LESSON MAKER PRO

Quadrant Quest

Use coordinate signs to locate points.

GRADE 6 · 6.NS.C.11.a

6.NS.C.11.a "Identify quadrant locations of ordered pairs on the coordinate plane based on the signs of the x and y coordinates."

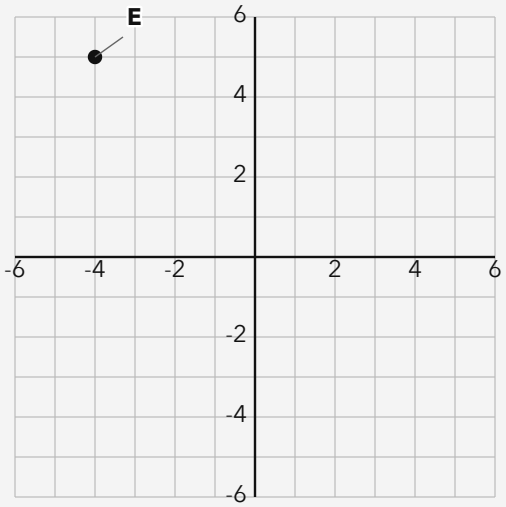
NAME _____ DATE _____

READ THE SIGNS

In (x, y), x tells left or right and y tells up or down. Positive x is right and positive y is up; negative x is left and negative y is down. Quadrants I, II, III, and IV go counterclockwise from the upper right. A point on an axis is not in a quadrant.

WORKED EXAMPLE

Which quadrant contains point E?

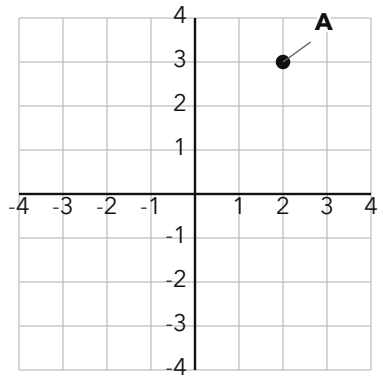


1. E is left of the y-axis, so its x-coordinate is negative.
2. E is above the x-axis, so its y-coordinate is positive.
3. Negative x and positive y place E in Quadrant II.

Answer: Quadrant II

PRACTICE 6 problems

1 Which quadrant contains point A?

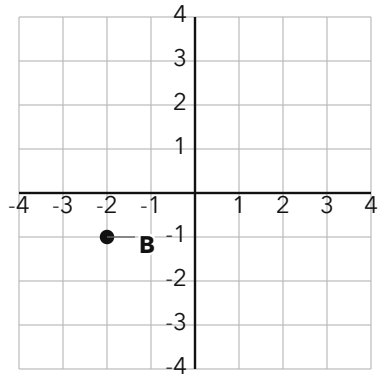


ANSWER _____

2 Which quadrant contains (-1, 2)?

ANSWER _____

3 Which quadrant contains point B?



ANSWER _____

4 Which quadrant contains (3, -1)?

ANSWER _____

5 Which quadrant contains (0, 3)? If it is not in a quadrant, name its axis.

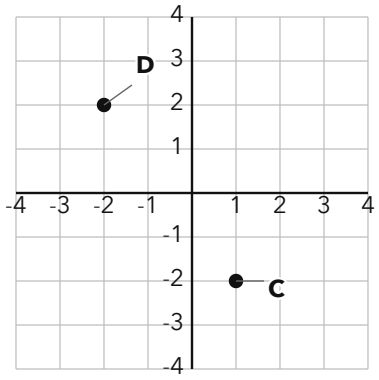
ANSWER _____

6 Which quadrant contains (-7/2, -1/2)?

ANSWER _____

APPLY IT Show your work

1 Two treasure chests are marked on this video game map. Which quadrant contains each chest?



ANSWER _____

2 A concert app marks a meet-up spot at (-1.5, 2.5) on a coordinate map. Which quadrant is the spot in? Explain using the signs.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Point P starts in Quadrant III. Its x-coordinate changes sign. Then its y-coordinate changes sign. Which quadrant is P in after each change? Explain using the signs.

WORK SPACE AND ANSWER

ANSWER KEY

Quadrant Quest

GRADE 6 · 6.NS.C.11.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Which quadrant contains point A?	**Quadrant I**
2	Which quadrant contains (-1, 2)?	**Quadrant II**
3	Which quadrant contains point B?	**Quadrant III**
4	Which quadrant contains (3, -1)?	**Quadrant IV**
5	Which quadrant contains (0, 3)? If it is not in a quadrant, name its axis.	**No quadrant; y-axis**
6	Which quadrant contains (-7/2, -1/2)?	**Quadrant III**

PART 2 · APPLY IT

1. **Chest C: Quadrant IV; chest D: Quadrant II** C is right of the y-axis and below the x-axis. D is left of the y-axis and above the x-axis.
2. **Quadrant II. The x-coordinate is negative, and the y-coordinate is positive.** A negative x-coordinate places the spot left of the y-axis, and a positive y-coordinate places it above the x-axis.

CHALLENGE

After x changes sign, P is in Quadrant IV because x is positive and y is negative. After y changes sign, P is in Quadrant I because both coordinates are positive.

Accept quadrant numbers or Roman numerals. For problem 5, accept "on the y-axis" or "no quadrant, y-axis."