

Lesson 8-6 • Group 1

Reinforce Understanding

8.6 Small Group • Group 1

With my small group, I can solve an inequality and graph its solution set on a number line — one step at a time, with support.

Worked model

Solve $x + 3 > 53$. The inverse of adding 3 is subtracting 3.

1. I subtract 3 from both sides: $x + 3 - 3 > 53 - 3$, so $x > 50$.
2. The symbol $>$ does not include 50, so I use an open circle at 50.
3. 'Greater than' shades right. Check: $x = 60$ gives $60 + 3 = 63 > 53$. True!

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Solve $x + 3 > 9$, then graph the solution on the number line.

Mark and label each value on the number line.

Show your thinking

2. Solve each inequality, describe the inverse operation, and describe the graph.

Complete the table. Show how you found each value.

Inequality	Inverse Operation	Solution	Graph Description
$x + 11 \geq 20$			
$x - 3 < 7$			
$x + 8 \leq 20$			

Show your work

3. Solve: $x + 6 > 14$

Circle the letter of the best answer. Show how you know.

- A. $x > 8$
- B. $x < 8$
- C. $x = 8$
- D. $x > 20$

Show your work
