

Mathematics — Ganita Manjari

Chapter 1 Test 8

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 $\times$ 1 mark = 5 marks)

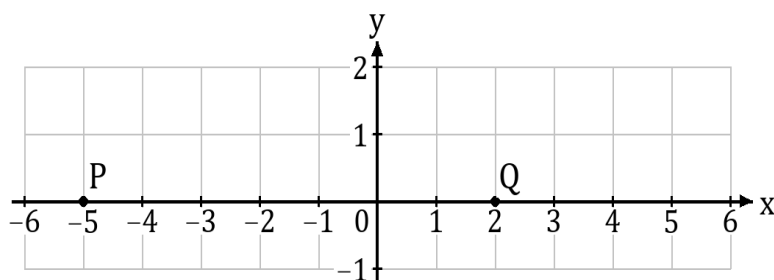
1. A point lies on both coordinate axes. Its distance from the origin is:

- (A) 1 unit (B) 0 units
(C) 2 units (D) not defined

2. For $P(-2, -7)$, which description is correct?

- (A) Right and above
(B) Left and above
(C) Left and below
(D) Right and below

3. Read the coordinates of Q.



- (A) (0, 2) (B) (-2, 0)
(C) (2, 1) (D) (2, 0)

4. The reflection of (5, 0) in the x-axis is:

- (A) (5, 0) (B) (-5, 0)
(C) (0, 5) (D) (0, -5)

5. M(2, 5) is the midpoint of A(-3, 8) and B. Which point is B?

- (A) (-1, 13) (B) (7, 2)
(C) (1, -3) (D) (4, 10)

SECTION B

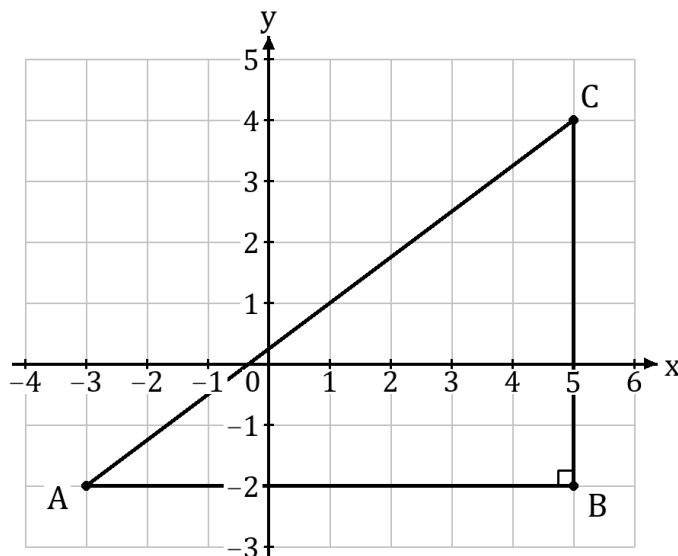
(4 questions $\times$ 2 marks = 8 marks)

6. Reflect $P(-1.5, -2.5)$ in the y -axis. State the quadrant of its image.
7. A floor plan gives the positions of the four feet of a table. Can it determine the table's height? Explain what extra information is required.
8. Find the distance from $A(4, -3)$ to $B(-5, -3)$. Explain why reversing the order gives the same distance.
9. If $(a + 2, 2b - 1) = (-3, 7)$, find a and b .

SECTION C

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

10. Read A, B and C. Find the two perpendicular side lengths, the hypotenuse and the area of triangle ABC.



11. Find the points that divide $A(-2, 5)$ to $B(10, -4)$ into three equal parts. Verify that the three segments have equal length.
12. Find the point on the x -axis that is equidistant from $P(0, 2)$ and $Q(6, 4)$.

SECTION D

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

13. Two drones are represented by $A(1, 1)$ and $B(7, 9)$, with 1 unit = 10 m. Find their separation. If both positions are reflected in the x -axis, give the new coordinates and calculate the new separation.