

Mathematics — Ganita Manjari

Chapter 1 Test 10

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. Which sign pair describes the coordinates of a point inside Quadrant III?

- (A) (+, +) (B) (-, -)
(C) (-, +) (D) (+, -)

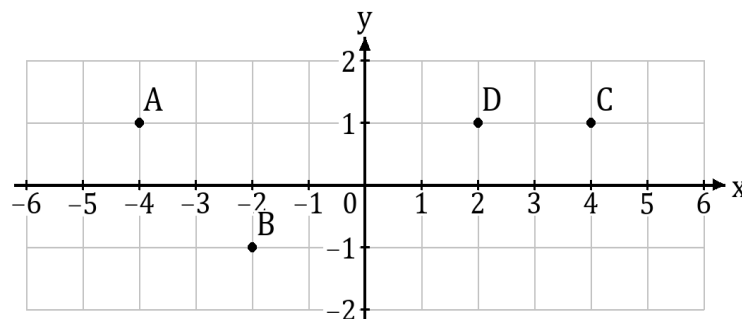
2. Which point is exactly 13 units from the origin?

- (A) (3, 4) (B) (6, 8)
(C) (-5, -12) (D) (9, 12)

3. If $k < 0$, the point $(0, k)$ lies on:

- (A) the positive x-axis
(B) the negative x-axis
(C) the positive y-axis
(D) the negative y-axis

4. Which pair consists of mirror images in the y-axis?



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

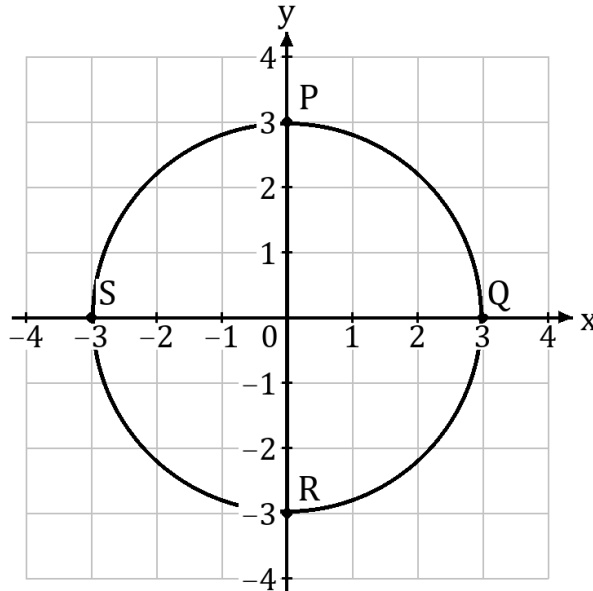
5. Which point is NOT on the segment joining $(3, -6)$ and $(3, 4)$?

- (A) (3, 0) (B) (3, 5)
(C) (3, -2) (D) (3, 3)

SECTION B

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

6. A(-7, 2) and B(-7, b) are 10 units apart. If B is below A, find b.
7. Reflect P(-2, -6) first in the y-axis and then reflect that image in the x-axis. Give both images and the quadrant of the final point.
8. The circle is centred at O. Read S and find the length of diameter PR.



9. A(-1, -2) and B have midpoint M(4, 1). Find B.

SECTION C

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

10. P(2, 1) is the trisection point of AB nearer A(-1, 4). Find the other trisection point Q and the endpoint B.
11. A square has vertices A(-2, -2), B(4, -2), C(4, 4) and D(-2, 4). Find its centre, diagonal length and area.
12. Triangle A(1, 2), B(4, 6), C(7, 2) is reflected in the x-axis. Find the image vertices and the perimeter of the image triangle.

SECTION D

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

13. A screen spans $0 \leq x \leq 320$ and $0 \leq y \leq 200$ pixels. Circular icons have centres (80, 80) and (200, 80), with radii 50 and 70 pixels. Check whether both fit and decide whether their boundaries are separate, touch once or cross twice.