

# REVIEW: Writing and Graphing Inequalities

Name \_\_\_\_\_

## Key Concept and Vocabulary

$x > 2$ : All numbers greater than 2

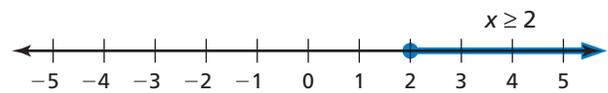
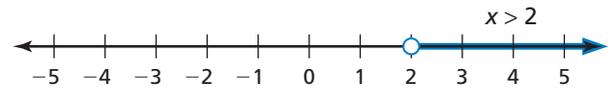
$x \geq 2$ : All numbers greater than or equal to 2

$x < 2$ : All numbers less than 2

$x \leq 2$ : All numbers less than or equal to 2



## Visual Model



## Skill Examples

- $x > 0$ : All positive numbers
- $x \geq 0$ : All nonnegative numbers
- $x < 0$ : All negative numbers
- $x \leq 0$ : All nonpositive numbers

## Application Example

- A sign at a clothing store reads "Savings up to 70%." Let  $S$  represent the percent of savings. Write an inequality to describe  $S$ .

$S$  can be equal to 70%.

Or  $S$  can be less than 70%.



••• An inequality is  $S \leq 70\%$ .

## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Write an inequality for the statement.

- All numbers that are less than 24

$x < 24$

- All numbers greater than 10

$x > 10$

- All numbers that are at least 11

$x \geq 11$

- All numbers that are at most 3

$x \leq 3$

- All numbers that are no more than 5

$x \leq 5$

- All numbers less than or equal to 8

$x \leq 8$

Graph the inequality.

- $x > -1$



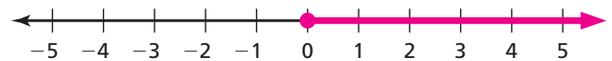
- $x < 4$



- $x \leq 3$



- $x \geq 0$



- A sign at a shoe store reads "Savings up to 60%." Let  $P$  represent the percent of savings. Write an inequality to describe  $P$ .

$P \leq 60\%$

