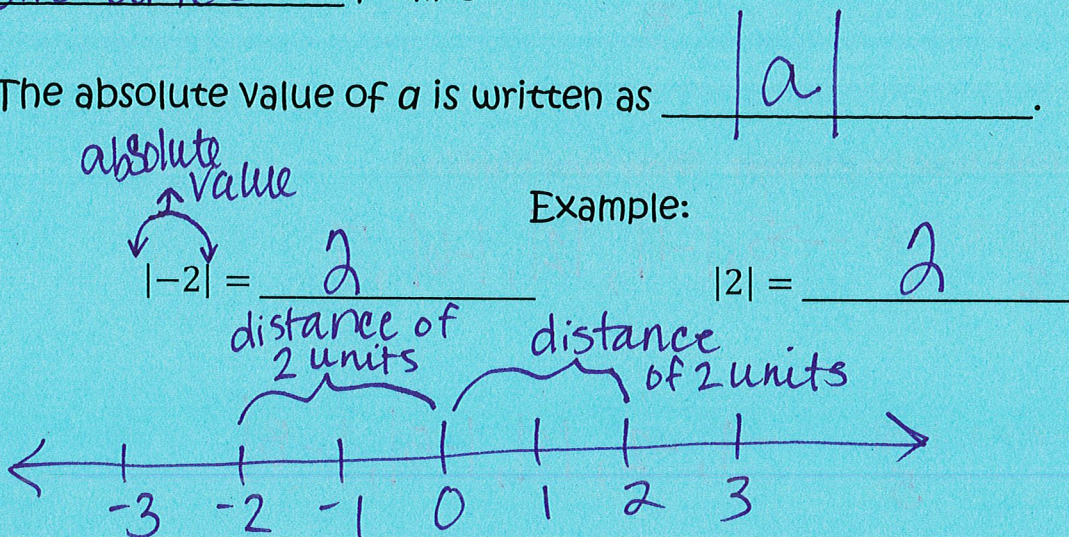


6.4 Absolute Value Notes

- The absolute value of a number is the distance between the number and zero on a number line.
- Absolute value is never negative because it means the distance from zero.
- The absolute value of a is written as $|a|$.



Find the absolute value.

a) $|3| = 3$

b) $|-2\frac{1}{2}| = 2\frac{1}{2}$

c) $|-10| = 10$

d) $|8.3| = 8.3$

e) $|7\frac{1}{3}| = 7\frac{1}{3}$

f) $|-14.7| = 14.7$

Death Valley has an elevation of -282 feet relative to sea level. Use absolute value to describe the elevation of Death Valley as a positive integer.

$$|-282| = 282$$

The distance between sea level and Death Valley is 282 ft.

Complete the statement using $<$, $>$, or $=$. Show your thinking!

a) $2 < \frac{|-5|}{5}$

b) $|-10| > 4$
10

c) $|-7| = |7|$
7 7

d) $|\frac{-3}{4}| > -\frac{1}{4}$
 $\frac{3}{4}$

e) $|1\frac{3}{5}| < 2$
 $1\frac{3}{5}$

f) $|-3.2| < |-3.5|$
3.2 3.5

Order the values from least to greatest. Show your thinking!

a) $-5, |-6|, |2|, 7, |-1| \rightarrow -5, |-1|, |2|, |-6|, 7$
6 2 1

b) $|-8|, |3|, -2, -4, |-5| \rightarrow -4, -2, |3|, |-5|, |-8|$
8 3 5

The table shows the elevations of several animals.

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

a) Which animal is the deepest?

Shrimp -65 ft

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

How do you know? shark $|-4| = 4$

sea lion $|5| = 5$

$\rightarrow = \text{zero}$
0

Shark \rightarrow it is only 4 ft away from sea level and the sea lion is 5 ft away.

c) Is the seagull or shrimp closer to sea level? How do you know?

seagull $|56| = 56$

shrimp $|-65| = 65$

The seagull is closer because it is 56 ft away from sea level and the shrimp is 65 ft away.