Exercise 36

Graph the function

$$f(x) = \begin{cases} \lfloor x \rfloor, & x \geq 0 \\ \lceil x \rceil, & x < 0. \end{cases}$$

Why is $f(x)$ called the *integer part* of x?

Solution

$f(x)$ is called the integer part because whatever x is, the function just chops off the decimal part of it—no rounding takes place. For example, $f(1.23) = 1$ and $f(7.892747) = 7$.