LESSON MAKER PRO

Coordinate Distance Dash

Measure horizontal and vertical distances between points.

GRADE 6 · MA.6.GR.1.2

MA.6.GR.1.2 "Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, represented on the coordinate plane."

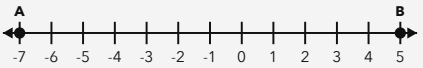
NAME _____ DATE _____

FIND THE CHANGE

If two points have the same x-coordinate, subtract their y-coordinates. If two points have the same y-coordinate, subtract their x-coordinates, and write the distance as a positive number.

WORKED EXAMPLE

The number line shows the y-coordinates of points A and B. Both points have x-coordinate 8. Find the distance between A and B.

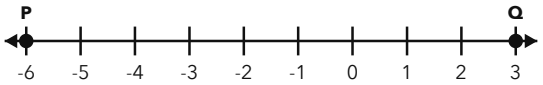


1. A = (8, -7) and B = (8, 5), so the x-coordinates match.
2. Subtract the y-coordinates: 5 - (-7) = 12.
3. The distance is 12 units.

Answer: 12 units

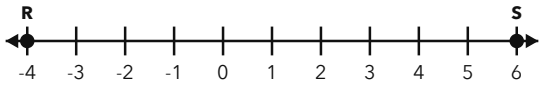
PRACTICE 6 problems

1 The number line shows the y-coordinates of points P and Q. Both points have x-coordinate 1. Find the distance between P and Q.



ANSWER _____

2 The number line shows the x-coordinates of points R and S. Both points have y-coordinate 2. Find the distance between R and S.



ANSWER _____

3 Find the distance between (-2, 0) and (4, 0).

ANSWER _____

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

ANSWER _____

5 Find the distance between (-6, 4) and (3, 4). Then tell which coordinate is the same.

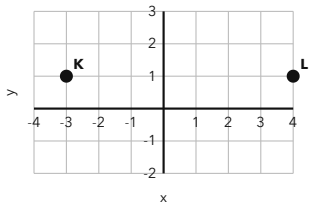
ANSWER _____

6 Find the distance between (-1, -6) and (-1, 3).

ANSWER _____

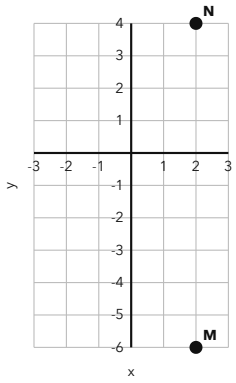
APPLY IT Show your work

1 In a game design club's virtual arena, a battery pack is at K and a charging pad is at L. Use the coordinate grid to find the horizontal distance from K to L.



ANSWER _____

2 At a robotics competition, robot M sends a signal to robot N. Use the coordinate grid to find the vertical distance from M to N.



ANSWER _____

CHALLENGE One step up

Points A = (3, -6) and B = (3, 4) are endpoints of a vertical path. Point M is exactly halfway between them. What are the coordinates of M? What is the distance from A to B? Explain how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Coordinate Distance Dash

GRADE 6 · MA.6.GR.1.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The number line shows the y-coordinates of points P and Q. Both points have x-coordinate 1. Find the distance between P and Q.	**9 units**
2	The number line shows the x-coordinates of points R and S. Both points have y-coordinate 2. Find the distance between R and S.	**10 units**
3	Find the distance between (-2, 0) and (4, 0).	**6 units**
4	Find the distance between (4, -3) and (4, 1).	**4 units**
5	Find the distance between (-6, 4) and (3, 4). Then tell which coordinate is the same.	**9 units; the y-coordinate is the same.**
6	Find the distance between (-1, -6) and (-1, 3).	**9 units**

PART 2 · APPLY IT

1. **7 units** K and L have the same y-coordinate. Subtract the x-coordinates: 4 - (-3) = 7.
2. **10 units** M and N have the same x-coordinate. Subtract the y-coordinates: 4 - (-6) = 10.

CHALLENGE

M = (3, -1); 10 units. The x-coordinate stays 3, and -1 is halfway between -6 and 4.

Accept equivalent subtraction methods that give a positive distance. For the challenge, accept a clear explanation that the midpoint has the same x-coordinate and a y-coordinate halfway between the endpoints.