Chapter 7	Equations and Inequalities
Date:	7.5 Writing and Graphing Inequalities
Essential Question	How can you use a number line to represent solutions of an inequality?
Vocab	An inequality is a mathematical sentence that compares expressions. Example: $C + 5 < 15$

Inequality Symbols				
Symbol	**<**	**>**	**≤**	**≥**
Key Phrases	• less than • fewer than	• greater than • more than	• less than or = to • at most • no more than	• greater than or = to • at least • no less than

Composition Book

7.5 Writing and Graphing Inequalities

Write the word sentence as an inequality.

1) A number c is less than 4.

$c < 4$

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2) A number k plus 5 is greater than or equal to 8.

$k + 5 \geq 8$

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3) Four times a number q is at most 16.

$4q \leq 16$

Complete numbers 1 - 4 on your notes page.
Write the word sentence as an inequality.

1) **A number n is greater than or equal to 1.**

$n \geq 1$

2) **Twice a number p is equal to or less than 7.**

$2p \leq 7$

3) **A number w minus 3 is fewer than 10.**

$w - 3 < 10$

4) **A number z divided by 2 is at least -6.**

$z \div 2 \geq -6$

Vocab

A **solution of an inequality** is a value that makes the inequality true

There may be more than one **solution**.

Example: $x + 3 \leq 7$

Are the following values of x possible solutions?

$x = 3$?	$3 + 3 \leq 7$?	yes
$x = 4$?	$4 + 3 \leq 7$?	yes
$x = 5$?	$5 + 3 \leq 7$?	no