LESSON MAKER PRO

Grid Distance Quest

Find distances across all four quadrants

GRADE 6 · 6.NS.C.11.d

6.NS.C.11.d "Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane, including finding distances between points with the same first or second coordinate."

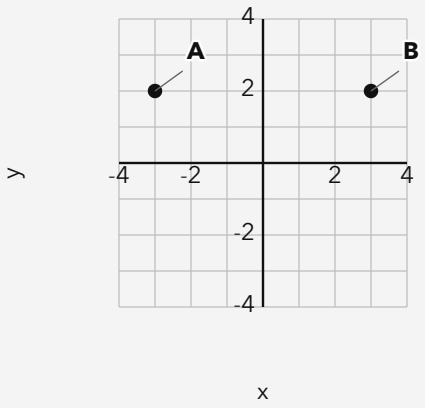
NAME _____ DATE _____

SAME ROW OR COLUMN

Points with the same y-coordinate are on one row. Subtract their x-coordinates to find the distance. Points with the same x-coordinate are in one column, so subtract their y-coordinates instead. Distance is always positive.

WORKED EXAMPLE

How far apart are A and B on the grid?



1. A and B share y = 2, so use their x-coordinates.
2. Distance = 3 - (-3) = 6.

Answer: 6 units

PRACTICE 4 problems

1 Find the distance between (-4, -1) and (-4, 3).

ANSWER _____

2 Find the distance between (1, -3) and (5, -3).

ANSWER _____

3 Find the distance between (-2, -5) and (3, -5).

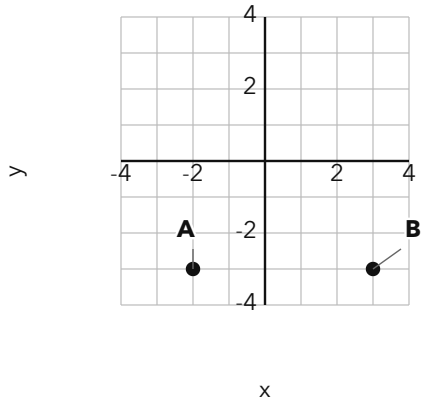
ANSWER _____

4 Find the distance between (4, -2) and (4, 5).

ANSWER _____

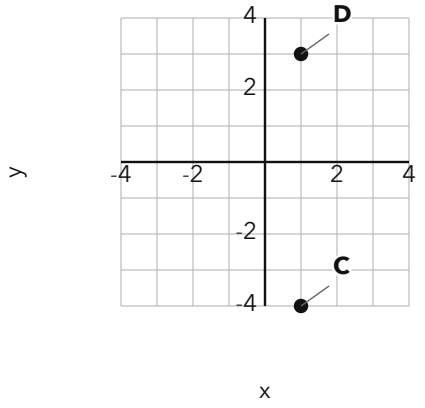
APPLY IT Show your work

1 On this game map, each grid unit is 1 tile. How many tiles apart are gems A and B?



ANSWER _____

2 On this skate park map, each grid unit is 1 meter. How far apart are ramps C and D?



ANSWER _____

CHALLENGE One step up

Point P is (-1, -2). Two points share its y-coordinate and are each 3 units from P. Give both coordinates and explain.

WORK SPACE AND ANSWER

ANSWER KEY

Grid Distance Quest

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PART 1 · PRACTICE

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

PART 2 · APPLY IT

1. **5 tiles** The gems share y = -3. Their x-coordinates differ by 3 - (-2) = 5.
2. **7 meters** The ramps share x = 1. Their y-coordinates differ by 3 - (-4) = 7.

CHALLENGE

(-4, -2) and (2, -2). Both have y = -2, and each x-coordinate is 3 units from -1.

Accept distances found by subtracting in either order if the result is positive. For the challenge, accept the two coordinates in either order.