

Coordinates

Maths

Level 2

Exam-style practice · 9 questions · 23 marks · Non-calculator

Remember

(x, y): along the corridor, then up the stairs. x is across (horizontal), y is up (vertical). Read the x-value first.

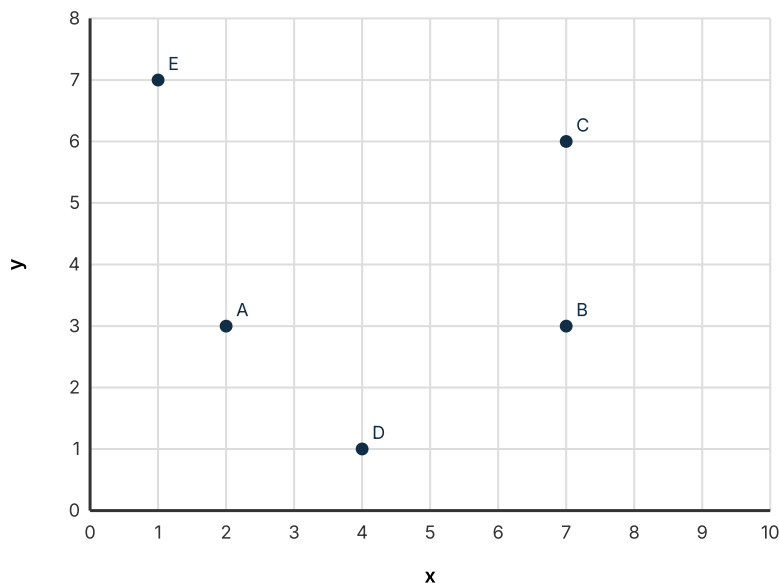
Plotting: mark a small cross exactly on the intersection, not a blob.

Midpoint of two points: average the x-values and average the y-values. Midpoint of (2, 3) and (8, 7) is (5, 5).

Rectangles and squares: opposite sides are parallel to the axes (usually), so the missing corner shares an x-value with one point and a y-value with another.

Section A – Reading and plotting

1. Write down the coordinates of points A to E.



(5 marks)

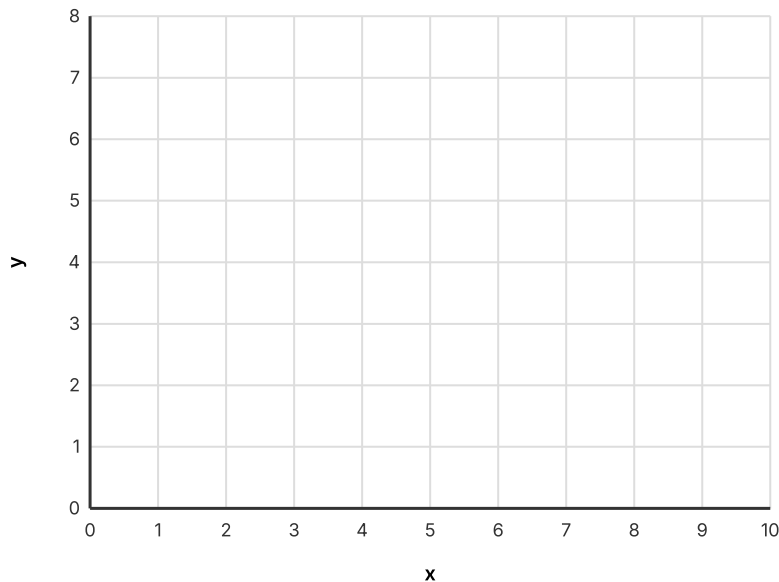
2. Points A, B and C are three corners of a rectangle. What are the coordinates of the fourth corner, F? (2 marks)

3. Find the coordinates of the midpoint of AB, and of the midpoint of BC. (2 marks)

4. Point D is moved 3 squares right and 4 squares up. Write its new coordinates. (1 mark)

Section B – Plotting and using coordinates

5. On the grid, plot P(1, 1), Q(6, 1) and R(6, 5). (a) Join them to make a right-angled triangle. (b) Plot S so that PQRS is a rectangle, and write down S's coordinates. (c) If each square is 1 metre, find the area of the rectangle.



(5 marks)

6. A square has corners at (2, 2), (2, 6) and (6, 6). What is the fourth corner? What is the length of one side? (2 marks)

7. On a car-park plan, two lamp posts are at (3, 8) and (11, 2). A third is to be placed exactly halfway between them. Give its coordinates. (2 marks)

8. A treasure-hunt clue says 'Go to (5, 2). Walk 4 east and 3 north.' What are the final coordinates? (East is the positive x direction.) (2 marks)

9. Seats in a hall are labelled by row (letter) and seat number, like a coordinate. Row D seat 7 is at (7, 4) if A is row 1. Write the coordinates of Row H seat 12, and the seat label for (3, 6). (2 marks)

Coordinates – Answers

Level 2 · Working shown so you can check your method, not just the final number.

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Section A

1. A (2, 3) · B (7, 3) · C (7, 6) · D (4, 1) · E (1, 7).
2. F is above A and level with C: **(2, 6)**.
3. Midpoint of AB: $((2 + 7) \div 2, 3) = \mathbf{(4.5, 3)}$. Midpoint of BC: $(7, (3 + 6) \div 2) = \mathbf{(7, 4.5)}$.
4. **(7, 5)**.

Section B

5. (b) S = **(1, 5)**. (c) Rectangle 5 m by 4 m = **20 m²**.
6. **(6, 2)**; side length **4 units**.
7. $((3 + 11) \div 2, (8 + 2) \div 2) = \mathbf{(7, 5)}$.
8. **(9, 5)**.
9. Row H is row 8, so **(12, 8)**. (3, 6) is **Row F, seat 3**.

Where Level 2 students lose marks on this topic

- Writing (y, x) – swapping the order. Across first, then up.
- Reading a point from the nearest gridline label instead of counting the squares to it.
- Finding a midpoint by averaging only one of the coordinates.