

# Lesson 7.2: Linear Inequalities

## Targets

1. I can solve one-step inequalities
2. I can solve two-step inequalities
3. I can interpret and solve linear inequalities

## Multiplying and dividing with inequalities

First attempt these problems on your own. Then watch the video and copy his notes.

Your attempt:

$$-0.5x \leq 7.5$$

$$75x \geq 125$$

$$\frac{x}{-3} > -\frac{10}{9}$$

$$\frac{x}{-15} < 8$$

Video Notes:

$$-0.5x \leq 7.5$$

$$75x \geq 125$$

$$\frac{x}{-3} > -\frac{10}{9}$$

$$\frac{x}{-15} < 8$$

What happens to the inequality symbol when you multiply or divide both sides by a negative?

## Khan Activity: One Step Inequalities

Complete this activity on Khan.

## Solving a two step inequality

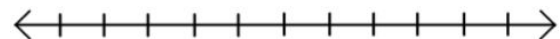
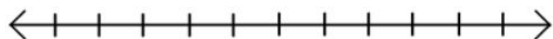
First attempt this problem on your own. Then watch the video and copy his notes.

Your attempt:

$$\frac{2}{3} > -4y - 8\frac{1}{3}$$

Video Notes:

$$\frac{2}{3} > -4y - 8\frac{1}{3}$$



## Multi-Step Inequalities

First attempt this problem on your own. Then watch the video and copy his notes.

Your attempt:

$$4x + 3 < -1$$

Video Notes:

$$4x + 3 < -1$$

$$5x > 8x + 27$$

$$5x > 8x + 27$$

$$8x - 5(4x + 1) \geq -1 + 2(4x - 3)$$

$$8x - 5(4x + 1) \geq -1 + 2(4x - 3)$$

## Khan Activity: Two-Step Inequalities

Complete this activity on Khan.

## Constructing and Solving A Two-Step Inequality

Watch this video and copy the notes below.

## Constructing and Solving A Two-Step Inequality: Example

First attempt this problem on your own. Then watch the video and copy his notes.

- *A popular R&B band recently returned from a successful 3-city tour where they played to at least 120,000 people. If they had an audience of 45,000 in Mesa and another 33,000 in Denver, how many people attended their show in Las Vegas?*

Your attempt:

Video Notes:

## Khan Activity: Interpreting and Solving Linear Inequalities

Complete this activity on Khan.

## Exit Ticket

1. Have all your notes filled out above.
2. Complete the following Khan Academy Activities:
  - a. One Step Inequalities
  - b. Two-Step Inequalities
  - c. Interpreting and Solving Linear Inequalities