LESSON MAKER PRO

Coordinate Moves

Find lengths along rows and columns.

GRADE 6 · 6.NOS.C.9.b

6.NOS.C.9.b "Use absolute value to calculate length of vertical and horizontal lines on Coordinate Plane."

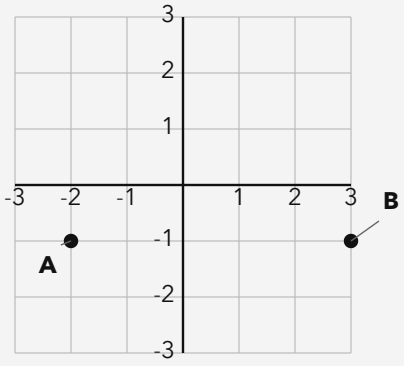
NAME _____ DATE _____

FIND THE DISTANCE

For a horizontal segment, subtract the x-coordinates and take the absolute value. For a vertical segment, do the same with the y-coordinates.

WORKED EXAMPLE

How long is segment AB?



1. The y-coordinates match, so use the x-coordinates.
2. $|3 - (-2)| = |5| = 5$

Answer: 5 units

PRACTICE 4 problems

1 Find the length from (0, 4) to (0, -3).

ANSWER _____

2 Find the length from (-6, 2) to (4, 2).

ANSWER _____

3 Find the length from (8, -6) to (8, 0).

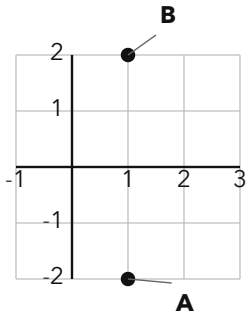
ANSWER _____

4 Find the length from (-8, -7) to (-8, 4).

ANSWER _____

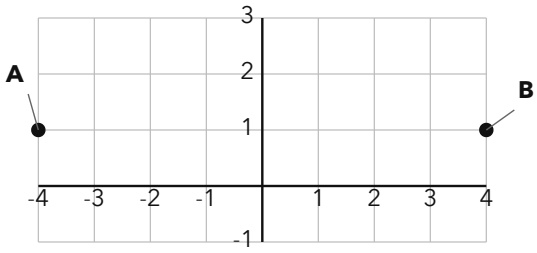
APPLY IT Show your work

1 On a game grid, a character moves from A to B. How many units does it travel?



ANSWER _____

2 In a design app, a sticker is dragged from A to B. How many grid units does it move?



ANSWER _____

CHALLENGE One step up

A game character travels from A(-7, -6) to B(-7, 2), then to C(4, 2). What is the total distance? Show two absolute-value calculations.

WORK SPACE AND ANSWER

ANSWER KEY

Coordinate Moves

GRADE 6 · 6.NOS.C.9.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the length from (0, 4) to (0, -3).	**7 units**
2	Find the length from (-6, 2) to (4, 2).	**10 units**
3	Find the length from (8, -6) to (8, 0).	**6 units**
4	Find the length from (-8, -7) to (-8, 4).	**11 units**

PART 2 · APPLY IT

1. **4 units** The points share an x-coordinate. The distance is |2 - (-2)| = 4 units.
2. **8 grid units** The points share a y-coordinate. The distance is |4 - (-4)| = 8 grid units.

CHALLENGE

|2 - (-6)| = 8 and |4 - (-7)| = 11, so the total distance is 19 units.

Accept equivalent subtraction orders inside the absolute-value signs. Distances must be nonnegative.