Plot and Read Points on a Coordinate Plane: Introductory Practice

Original tasks 1, 2, 3 / complete keys

Task 1

Plot the point (4, -1) on a four-quadrant grid. State the quadrant and describe the moves from the origin.

Answer: The point is in Quadrant IV. From the origin, move 4 units right, then 1 unit down.

Reason: x = 4 is positive, so move right 4. y = -1 is negative, so move down 1. Positive x and negative y place the point in Quadrant IV.

Check: From the plotted point, count 4 units left to reach the y-axis, then 1 unit up to reach the origin. If you land on the origin, the plot is correct.

Task 2

A straight line on a grid passes through the grid intersection at 3 units right of the origin and 2 units up. Write the ordered pair for this point and explain how you read it.

Answer: The ordered pair is (3, 2).

Reason: The x-coordinate is the horizontal distance from the origin: 3 units right means x = 3. The y-coordinate is the vertical distance: 2 units up means y = 2. Write (x, y) = (3, 2).

Check: Start at the origin, move 3 right and 2 up. The point should land exactly on the described grid intersection.

Task 3

Plot the point (-5, -2). Then plot (2, -5). Are they in the same quadrant? Explain.

Answer: (-5, -2) is in Quadrant III. (2, -5) is in Quadrant IV. They are not in the same quadrant.

Reason: For (-5, -2), both coordinates are negative, so the point is bottom-left (Quadrant III). For (2, -5), x is positive and y is negative, so the point is bottom-right (Quadrant IV).

Check: For each point, count back to the axes: from (-5, -2), 5 right and 2 up returns to the origin; from (2, -5), 2 left and 5 up returns to the origin.

Plot and Read Points on a Coordinate Plane: Introductory Practice

Original tasks 4 / complete keys

Task 4

A line on a grid passes through the origin (0, 0) and through the grid intersection at 2 units left and 4 units down. Write the ordered pair for the second point and state its quadrant.

Answer: The second point is (-2, -4), and it lies in Quadrant III.

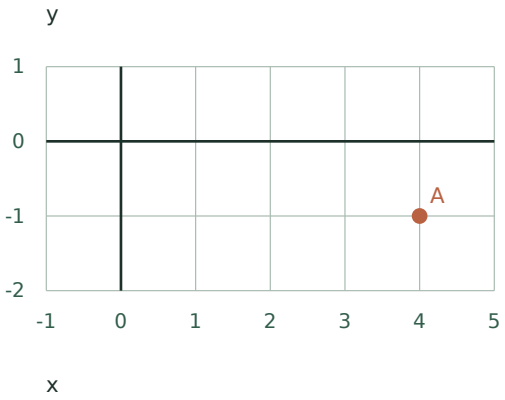
Reason: 2 units left means x = -2. 4 units down means y = -4. The ordered pair is (-2, -4). Both coordinates are negative, so the point is in Quadrant III.

Check: From (-2, -4), count 2 units right to the y-axis, then 4 units up to the origin. The line should also pass through (0, 0) as stated.

Plot and Read Points on a Coordinate Plane: Introductory Practice

Task 1 / completed coordinate key

Plot the point (4, -1) on a four-quadrant grid. State the quadrant and describe the moves from the origin.



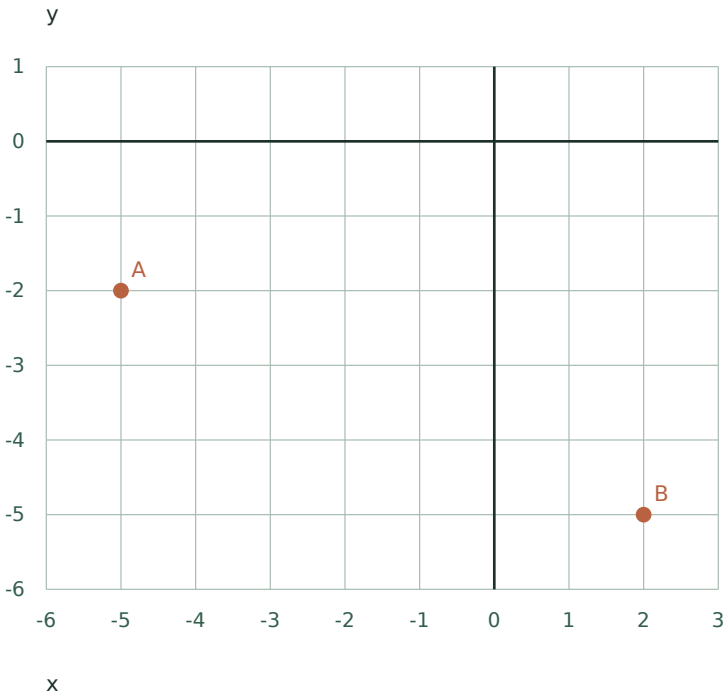
Each horizontal interval = 1; each vertical interval = 1. The axes show a display window, not a newly imposed domain.

A = (4, -1)

Plot and Read Points on a Coordinate Plane: Introductory Practice

Task 3 / completed coordinate key

Plot the point (-5, -2). Then plot (2, -5). Are they in the same quadrant? Explain.



Each horizontal interval = 1; each vertical interval = 1. The axes show a display window, not a newly imposed domain.

A = (-5, -2); B = (2, -5)

Plot and Read Points on a Coordinate Plane: Introductory Practice

Original rubric / reflection

- [ ] Correctly identifies the x-axis, y-axis, and origin.
- [ ] Plots ordered pairs by moving along the x-axis first, then parallel to the y-axis.
- [ ] Uses the correct sign for each coordinate to reach the correct quadrant.
- [ ] Reads points from a line graph only at clear grid intersections.
- [ ] Writes ordered pairs in the correct (x, y) order.
- [ ] Checks plotted points by counting back to both axes.
- [ ] Uses consistent scale and units when reading graphs.

Reflection: What did you check, what did you change, and what will you try next?