LESSON MAKER PRO

Opposite Number Trails

Use number lines to locate values and opposites.

GRADE 6 · 6.NR.3

6.NR.3 "Solve a variety of problems involving whole numbers and their opposites; model rational numbers on a number line to describe problems presented in relevant, mathematical situations."

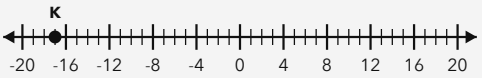
NAME _____ DATE _____

SAME DISTANCE, OTHER SIDE

On a number line, positive numbers are to the right of 0 and negative numbers are to the left of 0. Opposites are the same distance from 0 but are on different sides. Zero is its own opposite.

WORKED EXAMPLE

Use the number line. What number does point K name? What is its opposite?



1. Point K is at -17.
2. Count the distance from -17 to 0. It is 17 units.
3. The opposite is 17 units on the other side of 0.
4. So the opposite of -17 is 17.

Answer: K = -17; opposite = 17

PRACTICE 6 problems

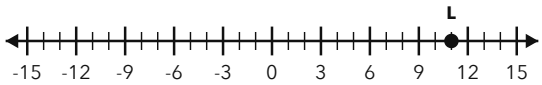
1 Write the opposite of 24.

ANSWER _____

2 Evaluate: -13 + 13

ANSWER _____

3 Use the number line. What number does point L name? Write its opposite.

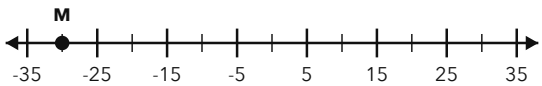


ANSWER _____

4 A robot is on floor -23 of an underground lab. What floor is the opposite of -23, relative to ground floor 0?

ANSWER _____

5 Use the number line. Point M shows a location. How far is M from 0?



ANSWER _____

6 Order these numbers from least to greatest: 26, -9, 0, -21

ANSWER _____

APPLY IT Show your work

1 In a game, Maya's character is at position -12 on a path with the starting gate at 0. Her teammate is the same distance from the gate on the opposite side. What is her teammate's position?

WORK SPACE

ANSWER _____

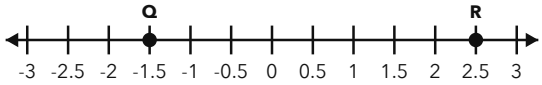
2 A theme park ride is at -8 meters compared with the loading platform. It rises 15 meters. What is its new position compared with the loading platform?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the number line. What number must be added to point Q to reach the opposite of point R? Explain your reasoning.



WORK SPACE AND ANSWER

ANSWER KEY

Opposite Number Trails

GRADE 6 · 6.NR.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write the opposite of 24.	**-24**
2	Evaluate: -13 + 13	**0**
3	Use the number line. What number does point L name? Write its opposite.	**L = 11; opposite = -11**
4	A robot is on floor -23 of an underground lab. What floor is the opposite of -23, relative to ground floor 0?	**23**
5	Use the number line. Point M shows a location. How far is M from 0?	**30 units**
6	Order these numbers from least to greatest: 26, -9, 0, -21	**-21, -9, 0, 26**

PART 2 · APPLY IT

1. **12** The opposite of -12 is 12 because it is 12 units from 0 on the other side of the number line.
2. **7 meters** Start at -8 and move 15 units to the right on a number line. -8 + 15 = 7.

CHALLENGE

Add -1. The opposite of 2.5 is -2.5, and -1.5 + (-1) = -2.5.

Accept a positive sign, such as +23 or +12, when it is mathematically correct. In the challenge, accept -1.5 written as -1 1/2 and -2.5 written as -2 1/2.