LESSON MAKER PRO

Below Zero Basics

Read, compare, and measure distance with negative numbers.

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 _____

NEGATIVE NUMBERS AND DISTANCE

On a horizontal number line, numbers get greater as you move to the right. Negative numbers are less than 0. The absolute value of a number is its distance from 0, so it is never negative.

WORKED EXAMPLE

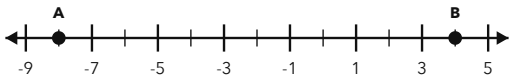
Find |-13|.

1. Start at 0.
2. Move 13 units from 0 to reach -13.
3. Absolute value tells this distance.

Answer: |-13| = 13

PRACTICE 6 problems

1 Use the number line. What values are marked by A and B? Which value is greater?



ANSWER _____

2 Write these integers from least to greatest: -5, 2, -1

ANSWER _____

3 Find |-9|.

ANSWER _____

4 Which integer is greater: -12 or -14?

ANSWER _____

5 Find |0|.

ANSWER _____

6 Write the opposite of -15. Then write |-15|.

ANSWER _____

APPLY IT Show your work

1 In a game, your coin balance starts at 0. You lose 16 coins, then earn 25 coins. What integer represents your balance now? Is the balance positive or negative?

WORK SPACE

ANSWER _____

2 In an ocean exploration game, a diver is at -24 meters and a drone is at 3 meters, compared with sea level at 0 meters. How far is each from sea level?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A game has checkpoint positions at -20, -4, and 14. Which position is farthest from 0? Explain how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Below Zero Basics

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the number line. What values are marked by A and B? Which value is greater?	**A = -8; B = 4; B is greater.**
2	Write these integers from least to greatest: -5, 2, -1	**-5, -1, 2**
3	Find |-9|.	**9**
4	Which integer is greater: -12 or -14?	**-12**
5	Find |0|.	**0**
6	Write the opposite of -15. Then write |-15|.	**Opposite: 15; |-15| = 15**

PART 2 · APPLY IT

1. **+9, positive** Start with -16 after losing coins. Add 25 to get 9, so the balance is positive.
2. **Diver: 24 meters; drone: 3 meters** Use absolute value to find each distance from 0. |-24| = 24 and |3| = 3.

CHALLENGE

-20 is farthest from 0 because |-20| = 20, |-4| = 4, and |14| = 14. The greatest distance is 20.

Accept a positive answer with or without a plus sign. For the challenge, accept explanations that correctly compare the three absolute values.