

## Chapter 3 Inequalities

$<, \leq, >, \geq, \neq, \dots$

we will mainly  
use these four  
inequalities

How do you say this?

$$w > 9$$

w is greater than 9

or

9 is less than w

How do you say this?

$$-11 \geq T$$

-11 is greater than or  
equal to T

or

T is less than or  
equal to -11

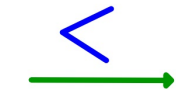
When saying an  
inequality it is  
better to start  
with the variable,  
whichever side it  
is on.

How do you say this?



It depends on the direction you read it!

If you read from left to right  
you would say



Less Than

If you read from right to left  
you would say



Greater Than

An inequality always points to the smaller number.

Smaller  
Number



Bigger  
Number

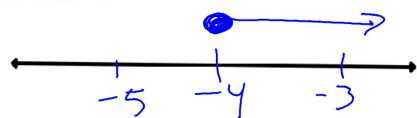
Bigger  
Number



Smaller  
Number

Graph each inequality on a number line.

- a) 1.  $w \geq -4$  "w is greater than or equal to -4"



● or ○  
 $\leq$  or  $\geq$  means  
 to use  
 a SHADED CIRCLE



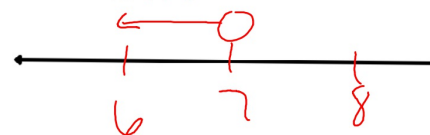
- b)  $D < 1$  D is less than 1



$<$  or  $>$  means  
 to use  
 an OPEN CIRCLE



2.  $7 > c$



c is less than 7