

Grade 6 · The Coordinate Plane · Test Answer Key

Common Core 6.NS.C.6b, 6.NS.C.6c, 6.NS.C.8, 6.G.A.3 · mathovore.fr

This answer key shows the full solution for each test question and explains how the 20 points are awarded. Partial credit is given when a student sets up the distance or reflection correctly but makes one sign error.

Grade 6 Common Core: 6.NS.C.6b · 6.NS.C.6c · 6.NS.C.8 · 6.G.A.3

Question 1: Name the quadrant (2 points)

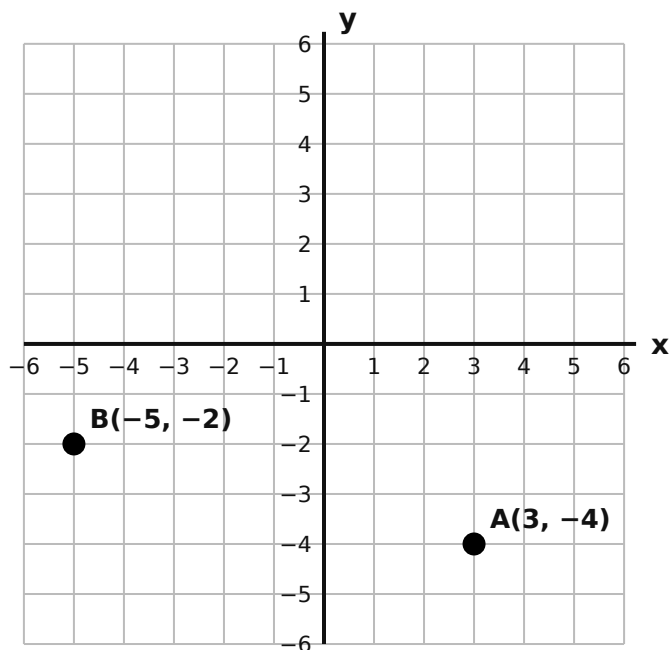
- a) Negative x and positive y : **Quadrant II**.
- b) Positive x and negative y : **Quadrant IV**.

Scoring: 1 point for each correct quadrant.

Question 2: Plot points (2 points)

A: move 3 right and 4 down. B: move 5 left and 2 down. Both points are in Quadrant IV and Quadrant III, respectively.

Scoring: 1 point for each point plotted in the correct place and labeled.



Plotted points.

Question 3: Read ordered pairs (3 points)

Read left or right first, then up or down.

a) $(-4, 3)$ b) $(2, 5)$ c) $(-1, -3)$

Scoring: 1 point for each correct ordered pair. Reversed coordinates earn no point.

Question 4: Reflect a point (2 points)

a) The x-axis changes the sign of y : $(-3, -7)$.

b) The y-axis changes the sign of x : $(3, 7)$.

Scoring: 1 point for each correct reflection.

Question 5: Distance between points (2 points)

a) Same x-coordinate, so use y. -2 and 6 are on opposite sides of 0: $|-2| + |6| = 8$. **8 units.**

b) Same y-coordinate, so use x. 9 and -3 are on opposite sides of 0: $|9| + |-3| = 12$. **12 units.**

Scoring: 1 point for each correct distance.

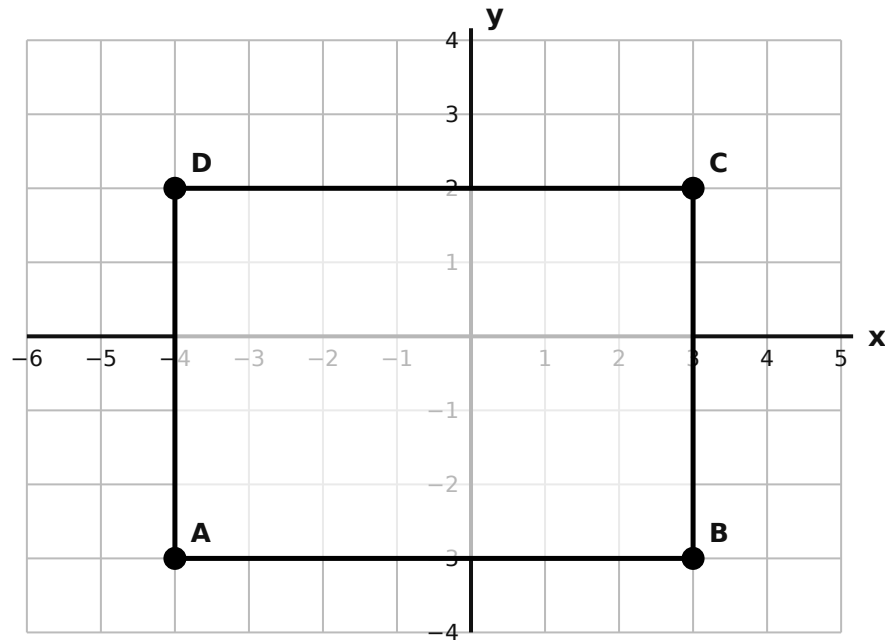
Question 6: Rectangle on the plane (3 points)

a) D has the same x-coordinate as A and the same y-coordinate as C : $D(-4,2)$.

b) $AB = |-4| + |3| = 7$ and $BC = |-3| + |2| = 5$. **7 units and 5 units.**

c) $2(7+5) = \mathbf{24 \text{ units.}}$

Scoring: 1 point for each part.



Rectangle ABCD: 7 units by 5 units.

Question 7: Walking route (3 points)

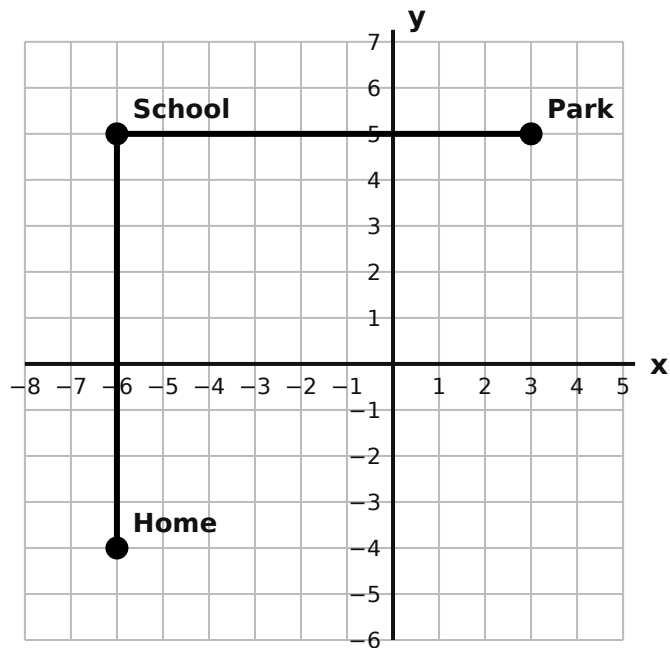
a) Same x-coordinate: $|-4| + |5| = 9$ blocks.

b) Same y-coordinate: $|-6| + |3| = 9$ blocks.

c) $9+9=18$ blocks.

a) 9 blocks b) 9 blocks c) 18 blocks

Scoring: 1 point for each part.



Route: 9 blocks plus 9 blocks.

Question 8: Find the error (3 points)

The points have the same y-coordinate, so the distance comes from the x-coordinates. But -3 and 5 are on opposite sides of 0 , so Jamal should add the absolute values instead of subtracting the numbers. He treated -3 as 3 .

$$|-3| + |5| = 3 + 5 = 8.$$

The correct distance is 8 units.

Scoring: 1 point for explaining that the points are on opposite sides of 0; 1 point for using absolute values correctly; 1 point for 8.

Total
20 points