

When the variable is on the left..

> greater than

< less than

(> or < open

circle) ○

≥ greater than or equal to.

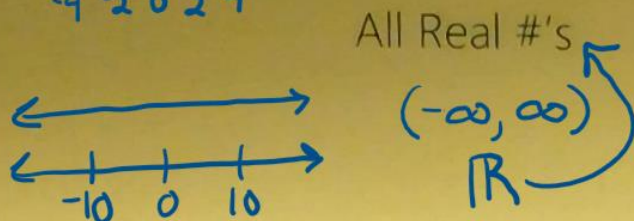
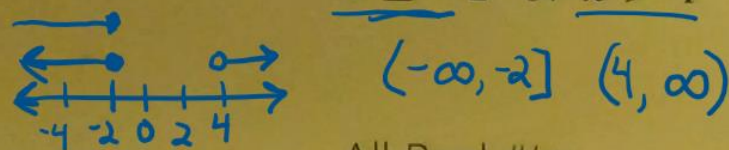
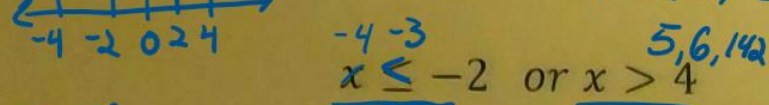
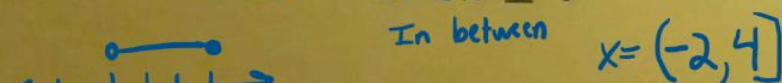
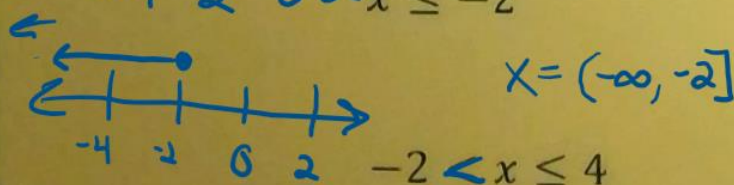
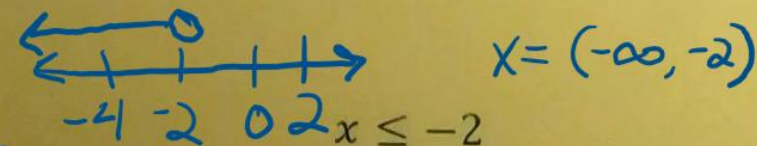
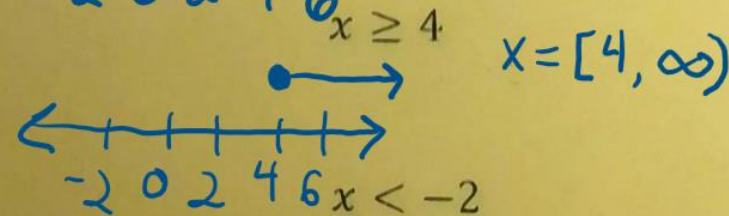
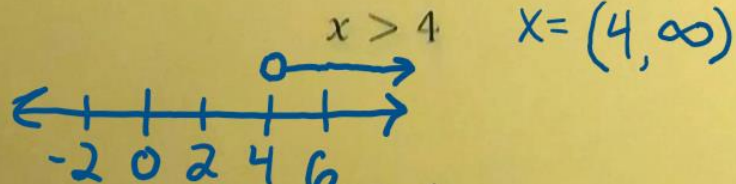
≤ less than or equal to.

(≥ or ≤ closed circle) ●

Number line

Ex.

Interval



Use...

(Parentheses)

- open circle on # line
- # is not included in the solution (< or >)
- Always use the () by ∞ and $-\infty$

[Brackets]

- closed circle on # line
- # is included in the solution (\leq or \geq)

* Order is always

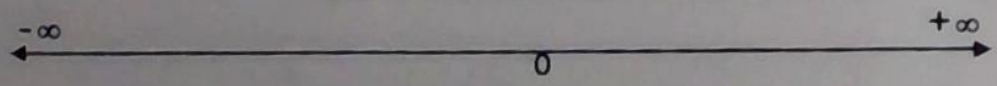
(Smallest #, Largest #)

Coordinate Algebra: Unit 3 Interval Notation

Interval notation is a method for writing a set of numbers, usually along the x-axis.

When graphing, the endpoint:

- O means "not included" or "open"
- means "included" or "closed"
- ← means "going towards negative infinity ($-\infty$)" which is also open
- means "going towards positive infinity ($+\infty$)" which is also open



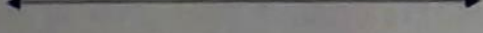
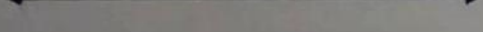
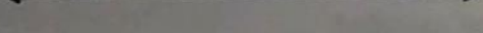
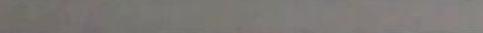

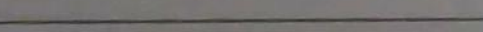
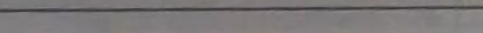
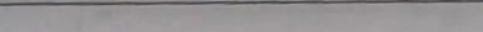

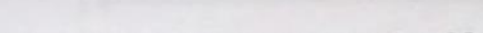


When using interval notation, the symbol:

- (means "not included" or "open"
- [means "included" or "closed"

Inequality	Number Line Graph	Interval Notation (left, right)
$x > -3$		$x = (-3, \infty)$
$x < 2$		$x = (-\infty, 2)$
$x \leq 0$		$x = (-\infty, 0]$
$x \geq 1$		$x = [1, \infty)$
$.5 \leq x \leq 3$		$x = [0.5, 3]$
$-2 < x < 2$		$x = (-2, 2)$
$-1.5 \leq x < 3.8$		$x = [-1.5, 3.8)$

HOMEWORK

Inequality	Number Line Graph	Interval Notation
$x \leq -2$		
$x > 4$		
$x \geq -1$		
$x < 3$		
$x \leq -2$ or $x > 4$		
$0 \leq x < 3$		
$x > -3$		
$x \leq 5$		
$-1 < x < 5$		
$x < -3$ or $x \geq -1$		
$x \geq -4$		
$0 \leq x < 5$		

How can you express "all real numbers except for 2" using interval notation?

How can you express "only 2" using interval notation?