LESSON MAKER PRO

Zero Distance Detectives

Use number lines to find how far integers are from zero.

GRADE 6 · 6.NS.2.d

6.NS.2.d "Identify and describe the absolute value of an integer as the distance from zero on the number line."

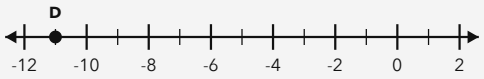
NAME _____ DATE _____

DISTANCE FROM ZERO

The absolute value of an integer is its distance from zero on a number line. Distance is never negative, so both a positive integer and its opposite have the same absolute value.

WORKED EXAMPLE

Use the number line. Find the absolute value of point D.

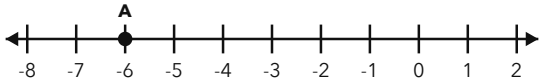


1. Point D is at -11.
2. Count from -11 to 0.
3. The distance is 11 units.

Answer: |-11| = 11

PRACTICE 6 problems

1 Use the number line. Find the absolute value of point A.

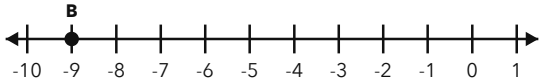


ANSWER _____

2 Find |-4|.

ANSWER _____

3 Use the number line. Find the absolute value of point B.



ANSWER _____

4 Find |0|.

ANSWER _____

5 An integer is -15. What is its distance from zero?

ANSWER _____

6 Find |-3| and |5|. Which integer is farther from zero?

ANSWER _____

APPLY IT Show your work

1 A scuba diver is 120 feet below sea level. Represent the diver's position as -120. How far is the diver from sea level?

WORK SPACE

ANSWER _____

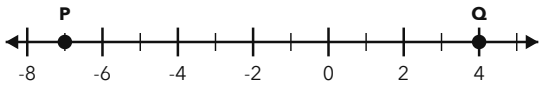
2 In a video game, Jay's score change after one round is -18 points. How many points away from zero is the score change?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the number line. Which point is farther from zero, P or Q? Explain how you know. How many more units from zero is that point?



WORK SPACE AND ANSWER

ANSWER KEY

Zero Distance Detectives

GRADE 6 · 6.NS.2.d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the number line. Find the absolute value of point A.	**|-6| = 6**
2	Find |-4|.	**4**
3	Use the number line. Find the absolute value of point B.	**|-9| = 9**
4	Find |0|.	**0**
5	An integer is -15. What is its distance from zero?	**15 units**
6	Find |-3| and |5|. Which integer is farther from zero?	**|-3| = 3; |5| = 5; 5 is farther from zero.**

PART 2 · APPLY IT

1. **120 feet** Find the absolute value of the position. |-120| = 120, so the diver is 120 feet from sea level.
2. **18 points** The distance from zero is the absolute value. |-18| = 18.

CHALLENGE

P is farther from zero. |-7| = 7 and |4| = 4, so P is 3 more units from zero than Q.

Accept an absolute-value expression with a correct value, such as |-4| = 4. For distance answers, accept the number alone or the number with the unit when a unit is given.