

NAME \_\_\_\_\_

DATE \_\_\_\_\_

SOLVING INEQUALITIES: Worksheet 3

True or False.

1)  $-11 > -12$

2)  $-5 \leq -5$

3)  $7 < -10$

Solve each inequality for the given variable.

4)  $8x > 48$

5)  $\frac{y}{-3} < 7$

6)  $-2t \leq -28$

7)  $\frac{y}{12} \geq -3$

8)  $-7w + 3 < 24$

9)  $15x - 1 > -16$

10)  $\frac{y}{-4} - 6 \leq 2$

KEY  
SOLVING INEQUALITIES: Worksheet 3

Simplify each expression.

1)  $-11 > -12$                       *true*

2)  $-5 \leq -5$                         *true*

3)  $7 < -10$                          *false*

Solve each inequality for the given variable.

4)  $8x > 48$                              $8x > 48$   
 $8x \div 8 > 48 \div 8$   
 $x > 6$

5)  $\frac{y}{-3} < 7$                              $\frac{y}{-3} < 7$   
 $\frac{y}{-3} \cdot -3 < 7 \cdot -3$   
 $y > -21$

6)  $-2t \leq -28$                          $-2t \leq -28$   
 $-2t \div -2 \leq -28 \div -2$   
 $t \geq 14$

7)  $\frac{y}{12} \geq -3$                              $\frac{y}{12} \geq -3$   
 $\frac{y}{12} \cdot 12 \geq -3 \cdot 12$   
 $y \geq -36$

8)  $-7w + 3 < 24$                        $-7w + 3 < 24$   
 $-7w + 3 - 3 < 24 - 3$   
 $-7w < 21$   
 $-7w \div -7 < 21 \div -7$   
 $w > -3$

9)  $15x - 1 > -16$                        $15x - 1 > -16$                        $15x \div 15 > -15 \div 15$   
 $15x - 1 + 1 > -16 + 1$                        $x > -1$   
 $15x > -15$

10)  $\frac{y}{-4} - 6 \leq 2$                          $\frac{y}{-4} - 6 \leq 2$                          $\frac{y}{-4} \cdot -4 \leq 8 \cdot -4$   
 $\frac{y}{-4} - 6 + 6 \leq 2 + 6$                          $y \geq -32$   
 $\frac{y}{-4} \leq 8$