LESSON MAKER PRO

Coordinate Connections

Find the lines that connect points.

GRADE 6 · 6.NOS.C.9.a

6.NOS.C.9.a "Explain that points with the same x-coordinate or y-coordinate are located on same vertical or horizontal line respectively."

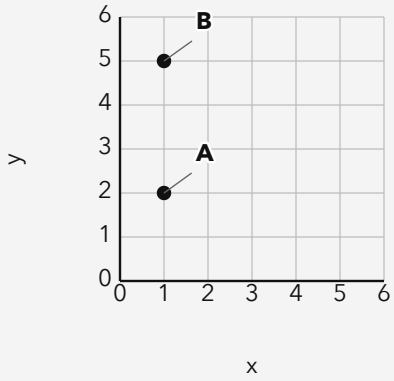
NAME _____ DATE _____

THE BIG IDEA

Points with the same x-coordinate line up vertically. Points with the same y-coordinate line up horizontally.

WORKED EXAMPLE

Do A and B lie on a vertical or horizontal line?



1. A is (1, 2), and B is (1, 5).
2. Their x-coordinates are both 1.
3. Points with the same x-coordinate line up vertically.

Answer: Vertical line

PRACTICE 4 problems

1 A is (-4, 3), and B is (-4, 8). Is the line through them vertical or horizontal?

ANSWER _____

2 C is (7, -6), and D is (-3, -6). Is the line through them vertical or horizontal?

ANSWER _____

3 E is (0, -8), and F is (0, 4). Which coordinate matches, and is the line through them vertical or horizontal?

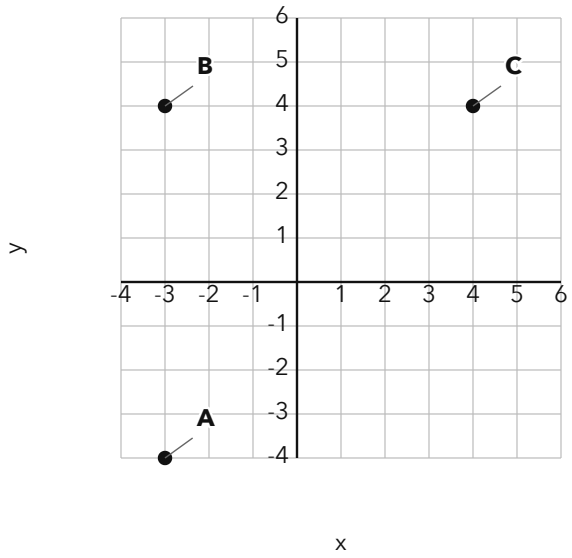
ANSWER _____

4 G is (-9, 9), and H is (6, -9). Do they share a vertical or horizontal line? Explain.

ANSWER _____

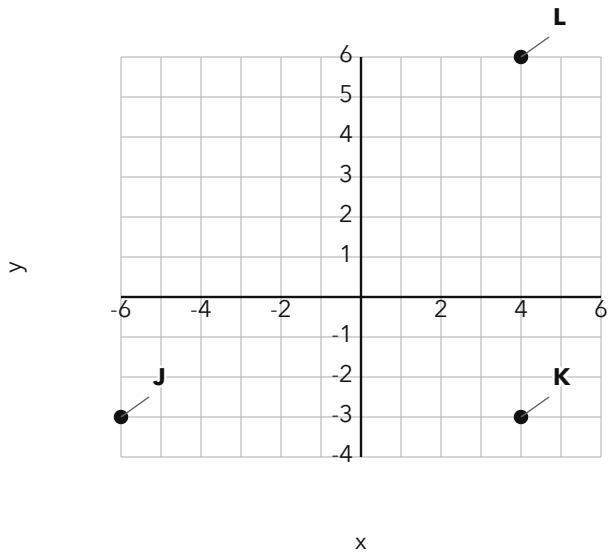
APPLY IT Show your work

1 In a game, your player starts at A and moves straight up. Which point, B or C, can the player reach? Explain.



ANSWER _____

2 On a skate park map, J, K, and L mark ramps. Which two ramps are on the same horizontal line? Give their shared coordinate.



ANSWER _____

CHALLENGE One step up

P is (-8, 7), and Q is (x, 7). Q shares a vertical line with R (6, -4). Find x and explain why P and Q share a horizontal line.

WORK SPACE AND ANSWER

ANSWER KEY

Coordinate Connections

GRADE 6 · 6.NOS.C.9.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A is (-4, 3), and B is (-4, 8). Is the line through them vertical or horizontal?	**Vertical**
2	C is (7, -6), and D is (-3, -6). Is the line through them vertical or horizontal?	**Horizontal**
3	E is (0, -8), and F is (0, 4). Which coordinate matches, and is the line through them vertical or horizontal?	**The x-coordinate matches. The line is vertical.**
4	G is (-9, 9), and H is (6, -9). Do they share a vertical or horizontal line? Explain.	**No. Neither their x-coordinates nor their y-coordinates match.**

PART 2 · APPLY IT

1. **B. A and B have the same x-coordinate, -3.** Moving straight up keeps the x-coordinate the same. Only B has the same x-coordinate as A.
2. **J and K; their shared y-coordinate is -3.** Points on a horizontal line have the same y-coordinate. J and K both have a y-coordinate of -3.

CHALLENGE

x = 6. Q must have R's x-coordinate, 6, and P and Q both have a y-coordinate of 7.

Accept explanations that correctly identify matching x-coordinates for vertical lines or matching y-coordinates for horizontal lines.