

KENDRIYA VIDYALAYA SANGATHAN BHOPAL REGION

CLASS 9 MATHEMATICS

COMPETENCY BASED TEST JULY 2026-27

Instructions: Each question carries 1 mark. Choose the correct option (A, B, C, or D).

Total Marks: 10.

Q1. On a mall directory map, the entrance is the origin. East is the positive x-direction and north is the positive y-direction. The food court is 3 units east and 4 units south of the entrance. In which quadrant does the food court lie?

- (A) Quadrant I
- (B) Quadrant II
- (C) Quadrant III
- (D) Quadrant IV

Answer – (D) Quadrant IV

Q2. In a game, a player's position is recorded as $(-4, 3)$ on the map grid. Which quadrant is the character in?

- (A) Quadrant I
- (B) Quadrant II
- (C) Quadrant III
- (D) Quadrant IV

Answer - (B) Quadrant II

Q3. In a city park, the main gate is taken as the origin. A bench is located 6 m east and 8 m north of the gate, at the point $(6, 8)$. What is the straight-line distance of the bench from the gate?

- (A) 6 m
- (B) 8 m
- (C) 10 m
- (D) 14 m

Answer – (C) 10 m

Q4. A warehouse robot moves only along grid lines. It travels from shelf A $(2, 3)$ straight to shelf B $(2, 9)$. How far does the robot travel ?

- (A) 2 units
- (B) 3 units
- (C) 6 units
- (D) 9 units

Answer - (C) 6 units

Q5. In a housing society, two identical houses are built as mirror images of each other across the main road, which runs along the y-axis. House A is at $(5, 3)$. What are the coordinates of House B, its mirror image?

- (A) $(-5, 3)$
- (B) $(5, -3)$
- (C) $(-5, -3)$
- (D) $(3, 5)$

Answer - (A) $(-5, 3)$

Q6. On a trekking map, base camp is at (2, 3) and the lookout point is at (14, 8), with distances in kilometres. What is the straight-line distance a helicopter would cover between them?

- (A) 11 km
- (B) 12 km
- (C) 17 km
- (D) 13 km

Answer - (D) 13 km

Q7. A delivery drone starts at its charging station (0, 0) and flies directly to a rooftop at (5, 12), with distances measured in metres. What straight-line distance does the drone cover?

- (A) 12 m
- (B) 13 m
- (C) 5 m
- (D) 17 m

Answer - (B) 13 m

Q8. A network of weather stations records Station S1 at (−3, −5) on the regional map. Which quadrant is S1 located in?

- (A) Quadrant I
- (B) Quadrant II
- (C) Quadrant III
- (D) Quadrant IV

Answer - (C) Quadrant III

Q9. A GPS app marks your home as the origin (0, 0) and a market at (7, 0). What does this tell you about the market's location?

- (A) It is 7 units north of home
- (B) It lies exactly on the x-axis, 7 units from home
- (C) It lies in Quadrant I
- (D) Its exact direction cannot be determined

Answer - (B) It lies exactly on the x-axis, 7 units from home

Q10. A security camera placed at the origin (0, 0) can detect objects up to 10 m away. A suspicious object is detected at (6, 8). What can you conclude?

- (A) The camera cannot detect the object .
- (B) The camera cannot determine the distance
- (C) The object is outside the camera's range
- (D) The object is exactly at the edge of the camera's range

Answer - (D) The object is exactly at the edge of the camera's range