

NAME \_\_\_\_\_

DATE \_\_\_\_\_

DISTRIBUTIVE PROPERTY: Worksheet 1

Simplify each expression.

1)  $3(x + 2)$

2)  $9(2t + 2)$

3)  $-5(y - 4)$

4)  $6(y + 2)$

5)  $-10(4y + 3)$

6)  $3(x + 5) + 9(x - 1)$

Solve each equation for the given variable.

7)  $8(t + 1) = 24$

8)  $3(2x + 2) = 48$

9)  $-2(y - 4) = -6$

10)  $5(3w + 3) = -30$

**KEY**  
**DISTRIBUTIVE PROPERTY: Worksheet 1**

Simplify each expression.

1)  $3(x+2)$                        $3(x+2) = 3x+6$

2)  $9(2t+2)$                        $9(2t+2) = 18t+18$

3)  $-5(y-4)$                        $-5(y-4) = -5y+20$

4)  $6(y+2)$                        $6(y+2) = 6y+12$

5)  $-10(4y+3)$                        $-10(4y+3) = -40y-30$

6)  $3(x+5)+9(x-1)$                        $3(x+5)+9(x-1) =$   
 $3x+15+9x-9 =$   
 $12x+6$

Solve each equation for the given variable.

7)  $8(t+1) = 24$                        $8(t+1) = 24$                        $8t = 16$   
 $8t+8 = 24$                        $8t+8-8 = 24-8$                        $8t \div 8 = 16 \div 8$   
 $8t+8-8 = 24-8$                        $t = 2$

8)  $3(2x+2) = 48$                        $3(2x+2) = 48$                        $6x = 42$   
 $6x+6 = 48$                        $6x+6-6 = 48-6$                        $6x \div 6 = 42 \div 6$   
 $6x+6-6 = 48-6$                        $x = 7$

9)  $-2(y-4) = -6$                        $-2(y-4) = -6$                        $-2y = -14$   
 $-2y+8 = -6$                        $-2y+8-8 = -6-8$                        $-2y \div -2 = -14 \div -2$   
 $-2y+8-8 = -6-8$                        $y = 7$

10)  $5(3w+3) = -30$                        $5(3w+3) = -30$                        $15w = -45$   
 $15w+15 = -30$                        $15w+15-15 = -30-15$                        $15w \div 15 = -45 \div 15$   
 $15w+15-15 = -30-15$                        $w = -3$