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