LESSON MAKER PRO

Coordinate Switch

Read points and track reflections

GRADE 6 · 6.NOS.C.7

6.NOS.C.7 "Intersect perpendicular number lines at the point (0,0) as the x-axis and y-axis to introduce the four quadrants of the Coordinate Plane. Represent points on the plane with positive and negative coordinates..."

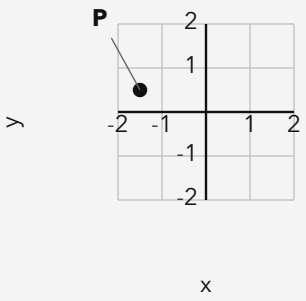
NAME _____ DATE _____

SIGNS SHOW LOCATION

The x-axis and y-axis cross at (0,0), forming four quadrants. In (x,y), the first number tells you left or right, and the second tells you down or up.

WORKED EXAMPLE

What ordered pair and quadrant describe P?



1. Read x: -1.5, left of 0.
2. Read y: 0.5, above 0.
3. The signs (-, +) place P in Quadrant II.

Answer: (-1.5, 0.5), Quadrant II

PRACTICE 4 problems

1 Which quadrant contains (4, -2)?

ANSWER _____

2 Change both signs in (5, -7/4). Give the new ordered pair and quadrant.

ANSWER _____

3 Reflect (-6, -9/2) across the x-axis. Give the new ordered pair and quadrant.

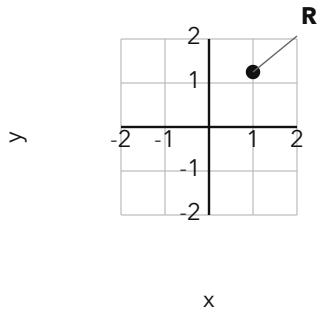
ANSWER _____

4 Which axis contains (0, -8/3)?

ANSWER _____

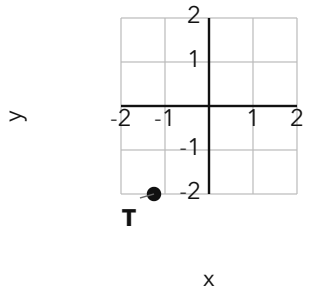
APPLY IT Show your work

1 A game character is at R. A portal reflects it across the x-axis. What are its new coordinates and quadrant?



ANSWER _____

2 A treasure is at T. Its twin is reflected across the y-axis. What are the twin's coordinates and quadrant?



ANSWER _____

CHALLENGE One step up

Start at (-8/5, 6). Reflect the point across the y-axis, then across the x-axis. Give the final coordinates and quadrant. Explain which sign changes at each step.

WORK SPACE AND ANSWER

ANSWER KEY

Coordinate Switch

GRADE 6 · 6.NOS.C.7

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Which quadrant contains (4, -2)?	**Quadrant IV**
2	Change both signs in (5, -7/4). Give the new ordered pair and quadrant.	**(-5, 7/4), Quadrant II**
3	Reflect (-6, -9/2) across the x-axis. Give the new ordered pair and quadrant.	**(-6, 9/2), Quadrant II**
4	Which axis contains (0, -8/3)?	**y-axis**

PART 2 · APPLY IT

1. **(1, -1.25), Quadrant IV** Keep the x-coordinate and change the sign of the y-coordinate.
2. **(1.25, -2), Quadrant IV** Change the sign of the x-coordinate and keep the y-coordinate.

CHALLENGE

First, x changes sign, giving (8/5, 6). Then y changes sign, giving (8/5, -6) in Quadrant IV.

Accept equivalent decimal coordinates. A point with x = 0 lies on the y-axis, not in a quadrant.