

# Warm-up

1. Calculate  $10(8-2) = 60$

2. Calculate  $4(2 + 0.5) = 10$

3. If 102 can be thought of as  $100 + 2$ , do mental math to find  $3 \cdot 102$ .

$$3 \cdot 100 + 3 \cdot 2 = 306$$

4. If \$12 is the cost of two posters and \$24 is the cost of three posters, what is the cost of five posters?

$$\text{\$34}$$

5. Evaluate when  $x = 5$ ;  $3x + 8x$

$$15 + 40 = 55$$

$$11x; 11 \cdot 5 = 55$$

# 1-5 Modeling the Distributive Property

**What is mental math?**

**Use mental math to find the product of each.**

$$7(100 + 8)$$

$$7(108)$$

**756**

$$7 \cdot 100 + 7 \cdot 8$$

$$700 + 56 = 756$$

$$15(98)$$

**1470**



$$15 \cdot 100 - 15 \cdot 2$$



# Distributive Property

**For all numbers a, b, and c:**

$$\mathbf{a(b + c) = ab + ac}$$

$$\mathbf{a(b - c) = ab - ac}$$



# Combining Like Terms

$$3x^2 + 2x + 4$$

**Coefficient**

$x^2, x$   
**Variable**

4  
**Constant**

# Combining Like Terms

Simplify

$$5x + 3x$$

$$x(5+3)$$
$$x(8)$$

$$5(x+4) - 3x$$

$$5x + 20 - 3x = 2x + 20$$

$$x(3+7) - 5x + 2$$

$$10x - 5x + 2 = 5x + 2$$