LESSON MAKER PRO

Absolute Value Tracks

Simplify integer expressions and locate each result.

GRADE 6 · 6.CE.2.c

6.CE.2.c "Simplify an expression that contains absolute value bars | | and an operation with two integers … and represent the result on a number line."

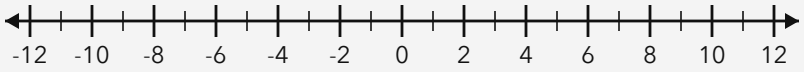
NAME _____ DATE _____

WORK INSIDE FIRST

First, calculate the operation inside the absolute value bars. Absolute value gives the distance from 0, so it is never negative. Then apply any operation outside the bars and place the result at its location on a number line.

WORKED EXAMPLE

Use the number line to represent and simplify -|6 - 13|.

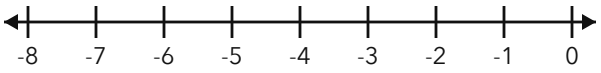


1. Calculate inside the bars: 6 - 13 = -7.
2. Find the absolute value: |-7| = 7.
3. Apply the negative sign outside the bars: -7.

Answer: -7, plotted at -7

PRACTICE 6 problems

1 Simplify -|8 - 3|. Plot the result on the number line.



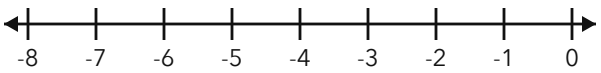
ANSWER _____

_____

2 Simplify |-1 + 10|.

ANSWER _____

3 Simplify -|-4 - 1|. Plot the result on the number line.



ANSWER _____

_____

4 Simplify |-9 + 4|.

ANSWER _____

5 Simplify -|11 + (-3)|.

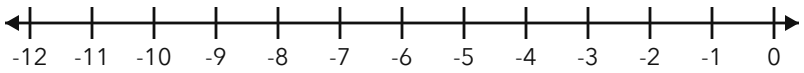
ANSWER _____

6 Simplify |-3 - (-11)|.

ANSWER _____

APPLY IT Show your work

1 In a game, a player loses 12 coins from a purchase and then earns 4 coins from a bonus. The game displays the opposite of the absolute value of the total coin change. What integer does the game display? Plot it on the number line.



ANSWER _____

2 In a drone-racing game, a drone moves up 11 units and then down 2 units. A safety meter records the opposite of the absolute value of the drone's total movement. What integer does the meter record? Plot it on the number line.



ANSWER _____

CHALLENGE One step up

A student says -|-8 + 3| equals 5 because absolute value makes the number positive. Is the student correct? Write the correct value and explain why.

WORK SPACE AND ANSWER

ANSWER KEY

Absolute Value Tracks

GRADE 6 · 6.CE.2.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Simplify -|8 - 3|. Plot the result on the number line.	**-5, plotted at -5**
2	Simplify |-1 + 10|.	**9**
3	Simplify -|-4 - 1|. Plot the result on the number line.	**-5, plotted at -5**
4	Simplify |-9 + 4|.	**5**
5	Simplify -|11 + (-3)|.	**-8**
6	Simplify |-3 - (-11)|.	**8**

PART 2 · APPLY IT

1. **-8, plotted at -8** The total change is -12 + 4 = -8. The display is -|-8|, which equals -8.
2. **-9, plotted at -9** The total movement is 11 + (-2) = 9. The meter records -|9|, which equals -9.

CHALLENGE

No. -|-8 + 3| = -5 because -8 + 3 = -5, |-5| = 5, and the negative sign outside the bars makes the result -5.

Accept a correctly placed point on each number line as representation of the integer. For the challenge, accept any explanation that shows the absolute value is found before applying the negative sign outside the bars.