

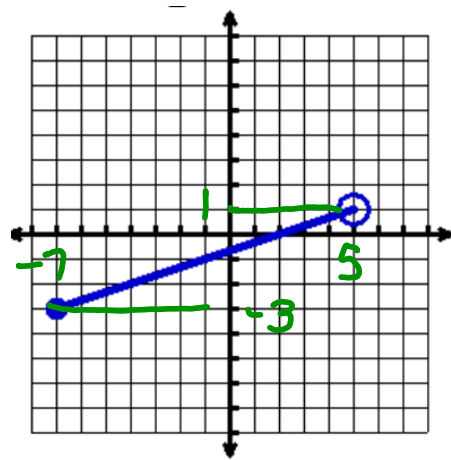
Notation

Domain and range can be represented using two notations.
The second type is interval notation.

Interval Notation

- point is included use [or]
- point is not included use (or)

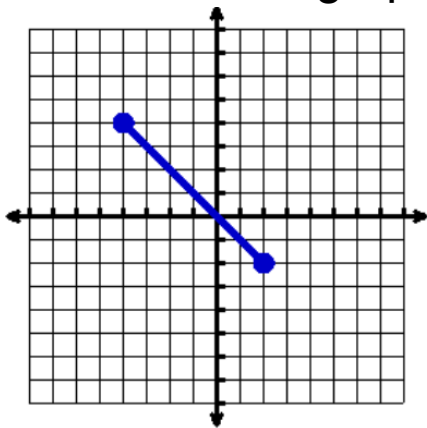
If all values use $(-\infty, \infty)$



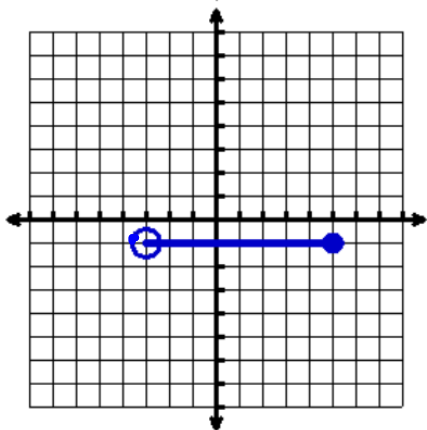
$$D: [-7, 5)$$
$$R: [-3, 1)$$

Types of graphs:

A continuous graph with two endpoints:



$$D: [-4, 2]$$
$$R: [2, 4]$$

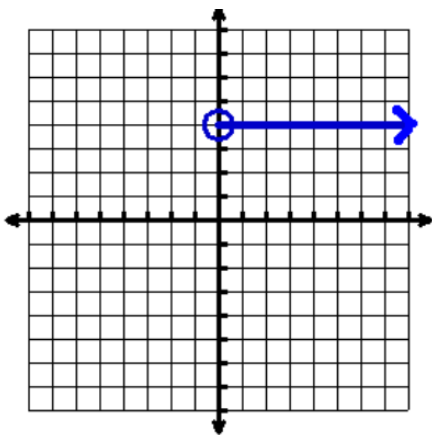


$$D: (-3, 5]$$
$$R: [-1]$$

Important Note:

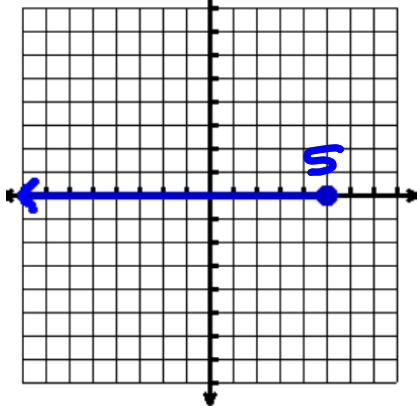
- To find the domain for a graph with two endpoints, always identify the x-values of the point farthest to the left and the point farthest to the right.
- For the range, you want the y-values of the lowest point and the highest point.

A continuous graph with only one endpoint (continues forever in the other direction):



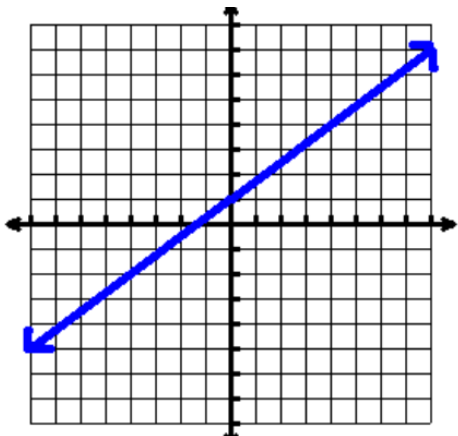
$$D: (0, \infty)$$
$$R: [4]$$

Note: If the arrow were pointing to the left, the domain would be \leq the x-value. If the arrow were pointing down, the range would \leq the y-value.



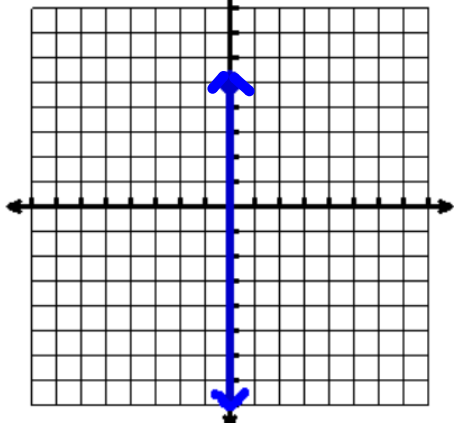
$$D: (-\infty, 5]$$
$$R: [0]$$

A continuous graph that has two arrows:



$$D: (-\infty, \infty)$$
$$R: (-\infty, \infty)$$

Note: If one of the arrows were pointing up and one of the arrows were pointing down, then the range would be all real numbers.



$$D: [0]$$
$$R: (-\infty, \infty)$$