

Inequalities and Interval Notation

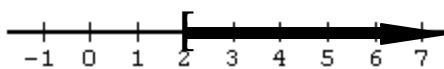
Inequality

Graph

**Interval
Notation**

**Set
Notation**

$$x \geq 2$$



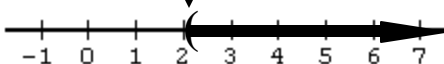
$$[2, \infty)$$

$$\{x \mid x \geq 2\}$$

Brackets [] indicate including the endpoint

Parentheses () indicate excluding the endpoint

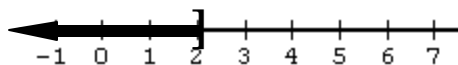
$$x > 2$$



$$(2, \infty)$$

$$\{x \mid x > 2\}$$

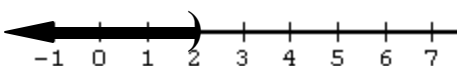
$$x \leq 2$$



$$(-\infty, 2]$$

$$\{x \mid x \leq 2\}$$

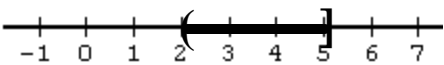
$$x < 2$$



$$(-\infty, 2)$$

$$\{x \mid x < 2\}$$

$$2 < x \leq 5$$



$$(2, 5]$$

$$\{x \mid 2 < x \leq 5\}$$