

## Worksheet: Coordinate Geometry

ISC · Class 9 · Mathematics · 21 questions · 41 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 41

**Q1.** In which quadrant does the point  $(5, 2)$  lie? *[1 mark]*

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**Q2.** In which quadrant does the point  $(3, 7)$  lie? *[1 mark]*

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**Q3.** In which quadrant does the point  $(8, 4)$  lie? *[1 mark]*

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**Q4.** Where does the point  $(0, 9)$  lie? *[1 mark]*

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**Q5.** Where does the point  $(4, 0)$  lie? *[1 mark]*

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**Q6.** Reflect  $(3, 4)$  across the x-axis. *[1 mark]*

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**Q7.** Reflect  $(2, 5)$  across the y-axis. *[1 mark]*

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**Q8.** Reflect  $(4, 7)$  through the origin. *[1 mark]*

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**Q9.** What is the ordinate of the point (6, 3)? [1 mark]

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**Q10.** What is the abscissa of the point (5, 8)? [1 mark]

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**Q11.** Plot the points A(2, 3), B(2, 3), C(2, 3), D(2, 3). Name the figure ABCD. [2 marks]

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**Q12.** A point P(a, b) lies on the x-axis. What is b? Where is P if a = 7? [2 marks]

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**Q13.** Find the distance between A(3, 5) and B(7, 5). [2 marks]

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**Q14.** Find the distance between P(4, 2) and Q(4, 6). [2 marks]

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**Q15.** Plot P(3, 0), Q(0, 4), R(3, 0), S(0, 4). What figure do they form? Find its area. [3 marks]

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**Q16.** Reflect  $(2, 5)$  first across the  $x$ -axis, then across the  $y$ -axis. What are the final coordinates? *[2 marks]*

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**Q17.** Without plotting, predict the quadrant of  $(a, b)$  given  $a > 0$  and  $b < 0$ . *[2 marks]*

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**Q18.** Three vertices of a rectangle are  $(2, 4)$ ,  $(2, 2)$ ,  $(8, 2)$ . Find the fourth vertex and the area. *[4 marks]*

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**Q19.** How many points  $(x, y)$  with integer coordinates lie strictly inside the rectangle with vertices  $(0, 0)$ ,  $(5, 0)$ ,  $(5, 3)$  and  $(0, 3)$ ? *[4 marks]*

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**Q20.** A bug walks anti-clockwise along the perimeter of the rectangle with vertices  $(0, 0)$ ,  $(4, 0)$ ,  $(4, 3)$ ,  $(0, 3)$  at 1 unit/sec, starting at  $(0, 0)$ . Where is the bug at  $t = 11$  sec? *[4 marks]*

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**Q21.** A drone is at  $(2, 5)$  km from a school. It reflects its position across the  $x$ -axis to drop a payload, then reflects its new position across the  $y$ -axis. Find its final location. *[4 marks]*

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