

2.2

Absolute Value

Find the opposite and the absolute value of a number.

VOCABULARY

Opposite

Numbers added together for a sum of zero. $5 + (-5) = 0$

Absolute value

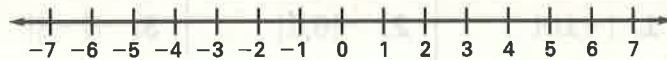
Neither positive or negative. Tells "how many" units from zero. $|1| = 1$
 $|-1| = 1$

Counterexample

An example to prove a statement false by showing it.

Example 1 Find the Opposite of a Number

Use a number line to find the opposite of 6.



On the number line, 6 is 6 units to the Right of 0. The opposite of 6 is 6 units to the Left of 0. So the opposite of 6 is -6.

THE ABSOLUTE VALUE OF A NUMBER

- If a is a positive number, then $|a| = \underline{a}$.
Example: $|9| = 9$
- If a is zero, then $|a| = \underline{0}$.
Example: $|0| = 0$
- If a is a negative number, then $|a| = \underline{a}$.
Example: $|-9| = -(-9) = 9$

The expression $-a$ can be read as "negative a " or as "the opposite of a ."

