# Solving and Graphing Compound Inequalities Notes

**Compound Inequalities:**

Sometimes we will have inequalities with three parts:

$$-3 \le 2x - 1 \le 5$$

**Goal of Solving Compound Inequalities:**

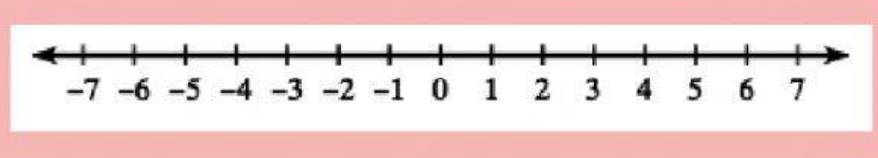
**Example 1:**

$$-3 \le 2x - 1 \le 5$$

$-3 \le 2x - 1 \le 5$

$\le 2x \le$

$\le x \le$




Same as saying: $x \ge$ and $x \le$

Interval Notation Solution:

$x =$

Graphing Tool Kit:



**Example 2:**

$$0 < \frac{x}{3} - 1 < 1$$

$0 < \frac{x}{3} - 1 < 1$

$< \frac{x}{3} <$




$< x <$

Same as saying: $x >$ and $x <$

Interval Notation Solution:

$x =$

Graphing Tool Kit: