Absolute value

The absolute value function is defined by

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

Its graph is
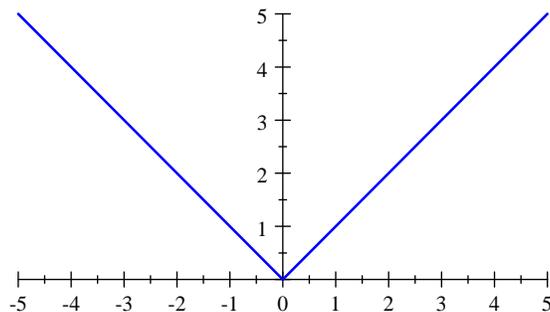
The absolute value of a number x is the distance between x and 0 on the real line.
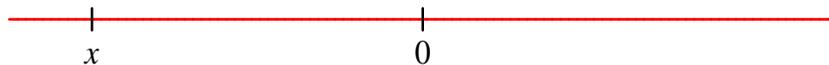
The absolute value of a number x is also given by the formla

$$|x| = \sqrt{x}$$