Algebra 1

Chapter 3

Section 3-1

May 13-10:02 PM

Concepts

Inequality | Mathematical sentence that compares the values of two expressions

Sep 23-8:22 PM

Inequalities
Word Phrases

Seven is less than ten.   Four is greater than one.

$$7 < 10$$ $$4 > 1$$
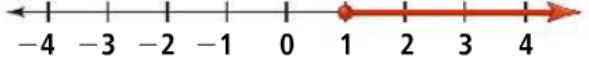
Sep 29-3:15 PM

Inequalities
Word Phrases
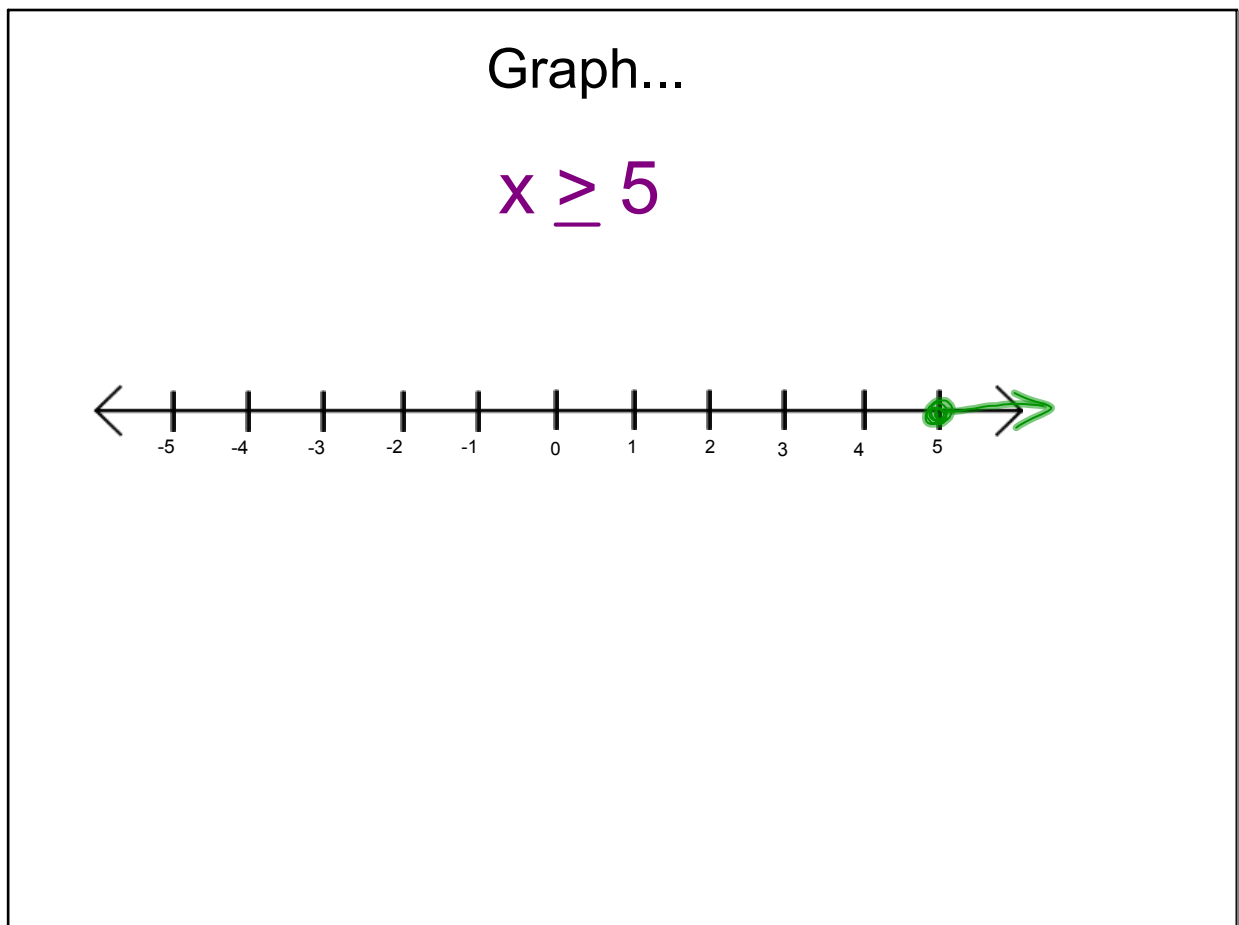
Negative twenty-two is less than negative five.

$$-22 < -5$$

Fourteen is greater than negative thirty-one.

$$14 > -31$$

Sep 29-3:15 PM

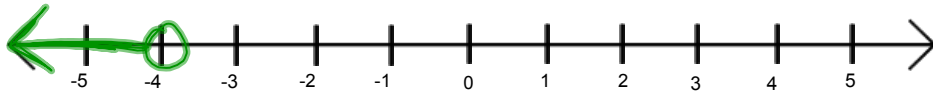| Words	Symbols	Graph
x is less than 3.	$x < 3$	
x is greater than -2.	$x > -2$	
x is less than or equal to 0.	$x \leq 0$	
x is greater than or equal to 1.	$x \geq 1$	

Oct 6-8:33 PM

Graph...

$$x \geq 5$$

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Graph...

$$2 < x \rightarrow x > 2$$
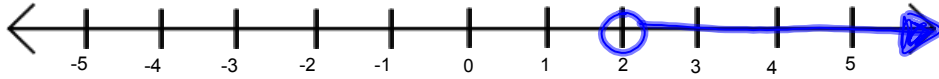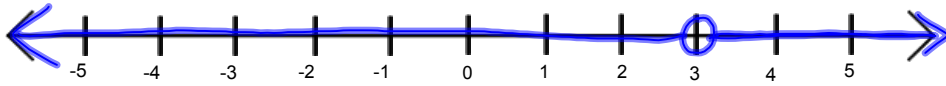

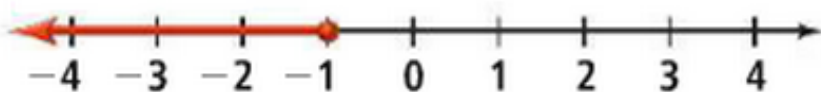Oct 6-8:36 PM

Graph...

$$x < -4$$

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Graph...

$x \neq 3 \longrightarrow \begin{array}{l} x > 3 \\ x < 3 \end{array}$

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Identify the inequalities from their graphs...

$x < 3$

$x \geq 0$

$x > 1$

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What inequality describes the situation? Be sure to define a variable.

A

Trail Rides
Starting at
$19.99

Let c = the cost of a trail ride in dollars.

$$c \geq 19.99$$

B

8 M P H

Let s = a legal speed in miles per hour.

$$s \leq 8$$

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Finding a Solution

$$t - 4 > 5$$

Are the following solutions of the inequality? How do you know?

$$11 - 4 > 5 \rightarrow 7 > 5 \rightarrow \text{Yes}$$

$$4 - 4 > 5 \rightarrow 0 > 5 \rightarrow \text{No}$$

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Finding a Solution

Is v = 20 a solution to the inequality?

$$2v - 10 < v + 5$$

$$2(20) - 10 < 20 + 5$$

$$40 - 10 < 25$$

$$30 \not< 25$$

No

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Finding a Solution

Is v = -4 a solution to the inequality?

$$2 - v > -2v - 2$$

$$2 - (-4) > -2(-4) - 2$$

$$2 + 4 > 8 - 2$$

$$6 \not> 6$$

No

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