



Lesson 8-6

Inequalities

ISG Interactive Study Guide

See pages 181–182 for:

- Getting Started
- Real-World Link
- Notes

e Essential Question

How are equations and inequalities used to describe and solve multi-step problems?

CCSS Common Core State Standards

Content Standards
7.EE.4

Mathematical Practices
1, 3, 4, 5

What You'll Learn

- Write inequalities.
- Graph inequalities on a number line.

**Real-World Link**

Water Parks Wisconsin Dells, Wisconsin, is known as the Water Park Capital of the World. The town has 20 water parks with more than 200 waterslides and 16 million gallons of water. Most of the water parks offer three different prices of tickets – adults, children, and seniors.

**Write Inequalities**

Recall that an inequality is a mathematical sentence that compares quantities that are not equal. Inequalities contain the symbols $<$, $>$, \leq , or \geq . The inequality $w > 200$ represents the number of waterslides in Wisconsin Dells.

Example 1

Write an inequality for each sentence.

- a. The DVD costs more than \$15.

Words	The DVD costs more than \$15.
Variable	Let d = the cost of the DVD in dollars.
Inequality	$d > 15$

- b. A dog weighs less than 50 pounds.

Words	A dog weighs less than 50 pounds.
Variable	Let d = the weight of the dog in pounds.
Inequality	$d < 50$

Got It? Do these problems to find out.

- 1a. Amelia sold more than 40 magazines.
1b. Gino sent less than 35 texts yesterday.