

Set Notation & Interval Notation

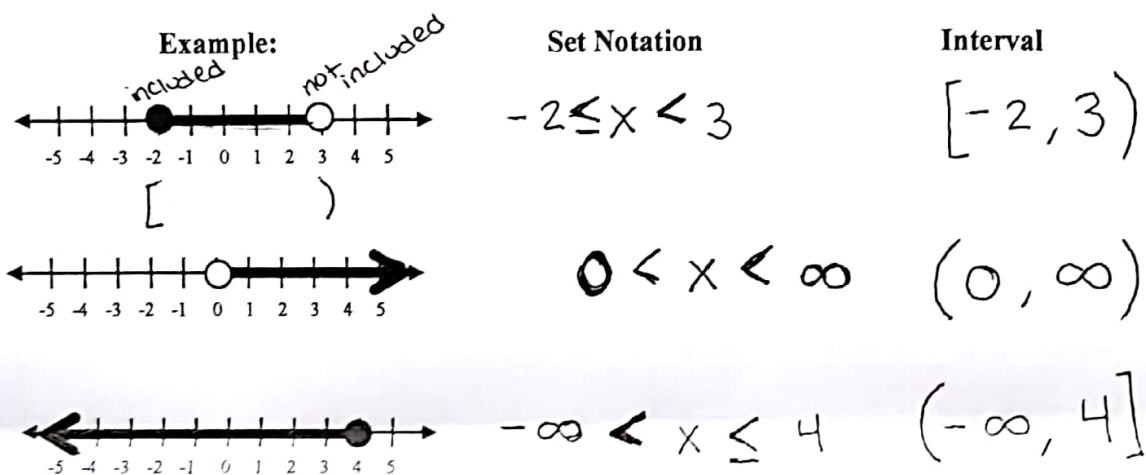
Recall from module 4 that *domain* is the set of inputs (x-values) for which a function is defined. There are two types of notation we will use in Math I to represent domain.

Set builder notation uses compound inequalities along with the symbols $<, >, \leq, \geq$ that are placed around intervals to denote domain

Interval notation uses parentheses and brackets instead of compound inequalities to represent the set of x-values (input)

Parentheses () indicate a domain interval that doesn't include the endpoints.

Brackets [] indicate a domain interval that does include the endpoints.



Summary:

- $<$ less than
- $>$ greater than
- \leq less than or equal to
- \geq greater than or equal to
- \circ - not included
- \bullet - included
- $()$ - not included
- $[]$ - included

Set Notation

- 1) lowest #
- 2) highest #
- 3) write x between the lowest & highest
- 4) add inequality symbols

Interval Notation

- 1) state lowest #
- 2) state highest #
- 3) separate with comma
- 4) state if lowest # is included or not
- 5) state if ~~lowest~~ ^{highest} # is included or not