

The *absolute value of x* , denoted by $|x|$, is x if $x \geq 0$ and $-x$ otherwise. The *floor of x* , denoted by $\lfloor x \rfloor$, is the greatest integer less than or equal to x . The *ceiling of x* , denoted by $\lceil x \rceil$, is the least integer greater than or equal to x .

Example 3.9. It is the case that $|-3| = 3 = |3|$, $\lfloor 2.3 \rfloor = 2$, and $\lceil \pi \rceil = 4$.