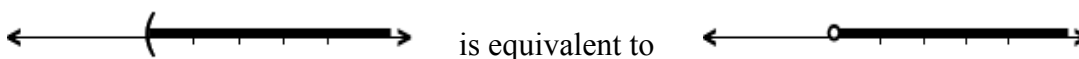


Using Set Builder and Interval Notation

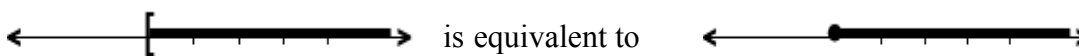
Symbols used in Set Builder and Interval Notation

To Show	Set Builder	Interval
Less than	$<$)
Greater than	$>$	(
Less than or Equal to	\leq]
Greater than or Equal to	\geq	[
Union	or	\cup
Intersection	and	\cap

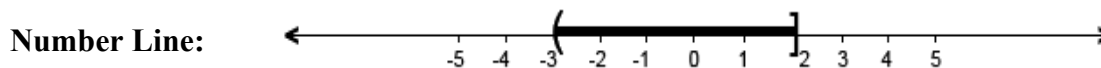
To exclude a number on a number line use a parenthesis or an open circle.



To include a number on a number line use a bracket or a closed circle.



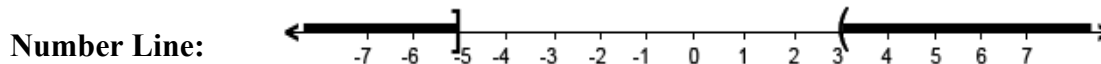
Example 1: Show all real numbers between -3 and +2, with -3 excluded and 2 included.



Set Builder Notation: $\{x \mid -3 < x \leq 2\}$

Interval Notation: $(-3, 2]$

Example 2: Show all numbers less than or equal to -5, or greater than +3.



Set Builder Notation: $\{x \mid x \leq -5 \text{ or } x > 3\}$

Interval Notation: $(-\infty, -5] \cup (3, \infty)$

NOTE: Use parenthesis with $-\infty$ and $+\infty$