

5.G.A.1 Graphing on a Coordinate Plane

5.G.A.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates.

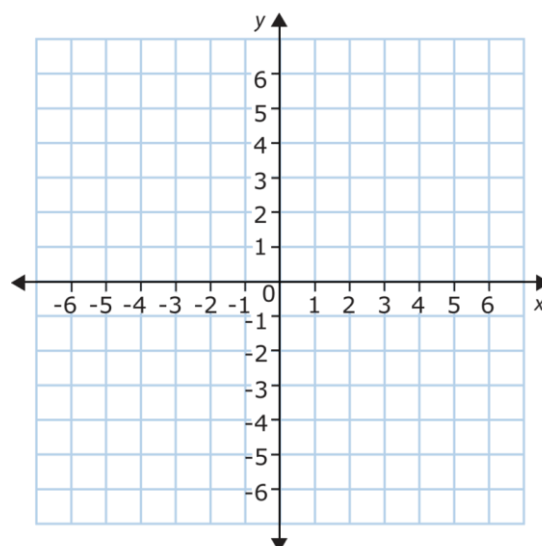
1. Encircle the correct option.

The point $(-4, 5)$

- a. lies in the 4th quadrant.
- b. lies on the y-axis.
- c. is an ordered pair.
- d. lies on the 3rd quadrant.

2. Use the coordinate plane shown below to answer the following questions.

- a. Mark the origin.
- b. Starting from the origin, move 3 units on the positive x-axis and 4 units on the negative y-axis. Mark the point reached as "C".
- c. Reverse the coordinates of the point "C" and mark the new point obtained on the grid as "A".
- d. Find the difference between the x-coordinates of C and A. _____
- e. Which of the two points C and A is closer to the origin? _____
- f. Add 2 units to each coordinate of C and mark the new point on the grid and label it as T.



3. What do we call the point where the x- and y-axis intersect? _____
4. The x coordinate is positive and the y coordinate is negative in quadrant _____
5. Write coordinates of any three points which lie on:
 - a. 2nd quadrant _____, _____, _____
 - b. 3rd quadrant _____, _____, _____
 - c. x-axis _____, _____, _____
 - d. y-axis _____, _____, _____
6. Plot points S(2, 2), T(-3, 2), A(-3, -1), and R(2, -1) on the coordinate plane shown in question 2. What polygon is formed by joining STAR?

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Answer Key

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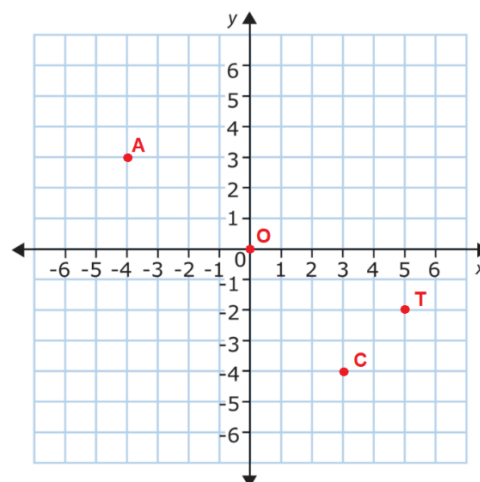
1. Encircle the correct option.

The point $(-4, 5)$

- a. lies in the 4th quadrant.
- b. lies on the y-axis.
- c. is an ordered pair.**
- d. lies on the 3rd quadrant.

2. Use the coordinate plane shown below to answer the following questions.

- a. Mark the origin. Name it as "O".
- b. Starting from the origin, move 3 units on the positive x-axis and 4 units on the negative y-axis. Mark the point reached as "C".
- c. Reverse the coordinates of the point "C" and mark the new point obtained on the grid as "A".
- d. Find the difference between the x-coordinates of C and A. 7 units
- e. Which of the two points C and A is closer to the origin? both are of equal distance from the origin
- f. Add 2 units to each coordinate of C and mark the new point on the grid and label it as T.



3. What do we call the point where the x- and y-axis intersect? origin
4. The x coordinate is positive and the y coordinate is negative in quadrant 4.
5. Write coordinates of any three points which lie on: **Answers will vary.**
 - a. 2nd quadrant $(-1, 1), (-3, 8), (-2, 5)$
 - b. 3rd quadrant $(-1, -4), (-2, -4), (-2, -3)$
 - c. x-axis $(-3, 0), (1, 0), (5, 0)$
 - d. y-axis $(0, -3), (0, 2), (0, 10)$
6. Plot points S(2, 2), T(-3, 2), A(-3, -1), and R(2, -1) on the coordinate plane shown in question 2. What polygon is formed by joining STAR?
rectangle