Ch. 1-5: Solving Combined Inequalities

Steps in Solving Inequalities

1. Simplify each side of the inequality
2. Add or Sub to get like terms on each side of the inequality symbol.
3. Multiply or Divide to get variable by itself
4. If mult. Or div. by negative FLIP the inequality symbol

Example 1: Solve and Graph \(3x + 16 < 7\)

Write in Interval Notation

Example 2: Solve and Graph using Interval Notation

\[11 - \frac{3}{2}x \geq -4\]

Example 3: Solve and Graph using Interval Notation

\[3(4z - 1) > 2(6z - 5)\]
Example 4:

\[
\frac{4}{5} x - 8 \geq 8 - \frac{4}{5} x
\]

Example 5: Write the Inequality Sentence

- The Product of 7 and a number is no more then 50

- 6 fewer than a number is at least 20

- The Wind speeds of tropical storms are at least 40 mi/h, but less than 74 mi/h.