

6.4 Absolute Value

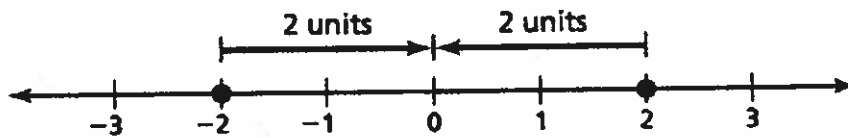
ESSENTIAL QUESTION: What does it mean to find the absolute value of a number?

ABSOLUTE VALUE -> The absolute value of a number is how far the number is away from zero on a number line.

The absolute value of a number a is $|a|$

Numbers

$$|-2| = 2 \quad |2| = 2$$



EXAMPLE 1

Find the absolute value.

1. $|3| = 3$

2. $|-2\frac{1}{2}| = 2\frac{1}{2}$

ON YOUR OWN

Find the absolute value.

1. $|8| = 8$ 2. $|-6| = 6$ 3. $|0| = 0$ 4. $|\frac{1}{4}| = \frac{1}{4}$ 5. $|-7\frac{1}{3}| = 7\frac{1}{3}$ 6. $|-12.9| = 12.9$

EXAMPLE 2

Complete the statement using $<$, $>$, or $=$.

1. $2 \underline{<} |-5|$
S

2. $|-4| \underline{>} -2$
F

3. $-5 \underline{<} |5|$
S

4. $|9| \underline{<} 10$
S

5. $3.9 \underline{=} |-3.9|$
S

EXAMPLE 3

Order the values from least to greatest.

1. $12, |-13|, -1, -1, |7|, 0$ $-12, -9, 0, |-7|, 12, |-13|$

2. $|20|, |-18|, -15, |-16|, 22, -17$ $-17, -15, |-16|, |-18|, |20|, 22$

3. $0, |-3|, 1, -2, |5|$ $-2, 0, 1, |-3|, |5|$

4. $|3|, |-4|, -5, |-5|, -3$ $-5, -3, |-4|, |3|, |-5|$

The table shows the elevations of several animals.

a. Which animal is the deepest?

Shrimp is the deepest.

b. Is the shark or the sea lion closer to sea level?

The shark is closer to sea level.

Animal	Elevation (ft)
Shark	-4
Sea lion	5
Seagull	56
Shrimp	-65
Turtle	-22