

Absolute Value

6th Grade

Distance from zero — never negative, however negative the number is.

The absolute value of a number is its distance from zero on the number line. Distance is never negative.

$$|-8| = 8 \cdot |8| = 8$$

$$|-8|$$

8

Eight units from zero, going left.

$$|8|$$

8

Eight units from zero, going right.

$$|0|$$

0

No distance at all.

$$-|-8|$$

-8

The minus outside is applied after the absolute value.

THE COMMON MISTAKE

× $|-8|$ means **-8 is bigger than 3**

✓ $|-8| = 8$, but **-8 < 3**

Absolute value measures distance, not size in the ordering sense. -8 is still the smaller number.

On the line, further left is always smaller — even when it is further from zero.