

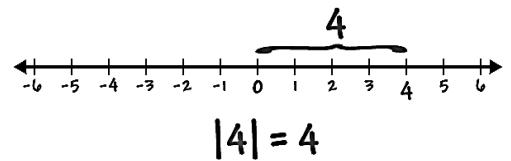
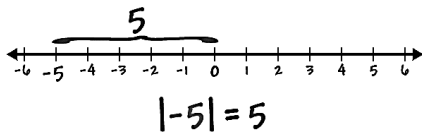
6.5 Part 1: Solving Absolute Value Equations

The **absolute value** of a number is the

The absolute value of a number is NEVER

Absolute value symbol: “bars” $\rightarrow |x|$ $|2|$ $|-7|$

** Picture standing on a number line. Stand on the given number, and move one number at a time until you reach zero. Ask yourself how many steps were taken. That is the absolute value of the number you started at **



Exs) Find the absolute value of each.

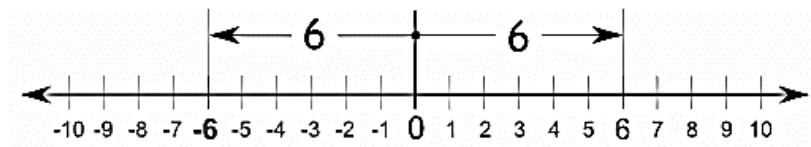
a.)

b.)

How to Solve Absolute Value Equations

Think about the example: Solve for $|x| = 6$

Doesn't it make sense that x could equal -6 or 6 ? The distance from -6 to 0 is 6, just like the distance from 0 to 6 is also 6.



So, to solve problems like $|x - 5| = 7$, we have to consider that there could possibly be 2 *answers*. However, they both do not always work. This is why we *check our answers*.

Steps:

Examples (a-f):