

Name: _____

Date: _____

2.1 Writing and Graphing Inequalities

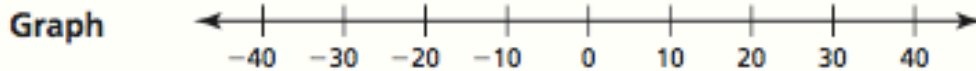
Essential Question: _____

EXPLORATION 1 Writing and Graphing Inequalities

Work with a partner. Write an inequality for each statement. Then sketch the graph of the numbers that make each inequality true.

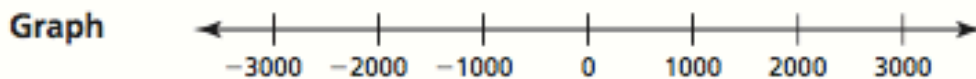
a. Statement The temperature t in Sweden is at least -10°C .

Inequality



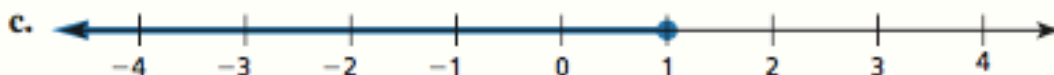
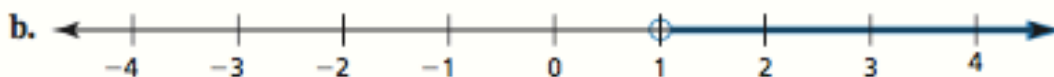
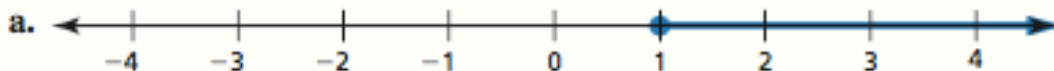
b. Statement The elevation e of Alabama is at most 2407 feet.

Inequality



EXPLORATION 2 Writing Inequalities

Work with a partner. Write an inequality for each graph. Then, in words, describe all the values of x that make each inequality true.



An inequality is a mathematical _____ that compares _____.

Inequality Symbols				
Symbol	$<$	$>$	\leq	\geq
Key Phrases	• is less than	• is greater than	• is less than or equal to	• is greater than or equal to
	• is fewer than	• is more than	• is at most • is no more than	• is at least • is no less than

Write each sentence as an inequality.

- A number w minus 3.5 is less than or equal to -2 .
- Three is less than a number n plus 5.
- Zero is greater than or equal to twice a number x plus 1.

Tell whether -4 is a solution of each inequality.

- $x + 8 < -3$
- $-4.5x > -21$

Graph each inequality.

- $y \leq -3$
- $2 < x$
- $x > 0$

The graphs show the height restrictions h (in inches) for two rides at an amusement park. Write an inequality that represents the height restriction of each ride.

