LESSON MAKER PRO

Integer Moves

Add, subtract, and measure distance on a number line

GRADE 6 · 6.NS.9

6.NS.9 "Apply and extend previous understandings of addition and subtraction to add and subtract integers; represent addition and subtraction on a horizontal or vertical number line diagram. a..."

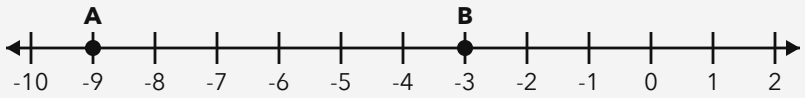
NAME _____ DATE _____

MOVES AND OPPOSITES

On a number line, adding a positive integer moves right, and adding a negative integer moves left. To subtract an integer, add its opposite. An integer and its opposite add to 0, and the distance between two integers is the absolute value of their difference.

WORKED EXAMPLE

Start at A and move 6 units right. Which point do you reach, and what is the sum?

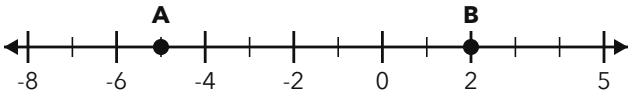


1. Read A as -9.
2. Move 6 units right to B.
3. Write -9 + 6 = -3.

Answer: Point B; the sum is -3.

PRACTICE 6 problems

1 Start at A and move 7 units right. Which labeled point do you reach? Write the sum and its value.



ANSWER _____

2 Find A - B. What is the distance between A and B?



ANSWER _____

_____

3 Find -8 + 3.

ANSWER _____

4 Find 2 - (-5).

ANSWER _____

5 Find -2 + 8 + (-8).

ANSWER _____

6 Find -11 - 2.

ANSWER _____

APPLY IT Show your work

1 Your score in a game is -12 points. You earn 17 points in the next round. What is your new score?

WORK SPACE

ANSWER _____

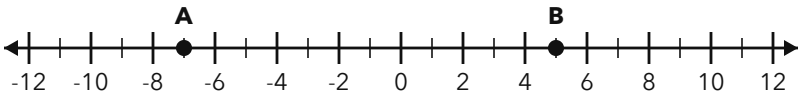
2 The temperature rises from -2°C in the morning to 11°C in the afternoon. How many degrees does it rise?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find the distance from A to B. Write a subtraction expression that starts with A's value and has an absolute value equal to that distance. Explain how to evaluate it by adding an opposite.



WORK SPACE AND ANSWER

ANSWER KEY

Integer Moves

GRADE 6 · 6.NS.9

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Start at A and move 7 units right. Which labeled point do you reach? Write the sum and its value.	**Point B; -5 + 7 = 2.**
2	Find A - B. What is the distance between A and B?	**A - B = 7; the distance is 7 units.**
3	Find -8 + 3.	**-5**
4	Find 2 - (-5).	**7**
5	Find -2 + 8 + (-8).	**-2**
6	Find -11 - 2.	**-13**

PART 2 · APPLY IT

1. **5 points** Add the points earned to the starting score: -12 + 17 = 5.
2. **13°C** Find the difference between the temperatures: 11 - (-2) = 11 + 2 = 13.

CHALLENGE

The distance is 12 units. |-7 - 5| = |-7 + (-5)| = |-12| = 12. Subtracting 5 is the same as adding -5.

Accept equivalent equations that show the correct moves or differences. For the challenge, accept any correct explanation that subtracting 5 means adding -5.