

Solving Linear Inequalities – Section 2.7

Discussion

What are the solutions to $x < 3$?

How would we represent this with a graph?

Why don't we graph the solutions of linear equations?

THE ONLY NEW RULE

When multiplying or dividing by a negative number, we switch the sign of each side and hence switch the inequality.

Solve in groups and graph the solution set for each:

Example 1

$$x + 2 \geq -7$$

Example 2

$$-11 > x + 4$$

Example 3

$$6(2 - z) \geq 12$$

Example 4

$$3(x + 2) - 6 > -2(x - 3) + 14$$

Example 5

$$3(5x - 4) < 4(3x - 2)$$

Example 6

$$-6x + 2 < 2(5 - x)$$