## Inequalities containing Absolute Value

## Algorithm

- 1. Isolate the absolute value
- 2. Set the expression and the opposite of the expression on the inside of the absolute value signs using the given inequality sign to the number on the outside
- 3. Solve the resulting two inequalities.

Solve the following equations.

- 1. |x| < 7
- $2. \qquad |x-1| \ge 8$
- 3.  $|2x+1| \le 13$
- 4. |x-2| + 4 < 10
- 5.  $|2x-3| \ge 13$
- 6. |3(x-2)| > 12
- 7. |-4x| < 10
- 8.  $|3x-1| \ge 5x+15$
- 9. |2x-6| < 0
- 10.  $|5(2x+3)| \ge -10$