

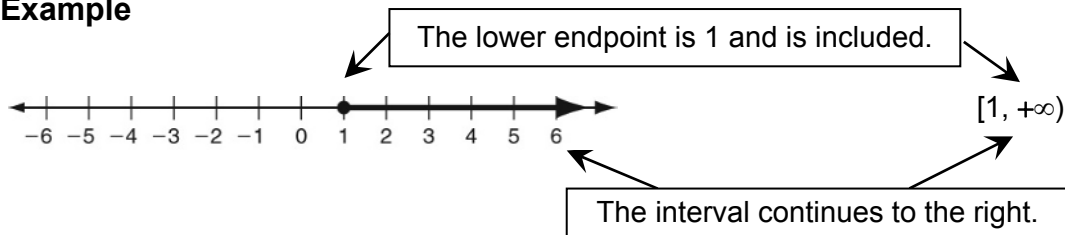
**LESSON**  
**1-1**

# Domain, Range, and End Behavior

## Reteach

To represent part of a number line using interval notation use a square bracket if the endpoint is included, use a parenthesis if the endpoint is not included. Use  $-\infty$  or  $+\infty$  if the interval continues to the left or right.

### Example

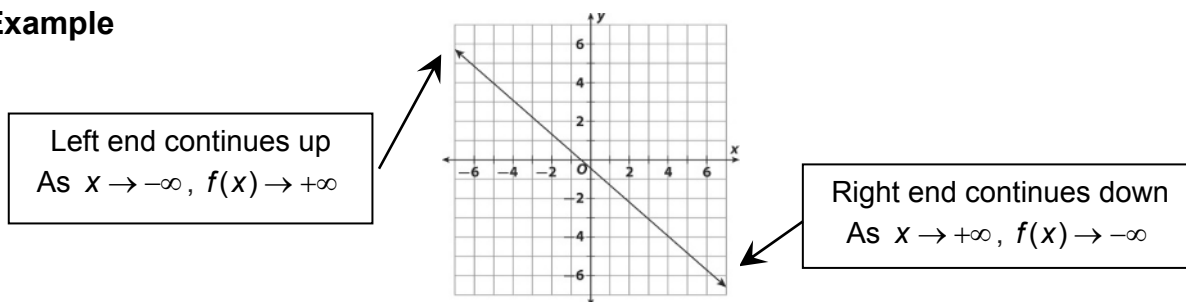


Use interval notation to represent each number line graph.

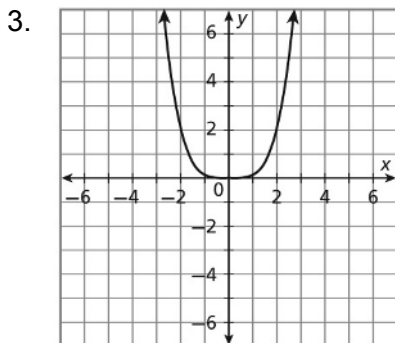
1. 1. \_\_\_\_\_
2. 2. \_\_\_\_\_

To find end behavior for a function, trace the graph to its left ( $x \rightarrow -\infty$ ) and right ( $x \rightarrow +\infty$ ) ends. If it continues up,  $f(x)$  goes to  $+\infty$ . If it continues down,  $f(x)$  goes to  $-\infty$ .

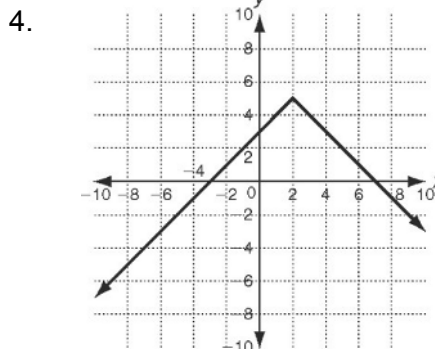
### Example



Fill in the end behavior for each function.



As  $x \rightarrow -\infty$ ,  $f(x) \rightarrow$  \_\_\_\_\_  
As  $x \rightarrow +\infty$ ,  $f(x) \rightarrow$  \_\_\_\_\_



As  $x \rightarrow -\infty$ ,  $f(x) \rightarrow$  \_\_\_\_\_  
As  $x \rightarrow +\infty$ ,  $f(x) \rightarrow$  \_\_\_\_\_