

2.1 Writing and Graphing Inequalities

Algebra 1: 2.1 Writing and Graphing Inequalities

Do you know what these symbols mean?

\geq	$<$	$>$	\leq
greater than or Equal to	less than	greater than	Less than or Equal to.

Ex: Try to write an equivalent inequality to the one given, using a Greater Than sign.

$$-3x + 2 < 20$$

$$20 > -3x + 2$$

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Translate **the text to an inequality**:

Ex 1: A number w minus 3.5 is less than or equal to -2 .

$$w - 3.5 \leq -2$$

Ex 2: Zero is greater than or equal to twice a number x plus 1 .

$$0 \geq 2x + 1$$

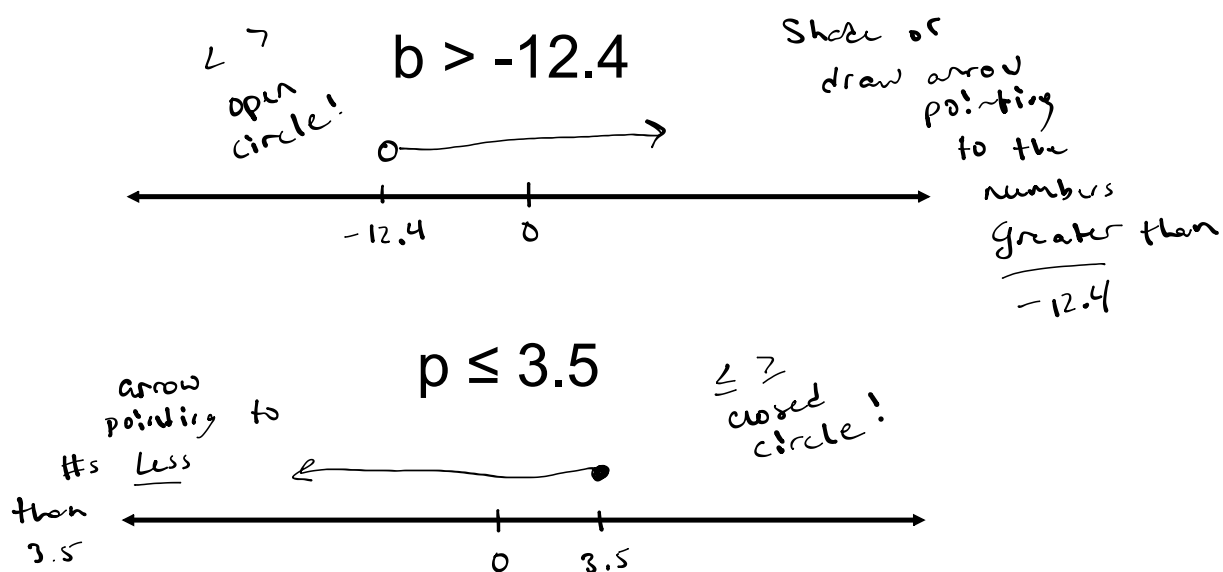
Phrases to watch for:

"Is at least" : \geq "Is at most" : \leq

"Is no more than" : \leq "Is no less than" : \geq

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Graphing inequalities on a number line.



"The solution" to an inequality isn't just ONE number. It's a range of numbers called the "Solution Set"

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A particular number is a solution to an inequality if the statement is true when you plug the number in.

Testing solutions to inequalities:

Is $x = -9$ a solution to the inequality? **No**

$$-42 < 5x$$

$$-42 < 5(-9)$$

$$-42 < -45$$

NOT
A solution

Is $p = 16$ a solution to the inequality? **Yes**

$$-\frac{96}{p} \geq -6$$

$$\frac{-96}{16} \geq -6$$

$$-6 \geq -6$$

True

Is a
solution!

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Homework:

Pages 64-65

Numbers: 7-9, 11, 15, 20, 21, 31-33