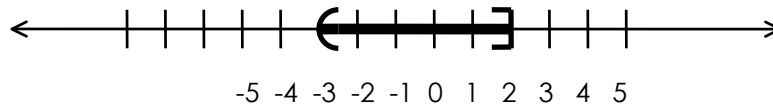


USING SET BUILDER & INTERVAL NOTATION

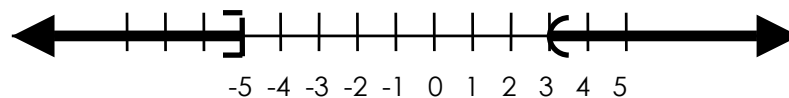
Example 1: Show how to represent all real numbers from negative three up to and including positive two.



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

Interval Notation: $(-3, 2]$

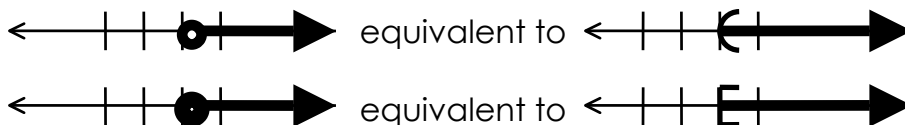
Example 2: Show how to represent all numbers from negative infinity up to and including negative five as well as all numbers from positive three to positive infinity.



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

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

Example 3: Optional ways of showing a number line.



i.e. An open circle does not include the point whereas a solid circle does include the point.

Example 4: Summary of mathematical symbols

$<$ less than \leq less than or equal
 $>$ greater than \geq greater than or equal to

$($ or $)$ does not include the actual point

$[$ or $]$ does include the actual point

\cup union or "or"

\cap disjunction or "and" (mutually exclusive)