LESSON MAKER PRO

Back to Zero

Find the changes that cancel.

GRADE 7 · 7.NS.A.4.a

7.NS.A.4.a "Identify and explain situations where the sum of opposite quantities is 0 and opposite quantities are defined as additive inverses."

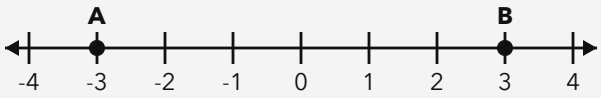
NAME _____ DATE _____

OPPOSITES ADD TO ZERO

Opposite numbers are the same distance from 0 on opposite sides of a number line. Their sum is 0. Each is the additive inverse of the other.

WORKED EXAMPLE

Use the number line to find -3 + 3.



1. Start at -3.
2. Move 3 units right to 0.

Answer: -3 + 3 = 0. The numbers are additive inverses.

PRACTICE 4 problems

1 Find the sum: -8 + 8.

ANSWER _____

2 Find the additive inverse of 5/4.

ANSWER _____

3 Find x: -2.5 + x = 0.

ANSWER _____

4 Are -4 and 2 additive inverses? Explain.

ANSWER _____

APPLY IT Show your work

1 Your game score drops 12 points, then rises 12 points. What is the total change? Explain.

WORK SPACE

ANSWER _____

2 A club wallet has a balance of -$4.50. You add $4.50. What is its new balance? Name the additive inverses.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A video is cut by 9/4 minutes, then extended by 1/4 minute. How many more minutes must be added to restore its length? Explain using additive inverses.

WORK SPACE AND ANSWER

ANSWER KEY

Back to Zero

GRADE 7 · 7.NS.A.4.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the sum: -8 + 8.	**0**
2	Find the additive inverse of 5/4.	**-5/4**
3	Find x: -2.5 + x = 0.	**x = 2.5**
4	Are -4 and 2 additive inverses? Explain.	**No. -4 + 2 = -2, not 0.**

PART 2 · APPLY IT

1. **0 points. The changes are additive inverses.** Add -12 + 12 = 0.
2. **$0. The additive inverses are -$4.50 and $4.50.** Add -$4.50 + $4.50 = $0.

CHALLENGE

Add 2 minutes. The first two changes total -9/4 + 1/4 = -2 minutes, and 2 is the additive inverse of -2.

Accept equivalent fractions and decimals. In explanations, look for a sum of 0 to identify additive inverses.