

Name: \_\_\_\_\_



# Solving Inequalities (Two-Step)

**Reminder:** When solving inequalities, you have to reverse the direction of the inequality sign whenever you:

- Swap the positions of the left side of the inequality with the right side of the inequality.  
Example:  $4 < x \rightarrow x > 4$
- Multiply or divide both sides of the inequality by a **negative** number.  
Example:  $-2y \geq 8 \rightarrow y \leq -4$



**Directions:** Solve each inequality.

1.)  $-2x - 1 \leq 11$

9.)  $\frac{y}{3} + 7 \leq 21$

2.)  $5 > 1 + \frac{y}{7}$

10.)  $\frac{-8 + k}{2} \leq -8$

3.)  $\frac{j - 6}{4} \geq 9$

11.)  $\frac{j}{-6} - 8 > -12$

4.)  $-5(x + 4) > 15$

12.)  $-1 \geq \frac{n + 12}{4}$

5.)  $-c - 2 \geq 8$

13.)  $-1 + 7x > -169$

6.)  $4 + \frac{m}{3} \leq 6$

14.)  $84 \leq -7(x - 9)$

7.)  $2y - 4 \leq -28$

15.)  $\frac{b - 11}{14} \geq -2$

8.)  $\frac{b}{-10} - 2 \geq -4$

16.)  $-5(y - 3) < -60$

## ANSWER KEY

1.)  $-2x - 1 \leq 11$

$x \geq -6$

2.)  $5 > 1 + \frac{y}{7}$

$y < 28$

3.)  $\frac{j-6}{4} \geq 9$

$j \geq 42$

4.)  $-5(x+4) > 15$

$x < -7$

5.)  $-c - 2 \geq 8$

$c \leq -10$

6.)  $4 + \frac{m}{3} \leq 6$

$m \leq 6$

7.)  $2y - 4 \leq -28$

$y \leq -12$

8.)  $\frac{b}{-10} - 2 \geq -4$

$b \leq 20$

9.)  $\frac{y}{3} + 7 \leq 21$

$y \leq 42$

10.)  $\frac{-8+k}{2} \leq -8$

$k \leq -8$

11.)  $\frac{j}{-6} - 8 > -12$

$j < 24$

12.)  $-1 \geq \frac{n+12}{4}$

$n \leq -16$

13.)  $-1 + 7x > -169$

$x > -24$

14.)  $84 \leq -7(x-9)$

$x \leq -3$

15.)  $\frac{b-11}{14} \geq -2$

$b \geq -17$

16.)  $-5(y-3) < -60$

$y > 15$