Exercise 33

For what values of x is

$$\textbf{a.} \quad \lfloor x \rfloor = 0 \qquad\qquad \textbf{b.} \quad \lceil x \rceil = 0?$$

Solution

The floor function, also known as the greatest integer function, is zero for $0 \le x < 1$ as the graph below shows.
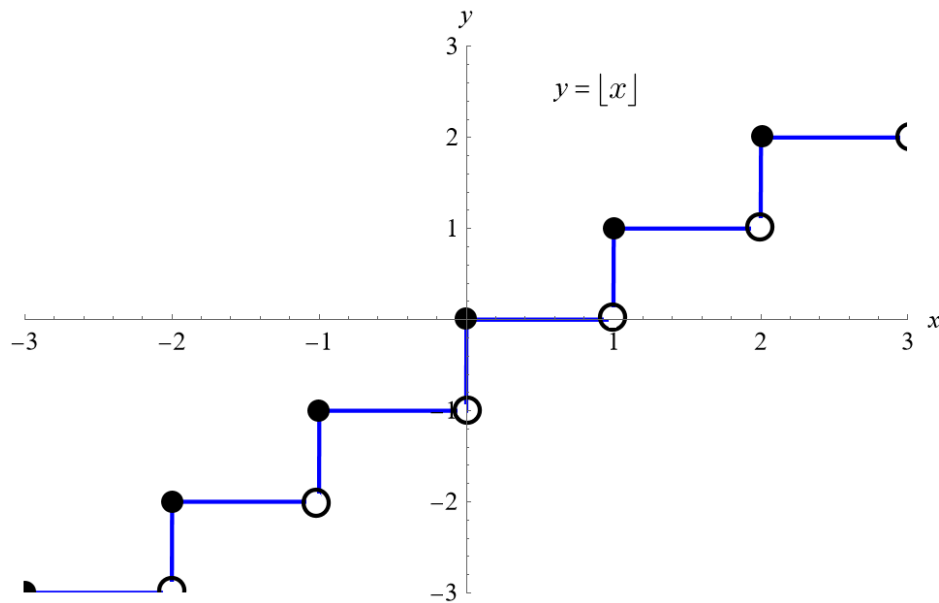
The ceiling function, also known as the least integer function, is zero for $-1 < x \le 0$ as the graph below shows.