

Below Zero

Use negative numbers and absolute value.

GRADE 6 • MA.6.NSO.1

MA.6.NSO.1 "Extend knowledge of numbers to negative numbers and develop an understanding of absolute value."

NAME _____

DATE _____

DISTANCE FROM ZERO

Negative numbers are less than 0. Absolute value tells how far a number is from 0, so an absolute value is never negative.

WORKED EXAMPLE

Find $|-12| + |4|$.

1. $|-12| = 12$

2. $|4| = 4$

3. $12 + 4 = 16$

Answer: 16

PRACTICE 6 problems

1 Find $|-14|$.

ANSWER _____

2 Write the opposite of -9.

ANSWER _____

3 An elevator is 6 floors below the ground floor. Write its location as an integer.

ANSWER _____

4 Write $<$, $>$, or $=$ to make the statement true:
 -3 ____ -11

ANSWER _____

5 Order these integers from least to greatest:
 -2 , 5 , -7

ANSWER _____

6 Write both integers whose absolute value is 10.

ANSWER _____

APPLY IT Show your work

- 1** During an online tournament, Luis has -18 points after a penalty. He earns 25 points in the next round. What is his new score?

WORK SPACE

ANSWER _____

- 2** A weather app reports a temperature of -19 C. What is the absolute value of the temperature, and what does it mean?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

The temperature rises from -23 C in the morning to 8 C in the afternoon. How many degrees does the temperature rise? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $ -14 $.	14
2	Write the opposite of -9 .	9
3	An elevator is 6 floors below the ground floor. Write its location as an integer.	-6
4	Write $<$, $>$, or $=$ to make the statement true: -3 ____ -11	$>$
5	Order these integers from least to greatest: -2 , 5 , -7	-7, -2, 5
6	Write both integers whose absolute value is 10 .	-10 and 10

PART 2 • APPLY IT

- 7 points** Add the points earned to the negative score: $-18 + 25 = 7$.
- 19, meaning the temperature is 19 C below 0 C** The absolute value of -19 is 19 . It describes the temperature's distance from 0 C.

CHALLENGE

31 C. It rises 23 degrees from -23 C to 0 C, then 8 more degrees from 0 C to 8 C. $23 + 8 = 31$.

Accept a positive integer with or without a plus sign. For the challenge, accept equivalent reasoning that adds the distance to 0 and the distance above 0 .