

Coordinates and Midpoints

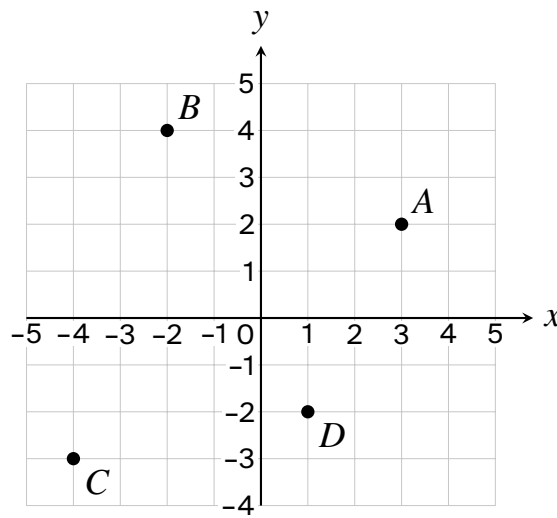
For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **25**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Points A , B , C and D are plotted on the grid.



- (a) Write down the coordinates of B .

[1 mark]

Answer (_____ , _____)

- (b) Write down the coordinates of C .

[1 mark]

Answer (_____ , _____)

- (c) Plot the point E at $(-3, 1)$ on the grid.

[1 mark]

- (d) Write down the coordinates of the midpoint of AD .

[1 mark]

Answer (_____ , _____)

- 2 Circle the coordinates of a point on the y -axis.

[1 mark]

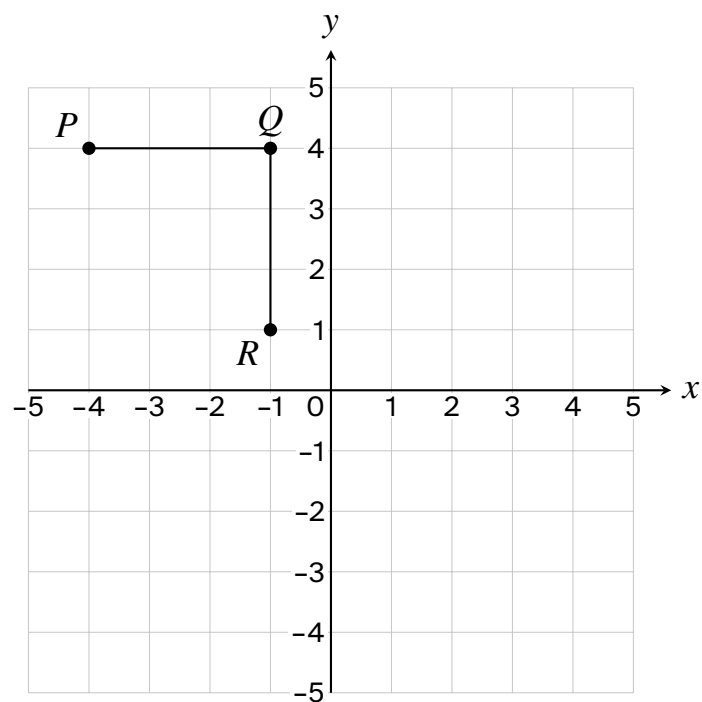
(3, 0)

(0, 3)

(3, 3)

(-3, 3)

- 3 P , Q and R are three vertices of a square $PQRS$.



$PQRS$ is a square.

Work out the coordinates of S .

[1 mark]

Answer (_____ , _____)

- 4** A is the point $(2, 3)$.
 B is the point $(8, 7)$.

Work out the coordinates of the midpoint of AB .

[2 marks]

Answer (_____ , _____)

- 5** C is the point $(-4, 5)$.
 D is the point $(6, -1)$.

Work out the coordinates of the midpoint of CD .

[2 marks]

Answer (_____ , _____)

- 6** M is the midpoint of PQ .
 P is the point $(1, 4)$ and M is the point $(5, 7)$.
Work out the coordinates of Q .

[2 marks]

Answer (_____ , _____)

- 7 Ali plots the point $(4, 1)$.
He goes up 4 and then across 1.

Is he correct? Tick a box.
Give a reason for your answer.

[1 mark]

☐ Yes

☐ No

- 8 Three vertices of a rectangle are $(1, 1)$, $(6, 1)$ and $(6, 4)$.
Work out the coordinates of the fourth vertex.

[2 marks]

Answer (_____ , _____)

- 9 A is the point $(-2, 3)$ and B is the point $(7, 3)$.
Work out the length of AB .

[2 marks]

Answer _____ units

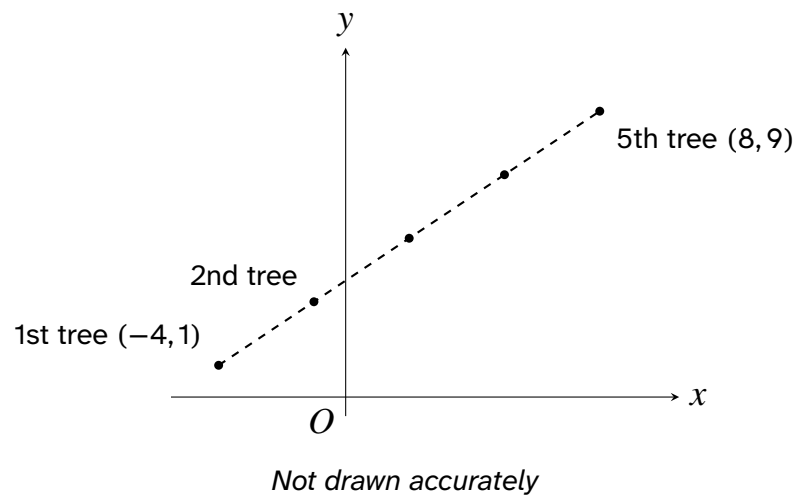
- 10 A triangle has vertices at $(0,0)$ and $(6,0)$.
The area of the triangle is 12 square units.

Work out one possible pair of coordinates of the other vertex.

[2 marks]

Answer _____

- 11 A gardener plants five trees in a straight line.
The trees are equally spaced.
On a plan, the first tree is at $(-4,1)$ and the fifth tree is at $(8,9)$.



Work out the coordinates of the **second** tree.

[3 marks]

Answer (_____ , _____)

12 A triangle is drawn using the lines

$$y = x$$

$$x = -3$$

$$y = 5$$

Work out the coordinates of the three vertices of the triangle.

[3 marks]

Answer _____