LESSON MAKER PRO

Quadrant Quest

Read points and track sign changes.

GRADE 6 · 6.NOS.C.7.b

6.NOS.C.7.b "Locate and interpret the positions of rational numbers on the Coordinate Plane, including how changes in the signs of ordered pairs reflect their location into different quadrants."

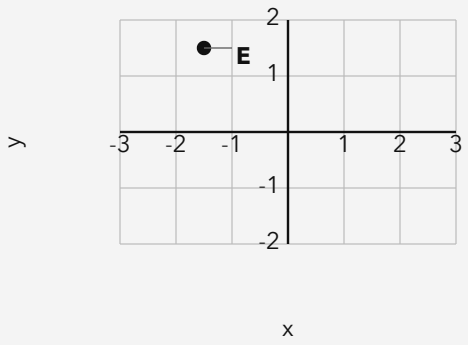
NAME _____ DATE _____

READ THE SIGNS

In (x, y), x tells how far left or right to go, and y tells how far down or up to go. Quadrants I, II, III, and IV are found in order, starting at the upper right and moving counterclockwise. A point on an axis is not in a quadrant.

WORKED EXAMPLE

What are E's coordinates and quadrant?



1. Read x: -1.5. Read y: 1.5.
2. E is left of the y-axis and above the x-axis.
3. That position is in quadrant II.

Answer: E = (-1.5, 1.5), quadrant II

PRACTICE 4 problems

1 Which quadrant contains (3/4, -2)?

ANSWER _____

2 Which quadrant contains (-3, -1/2)?

ANSWER _____

3 Change only the sign of x in (2, 3/4). Give the new pair and quadrant.

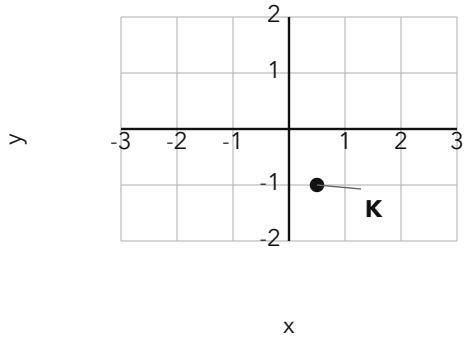
ANSWER _____

4 Which axis contains (0, -5/4)? Is the point in a quadrant?

ANSWER _____

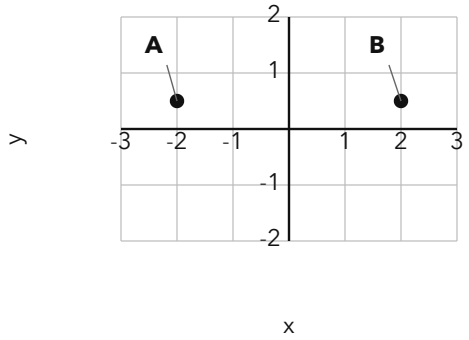
APPLY IT Show your work

1 A game map marks a hidden key at K. What are its coordinates and quadrant?



ANSWER _____

2 A robot moves from A to B. Which coordinate changes sign? Give both quadrants.



ANSWER _____

CHALLENGE One step up

A drone starts at (-3/4, 2). Its next position changes the sign of both coordinates. Give the new pair and quadrant. Explain why.

WORK SPACE AND ANSWER

ANSWER KEY

Quadrant Quest

GRADE 6 · 6.NOS.C.7.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Which quadrant contains (3/4, -2)?	**Quadrant IV**
2	Which quadrant contains (-3, -1/2)?	**Quadrant III**
3	Change only the sign of x in (2, 3/4). Give the new pair and quadrant.	**(-2, 3/4), quadrant II**
4	Which axis contains (0, -5/4)? Is the point in a quadrant?	**The y-axis; no quadrant**

PART 2 · APPLY IT

1. **K = (1/2, -1), quadrant IV** Read half a unit right and one unit down from the origin. Positive x and negative y place K in quadrant IV.
2. **The x-coordinate changes sign. A is in quadrant II; B is in quadrant I.** A is (-2, 1/2) and B is (2, 1/2). The x-coordinate changes from negative to positive while y stays the same.

CHALLENGE

(3/4, -2), quadrant IV. Positive x places it right of the y-axis, and negative y places it below the x-axis.

Accept equivalent fraction and decimal forms. For the challenge, accept any explanation that correctly links the new signs to quadrant IV.