LESSON MAKER PRO

Across the Grid

Find distances on a coordinate plane.

GRADE 6 · MT.6.NS.8

MT.6.NS.8 "Graph points in all four quadrants of the coordinate plane and include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate..."

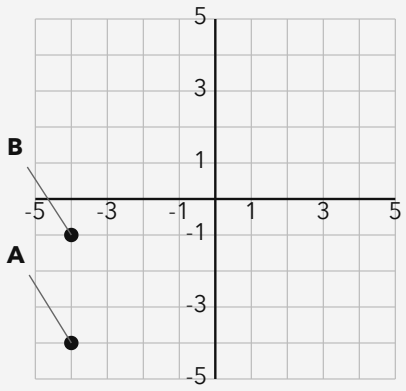
NAME _____ DATE _____

COORDINATE DISTANCE

The first coordinate tells how far left or right to go. The second tells how far up or down to go. If two points share one coordinate, subtract the coordinates that change and take the absolute value to find the distance.

WORKED EXAMPLE

Find the distance from A to B on the grid.



1. A is (-4, -4), and B is (-4, -1).
2. The first coordinates match, so subtract the second coordinates.
3. |-1 - (-4)| = |3| = 3

Answer: 3 units

PRACTICE 4 problems

1 Find the distance between (2, -2) and (2, 4).

ANSWER _____

2 Find the distance between (-2, 0) and (5, 0).

ANSWER _____

3 Find the distance between (0, -2) and (0, 2).

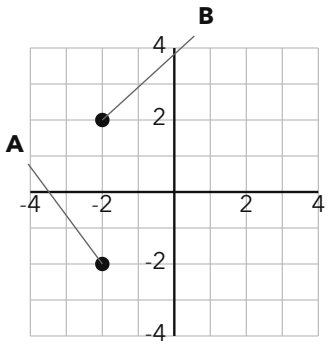
ANSWER _____

4 Find the distance between (-5, 0) and (5, 0).

ANSWER _____

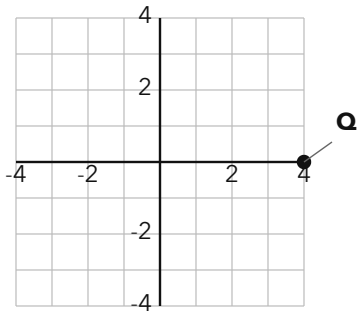
APPLY IT Show your work

1 At a Blackfeet student art fair in Browning, A and B mark tables. Each grid unit is 1 meter. Give both coordinates and the distance between the tables.



ANSWER _____

2 At a youth game day in Pablo, students from the Confederated Salish and Kootenai Tribes map stations. Plot P at (-2, 0). How far is P from Q if each grid unit is 1 meter?



ANSWER _____

CHALLENGE One step up

A point has first coordinate 2 and is 7 units from (2, -2). Its second coordinate is positive. Find the point and show an absolute value equation.

WORK SPACE AND ANSWER

ANSWER KEY

Across the Grid

GRADE 6 · MT.6.NS.8

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the distance between (2, -2) and (2, 4).	**6 units**
2	Find the distance between (-2, 0) and (5, 0).	**7 units**
3	Find the distance between (0, -2) and (0, 2).	**4 units**
4	Find the distance between (-5, 0) and (5, 0).	**10 units**

PART 2 · APPLY IT

1. **A: (-2, -2); B: (-2, 2); 4 meters** The first coordinates match. The distance is |2 - (-2)| = 4 meters.
2. **6 meters** P and Q share a second coordinate of 0. Their distance is |4 - (-2)| = 6 meters.

CHALLENGE

(2, 5); |5 - (-2)| = 7.

Accept either order of subtraction inside an absolute value. In the second word problem, P must be plotted at (-2, 0).