3 = 5x - 15$$

Write an equivalent expression using the Distributive Principle.

$$-2(x + 6) = -2x - 12$$

$$2(x + 6) =$$

$$(-3)(2x + 4) =$$

$$8(x + 2) =$$

$$(-8)(x - 2) =$$

$$11(5x + 2) =$$

$$(-6)(x + 4) =$$

$$(-6)(x - 4) =$$

$$(-2)(3x + 1) =$$

$$(x + 3)4 =$$

$$(x - 3)4 =$$

$$6(2x - 3) =$$

$$(x - 9)7 =$$

$$(-7)(x - 9) =$$

$$(-5)(5x - 2) =$$

$$(-3)(x + 1) =$$

$$(x + 1)(-3) =$$

$$(3x - 10)(-5) =$$

$$(-5)(x - 6) =$$

$$(x - 6)5 =$$

$$(x + 1)(-3) =$$

Simplify. Box your like terms.

$$8 + 3(x + 2)$$

$$\boxed{8} + 3x + \boxed{6}$$

$$3x + 14$$

$$-x + 4(x - 6)$$

$$-5(2x - 3) + 14$$

$$-2(x + 7) + 12x$$

$$x + 3(x - 4) + 2x$$

$$5x + 3(x - 1)$$

$$10a + 2(a + 9) + 25$$

$$5x + (x - 4)(-7)$$

$$x + 2(x + 1) + x$$