LESSON MAKER PRO

Zero Side Switch

Use number lines to find opposites.

GRADE 6 · 6.NS.C.6a

CCSS.Math.Content.6.NS.C.6a "Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., -(-3) = 3, and that 0 is its own opposite."

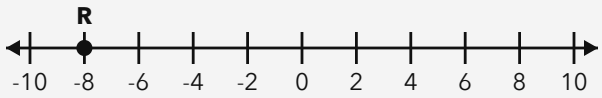
NAME _____ DATE _____

OPPOSITES ON A NUMBER LINE

Numbers with opposite signs lie on opposite sides of 0 and may have different distances from it. Nonzero opposite numbers have equal distance from 0 on opposite sides. Taking the opposite twice returns to the starting number, so -(-9) = 9, and 0 is its own opposite.

WORKED EXAMPLE

Point R is shown on the number line. What is the opposite of the number at R?

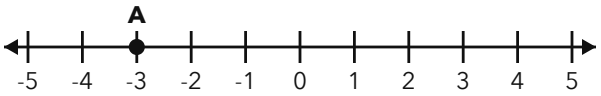


1. Point R is at -8.
2. Move the same distance from 0 to the other side.
3. The matching location is 8.

Answer: 8

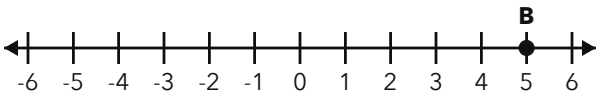
PRACTICE 6 problems

1 Point A is shown on the number line. What is the opposite of the number at A?



ANSWER _____

2 Point B is shown on the number line. What is the opposite of the number at B?



ANSWER _____

3 Evaluate: -(-12)

ANSWER _____

4 What is the opposite of 0?

ANSWER _____

5 Write the number whose opposite is -11.

ANSWER _____

6 Are -7 and 7 opposites? Explain how you know.

ANSWER _____

_____

APPLY IT Show your work

1 In a virtual diving game, Kai's character is at location -14 on a depth meter. What location is the same distance from 0 on the opposite side?

WORK SPACE

ANSWER _____

2 A coding-club robot is at location -13 on a number line. A Reverse command sends the robot to its opposite location. The command runs twice. What is the robot's final location?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A number has an opposite that is equal to itself. What number is it? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Zero Side Switch

GRADE 6 · 6.NS.C.6a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Point A is shown on the number line. What is the opposite of the number at A?	**3**
2	Point B is shown on the number line. What is the opposite of the number at B?	**-5**
3	Evaluate: -(-12)	**12**
4	What is the opposite of 0?	**0**
5	Write the number whose opposite is -11.	**11**
6	Are -7 and 7 opposites? Explain how you know.	**Yes. They are the same distance from 0 on opposite sides.**

PART 2 · APPLY IT

1. **14** The opposite of -14 is 14. It is the same distance from 0 on the positive side.
2. **-13** The first Reverse command sends -13 to 13. The second Reverse command sends 13 back to -13.

CHALLENGE

0. Zero is the only number that is not on either side of 0, so its opposite is also 0.

For nonzero opposites, accept equivalent explanations stating equal distances from 0 on opposite sides. Opposite signs alone do not imply equal distances. For the challenge, students should identify 0 and explain that its opposite is itself.