## Set Notation \& Interval Notation

Recall from module 2 that the domain is the set of inputs ( $\mathrm{x}-\mathrm{values)} \mathrm{for} \mathrm{which} \mathrm{a} \mathrm{function} \mathrm{is}$ defined. There are two types of notation we will use in Math 1 to represent domain.

Set builder notation indicates the type of number (eg. Real, Integer, Natural, etc.) and the conditions that the number meets, using inequalities. Discrete sets are defined with this notation. For example:

$$
\{x \mid x \in \mathbb{Z},-2 \leq x<7\}
$$

Interval notation uses parentheses and brackets instead of inequalities to represent the set of values. This notation can only be used for continuous intervals!
Parentheses () indicate an $\qquad$ interval that $\qquad$ include the endpoints.
Brackets [ ] indicate a $\qquad$ interval that $\qquad$ include the endpoints.

| Example: | Set Notation | Interval |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
| $\mathbf{H}_{-5} \mathbf{4}$ |  |  |
|  |  |  |
| $4 \mathbf{C}_{-5}$ |  |  |

