

Distance From Zero

Use absolute value to show magnitude.

GRADE 6 • 6.NS.C.7c

CCSS.Math.Content.6.NS.C.7c "Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example..."

NAME _____

DATE _____

ABSOLUTE VALUE MEANS DISTANCE

Absolute value tells how far a number is from 0 on a number line. Distance is never negative, so a positive and negative number with the same digits have the same absolute value.

WORKED EXAMPLE

Find $|-7/8|$.

1. Start with the number $-7/8$.
2. The distance from $-7/8$ to 0 is $7/8$.
3. Write $|-7/8| = 7/8$.

Answer: $7/8$

PRACTICE 6 problems

1 Find $|-12|$.

ANSWER _____

2 Find $|5.6|$.

ANSWER _____

3 Find $|-3/4|$.

ANSWER _____

4 Find $|0|$.

ANSWER _____

5 Find $|-2 \frac{1}{3}|$.

ANSWER _____

6 Find $|-1.25|$.

ANSWER _____

APPLY IT Show your work

- 1** The temperature outside is -9 degrees. How many degrees is the temperature from 0 degrees? Write an absolute value equation and answer the question.

WORK SPACE

ANSWER _____

- 2** Jordan's game account has a balance of $-\$14.50$. What is the size of the amount Jordan owes? Write an absolute value equation and answer the question.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A submarine is at -18.5 meters, and a diver is at -6.75 meters. Who is farther from sea level, and how much farther from sea level are they? Show the absolute values you compare.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $ -12 $.	12
2	Find $ 5.6 $.	5.6
3	Find $ -3/4 $.	3/4
4	Find $ 0 $.	0
5	Find $ -2 \frac{1}{3} $.	2 $\frac{1}{3}$
6	Find $ -1.25 $.	1.25

PART 2 • APPLY IT

1. **$|-9| = 9$; The temperature is 9 degrees from 0 degrees.** The negative sign shows the temperature is below 0. Its distance from 0 is 9 degrees.
2. **$|-\$14.50| = \14.50 ; Jordan owes \$14.50.** The negative balance represents money owed. Absolute value gives the size of the debt, \$14.50.

CHALLENGE

The submarine is farther from sea level. $|-18.5| = 18.5$ and $|-6.75| = 6.75$, so the submarine is 11.75 meters farther from sea level.

Accept equivalent fraction forms, such as $6/8$ for $3/4$, when they represent the correct distance. In word problems, accept correct absolute value equations with or without dollar signs inside the bars, as long as the magnitude and units are correct.