LESSON MAKER PRO

Distance from Zero

Find what a number's absolute value means.

GRADE 6 · 6.NS.C.12

6.NS.C.12 "Explain the meaning of absolute value and determine the absolute value of rational numbers in real-world contexts."

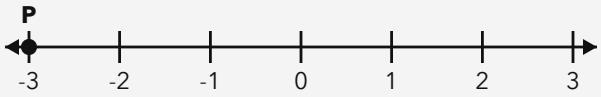
NAME _____ DATE _____

THE BIG IDEA

Absolute value is a number's distance from 0 on a number line. Distance cannot be negative, so opposite numbers have the same absolute value.

WORKED EXAMPLE

Use the number line to find |-3|.



1. Point P is at -3.
2. Count from -3 to 0: the distance is 3 units.

Answer: |-3| = 3

PRACTICE 4 problems

1 Find |-7/2|.

ANSWER _____

2 Find |2.25|.

ANSWER _____

3 Which is greater, |-4| or |1.5|? Write both values.

ANSWER _____

_____

4 Find |-0.8|.

ANSWER _____

APPLY IT Show your work

1 A game penalty changes your score by -2.5 points. What is the absolute value of the change? What does it tell you?

WORK SPACE

ANSWER _____

2 An underwater robot is at -6 1/4 meters relative to sea level. How far is it from sea level?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Two players' scores change by -5/4 points and 3/2 points. Which change has the greater absolute value, and by how much? Explain.

WORK SPACE AND ANSWER

ANSWER KEY

Distance from Zero

GRADE 6 · 6.NS.C.12

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find |-7/2|.	**7/2**
2	Find |2.25|.	**2.25**
3	Which is greater, |-4| or |1.5|? Write both values.	**|-4| = 4 and |1.5| = 1.5, so |-4| is greater.**
4	Find |-0.8|.	**0.8**

PART 2 · APPLY IT

1. **2.5 points. Your score changed by 2.5 points.** The distance from -2.5 to 0 is 2.5, so |-2.5| = 2.5.
2. **6 1/4 meters** Sea level is 0 meters. The distance from -6 1/4 to 0 is 6 1/4 meters.

CHALLENGE

The 3/2-point change has the greater absolute value by 1/4 point. The absolute values are 5/4 and 3/2 = 6/4, and 6/4 - 5/4 = 1/4.

Accept equivalent fractions or decimals. For the word problems, accept answers that describe the size of the change or distance without calling it negative.