Graph each inequality on a number line. Then write the solutions in interval notation.

1. \( x < 4 \)
   \[ \rightarrow \text{, interval notation} \]
2. \( x \geq -2 \)
   \[ \rightarrow \text{, interval notation} \]

Graph each set of numbers given in interval notation. Then write an inequality statement, using \( x \) as the variable, to describe the numbers graphed.

3. \( (-\infty, 0] \)
   \[ \rightarrow \text{, inequality} \]
4. \( (2, \infty) \)
   \[ \rightarrow \text{, inequality} \]

Solve each inequality. Graph the solution set and write it in interval notation.

5. \( \frac{2}{3}x < -4 \)
   \[ \rightarrow \text{, interval notation} \]
6. \( 4x - 1 \geq 3 + 8x \)
   \[ \rightarrow \text{, interval notation} \]

7. \( 4 - 2(m + 3) \leq m + (4m - 6) \)
   \[ \rightarrow \text{, interval notation} \]
8. \( \frac{1}{4}(8x + 4) > 3x + 1 \)
   \[ \rightarrow \text{, interval notation} \]
Solve each inequality. Graph the solution set and write it in interval notation.

9. \(-1 < x \leq 3\)
10. \(-2 < -3x + 1 < 7\)

11. SET UP THE INEQUALITY USED TO SOLVE THIS PROBLEM. DO NOT SOLVE. Three less than twice a number is greater than or equal to the difference between the number and 5.

12. A person’s blood sugar level is between 80 and 90. Let \(x\) represent the blood sugar, and write and inequality to describe the blood sugar level.