

Mathematics — Ganita Manjari

Chapter 1 Test 4

Orienting Yourself: The Use of Coordinates

Class IX | 2026–27

Time Allowed: 45 Minutes

Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. Choose one option in A; show working in B–D.
2. Show the main steps and give reasons where asked. Calculators are not allowed.
3. Read coordinate scales carefully. Give exact lengths and state units.

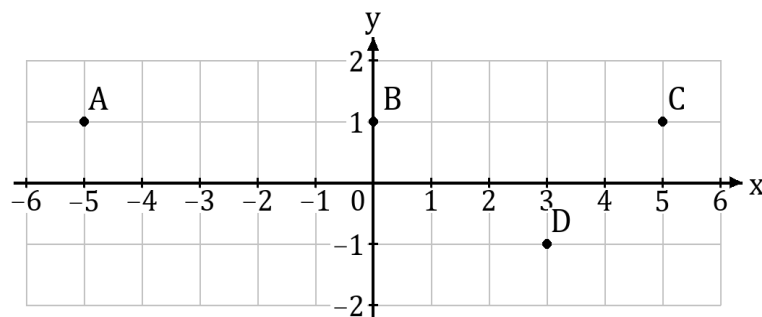
SECTION A

(5 questions × 1 mark = 5 marks)

1. The distance of $(4, -9)$ from the x-axis is:

- (A) 9 units (B) 4 units
(C) -9 units (D) 13 units

2. Which labelled point lies on the y-axis?



- (A) A (B) B
(C) C (D) D

3. The image of the origin after reflection in the x-axis is:

- (A) $(1, 0)$
(B) $(0, 1)$
(C) $(0, 0)$
(D) $(-1, -1)$

4. The midpoint of $(2, 4)$ and $(6, 8)$ is:

- (A) $(8, 12)$ (B) $(2, 2)$
(C) $(6, 4)$ (D) $(4, 6)$

5. If $(3, k) = (k, 3)$, then k equals:

- (A) 3 (B) 0
(C) -3 (D) 6

SECTION B

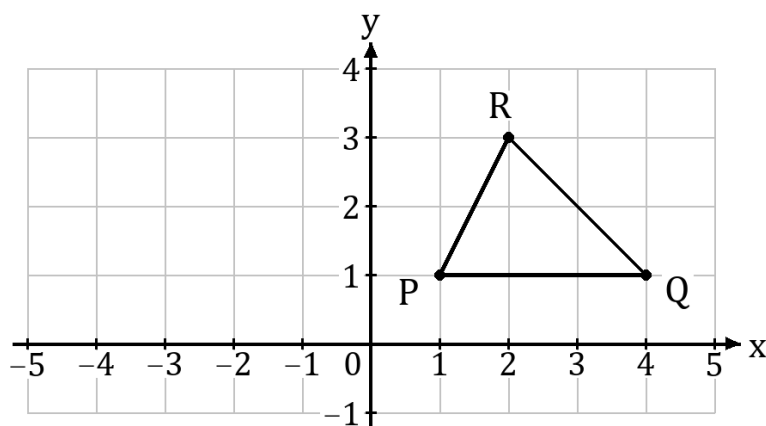
(4 questions $\times$ 2 marks = 8 marks)

6. Reflect $A(-2, 5)$ and $B(4, -1)$ in the x-axis. Write the image coordinates.
7. A pupil says that the distance of $P(-8, 3)$ from the y-axis is -8 units. Explain the mistake and give the correct distance.
8. Find the distance between $A(-6, 2)$ and $B(-1, 2)$. Explain why only one coordinate difference is needed.
9. $M(2, -1)$ is the midpoint of $A(-4, 3)$ and B . Find B .

SECTION C

(3 questions $\times$ 3 marks = 9 marks)

10. For $A(-2, -1)$, $B(4, -1)$ and $C(4, 7)$, calculate all three side lengths and use them to show that the triangle is right-angled.
11. Read P , Q and R from the grid. Write their images P' , Q' and R' in the y-axis. Calculate QR and $Q'R'$.



12. Are $A(0, 0)$, $B(3, 4)$ and $C(6, 0)$ collinear? Use the three pairwise distances to justify your answer.

SECTION D

(1 application question $\times$ 3 marks = 3 marks)

13. Two circular icons have centres $A(100, 100)$ and $B(220, 150)$, with radii 60 and 80 pixels. Find the distance between their centres and determine whether their boundaries meet at two points.