

Coordinates and Midpoints

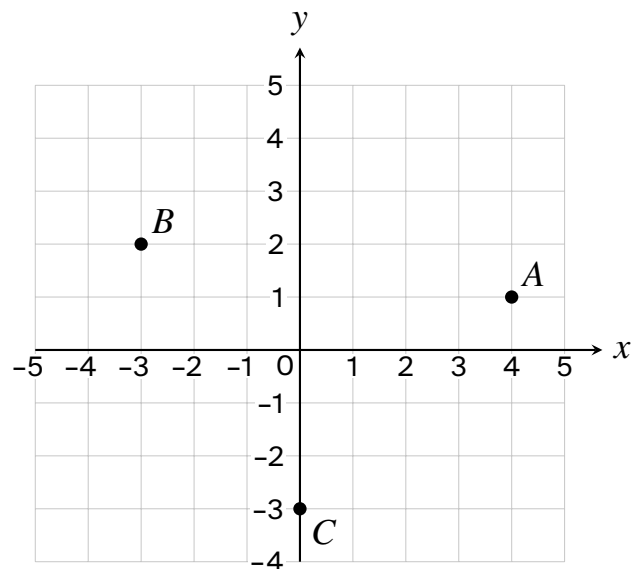
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **26**

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

- 1** The grid shows the points A , B and C .



- (a) Write down the coordinates of point A .

(..... ,)
(1)

- (b) Write down the coordinates of point B .

(..... ,)
(1)

- (c) Write down the coordinates of point C .

(..... ,)
(1)

- (d) On the grid, mark with a cross ($\times$) the point $(2, -3)$. Label it D .

(1)

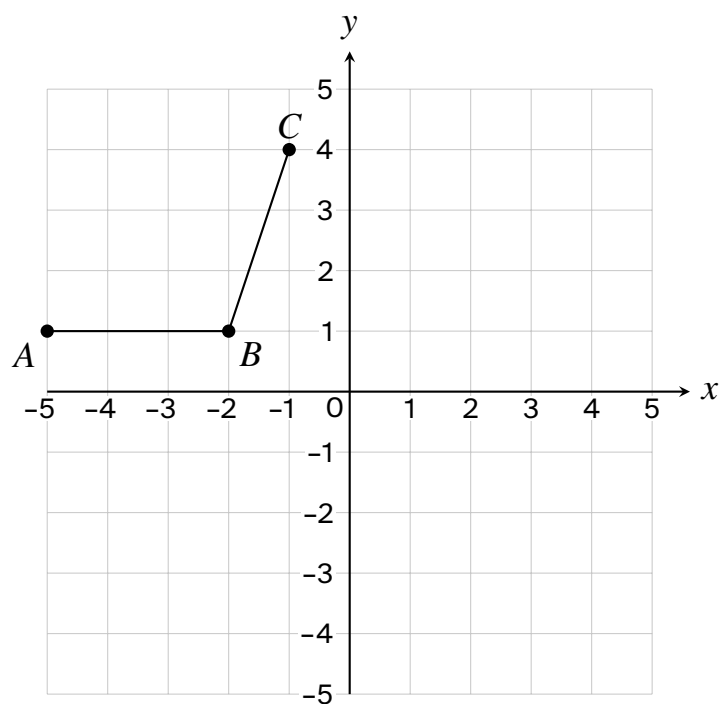
(e) Write down the coordinates of the midpoint of AB .

(..... ,)

(1)

(Total for Question 1 is 5 marks)

2 The points A , B and C are three vertices of a parallelogram $ABCD$.



$ABCD$ is a parallelogram.
Find the coordinates of D .

(..... ,)

(2)

(Total for Question 2 is 2 marks)

- 3** P is the point with coordinates $(3, 1)$.
 Q is the point with coordinates $(9, 5)$.
Find the coordinates of the midpoint of PQ .

(..... ,)
(2)

(Total for Question 3 is 2 marks)

- 4** A is the point $(-5, -2)$ and B is the point $(3, 8)$.
Find the coordinates of the midpoint of AB .

(..... ,)
(2)

(Total for Question 4 is 2 marks)

- 5** The midpoint of PQ is $(4, 1)$.
 P is the point $(-2, 3)$.
Find the coordinates of Q .

(..... ,)
(2)

(Total for Question 5 is 2 marks)

- 6 Write down the coordinates of the point where the line $x = 3$ meets the line $y = -2$

(..... ,)
(1)

(Total for Question 6 is 1 mark)

- 7 $ABCD$ is a square.
 A is the point $(2, 1)$ and B is the point $(6, 1)$.
Find the coordinates of the other two vertices.

..... and
(2)

(Total for Question 7 is 2 marks)

- 8 M is the point $(a, 4)$.
 M is the midpoint of $A(2, b)$ and $B(10, 6)$.
Find the value of a and the value of b .

$a = \dots\dots\dots$ $b = \dots\dots\dots$
(2)

(Total for Question 8 is 2 marks)

- 9 Kai says,
‘The point $(-1, 5)$ lies on the x -axis.’

Explain why Kai is wrong.

(1)

(Total for Question 9 is 1 mark)

- 10 A straight path goes from a gate, G , past a café, C , to a lake, L .
On a map, C has coordinates $(7, 4)$ and L has coordinates $(11, 2)$.

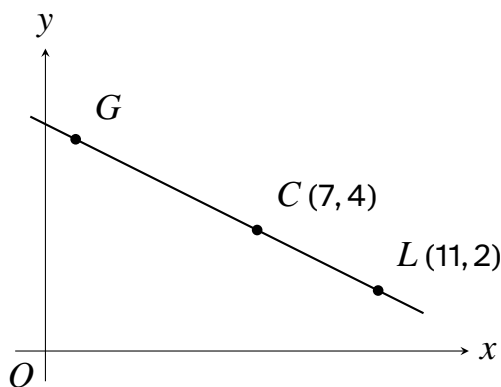


Diagram **NOT** accurately drawn

The distance from G to C is $\frac{3}{2}$ of the distance from C to L .
Find the coordinates of the gate, G .

(..... ,)
(3)

(Total for Question 10 is 3 marks)

- 11** The points E , F and G lie in that order on a straight line.
 E is the point $(-3, -2)$ and F is the point $(6, 4)$.
 $EG:FG = 5:2$
Find the coordinates of G .

(..... ,)
(4)

(Total for Question 11 is 4 marks)
