LESSON MAKER PRO

Distance From Zero

Use absolute value to find size and distance.

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..."

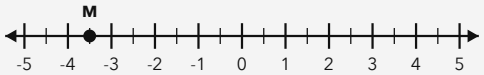
NAME _____ DATE _____

ABSOLUTE VALUE MEANS DISTANCE

Absolute value tells how far a number is from 0 on a number line, so an absolute value is never negative. In a real situation, absolute value tells the size of a loss, debt, drop, or distance below zero.

WORKED EXAMPLE

Point M is shown on the number line. Find the absolute value of M's coordinate.

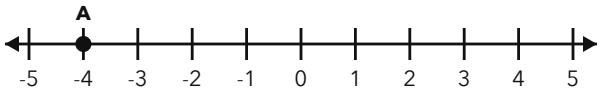


1. Point M is at -3.5.
2. The distance from -3.5 to 0 is 3.5 units.
3. Write |-3.5| = 3.5.

Answer: 3.5

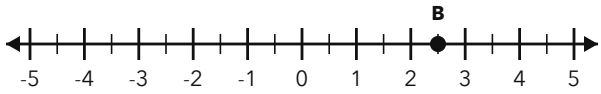
PRACTICE 6 problems

1 Point A is shown on the number line. Find the absolute value of A's coordinate.



ANSWER _____

2 Point B is shown on the number line. Find the absolute value of B's coordinate.



ANSWER _____

3 Find |-9|.

ANSWER _____

4 Find |5/6|.

ANSWER _____

5 At sunrise, the temperature is -12°C. What is the magnitude of the temperature below 0°C?

ANSWER _____

6 A science club records a water-level change of -1.25 m. What is the magnitude of the change?

ANSWER _____

APPLY IT Show your work

1 Sam's gaming account has a balance of -$24 after buying a game. Write an absolute value equation and state the size of Sam's debt.

WORK SPACE

ANSWER _____

2 After a penalty in a basketball game, a team's score change is -35 points. Write an absolute value equation and tell what the magnitude means.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Which number has the greater magnitude, -2 3/4 or 2 1/4? Explain using each number's distance from 0.

WORK SPACE AND ANSWER

ANSWER KEY

Distance From Zero

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Point A is shown on the number line. Find the absolute value of A's coordinate.	**4**
2	Point B is shown on the number line. Find the absolute value of B's coordinate.	**2.5**
3	Find |-9|.	**9**
4	Find |5/6|.	**5/6**
5	At sunrise, the temperature is -12°C. What is the magnitude of the temperature below 0°C?	**12°C**
6	A science club records a water-level change of -1.25 m. What is the magnitude of the change?	**1.25 m**

PART 2 · APPLY IT

1. **\|-24\| = 24; Sam's debt is $24.** The negative balance shows money owed. Its distance from 0 is 24, so the debt has a size of $24.
2. **\|-35\| = 35; the team lost 35 points.** The negative sign shows a loss of points. The absolute value gives the size of that loss.

CHALLENGE

-2 3/4 has the greater magnitude because |-2 3/4| = 2 3/4 and |2 1/4| = 2 1/4. A distance of 2 3/4 is greater than a distance of 2 1/4.

Accept equivalent decimal or fraction forms when they name the same magnitude. For real-world items, accept a correct equation and a clear statement of the positive size of the loss, debt, or change.