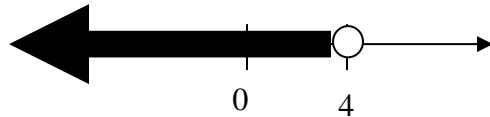


# Inequalities and Their Graphs

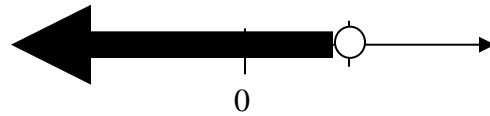
SIGN	SAID	GRAPHED
$>$	“greater than”	open dot, shade to the right
$<$	“less than”	open dot, shade to the left
$\geq$	“greater than or equal to”	closed dot, shade to the right
$\leq$	“less than or equal to”	closed dot, shade to the left
$\neq$	“not equal to”	open dot, no shading

☺ **ALWAYS** read the inequality sentence starting with the variable.

Ex:  $x < 4$  is read “x is less than 4” and the graph:



Ex:  $4 > x$  is read “x is less than 4”

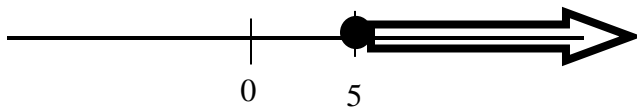


You can rewrite the inequality so that the variable is always on the left.

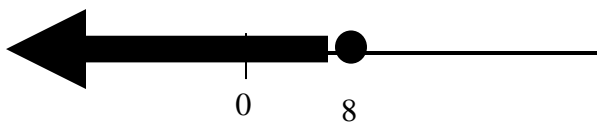
if  $-5 \geq y$  flip & rewrite  $y \leq -5$

**Ex: Graph the solutions of each inequality on a number line.**

$a \geq 5$



$x \leq 8$



$-7 < y$

