

Name

ANSWERS

Class



MATHS TEACHER HUB

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Coordinates

(9 – 1) Topic booklet

Foundation

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- Fill in the **boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a 1F question you are not allowed to use a calculator.
- If the question is a 2F or a 3F question, you may use a calculator to help you answer.

Information

- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

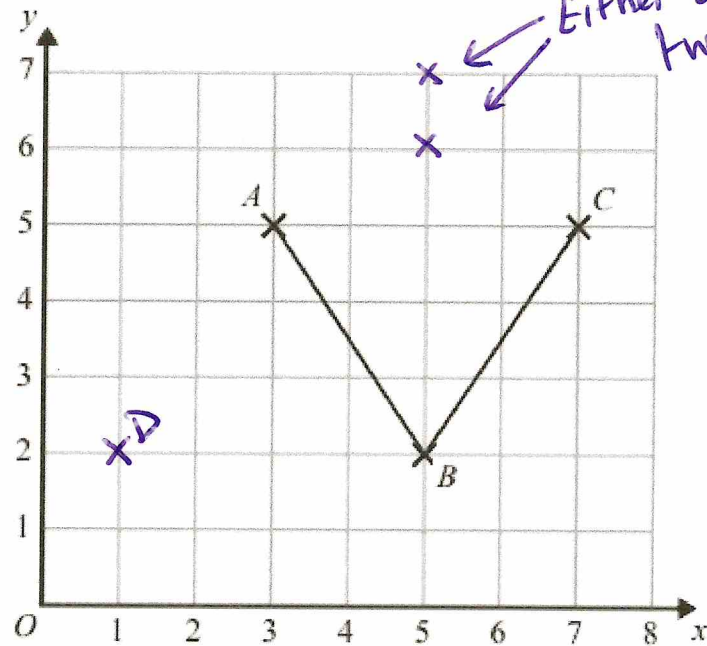
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer ALL questions

Write your answers in the space provided.

You must write down all the stages in your working.

- 4 Here is a grid showing the points A , B and C .



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

$(3, 5)$

(1)

- (b) On the grid, mark with a cross (\times) the point $(1, 2)$.
Label this point D .

(1)

- (c) On the grid, mark with a cross (\times) a point E , so that the quadrilateral $ABCE$ is a kite.

(1)

5



(a) Write down the coordinates of point B .

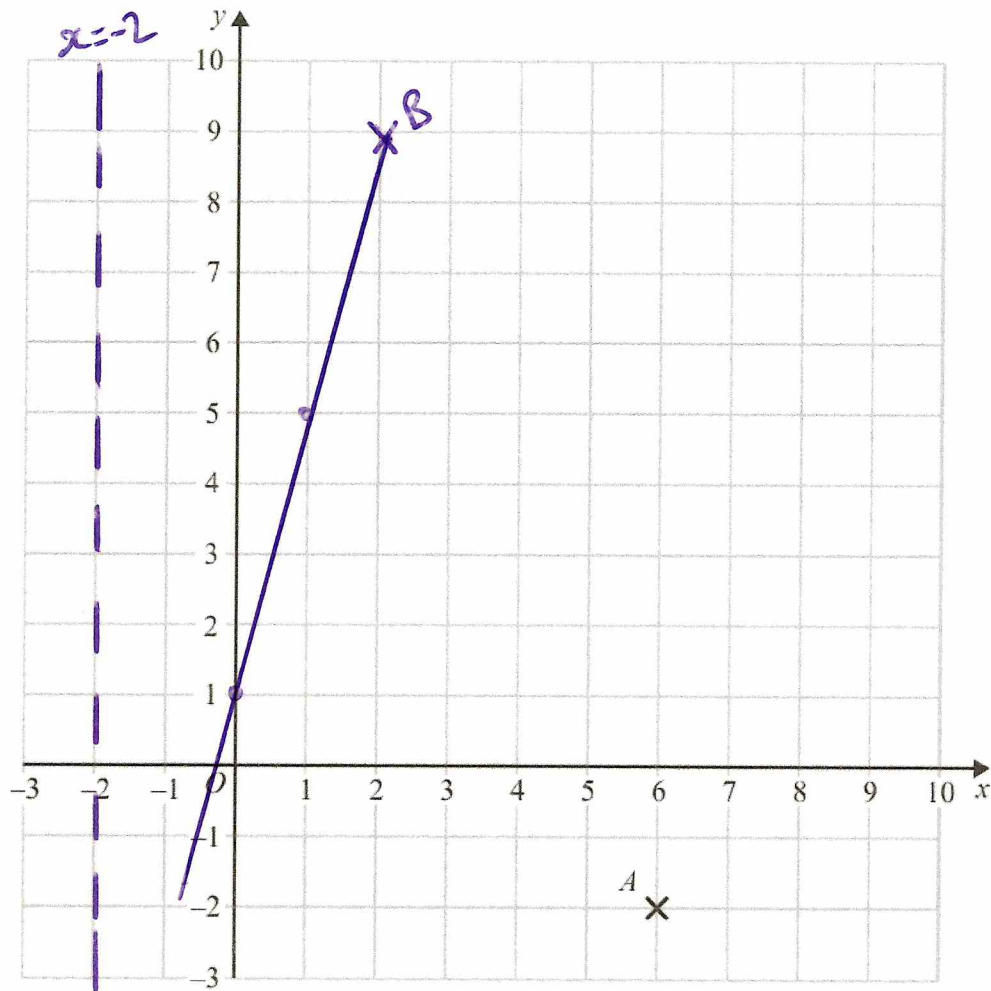
(4 , 5)
(1)

(b) Find the coordinates of the midpoint of AB .

(1 , 4)
(1)

(c) On the grid, draw the line with equation $y = -3$

(1)



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

(6 , -2)
(1)

- (b) (i) Plot the point with coordinates $(2, 9)$.
Label this point B .

(1)

- (ii) Does point B lie on the straight line with equation $y = 4x + 1$?
You must show how you get your answer.

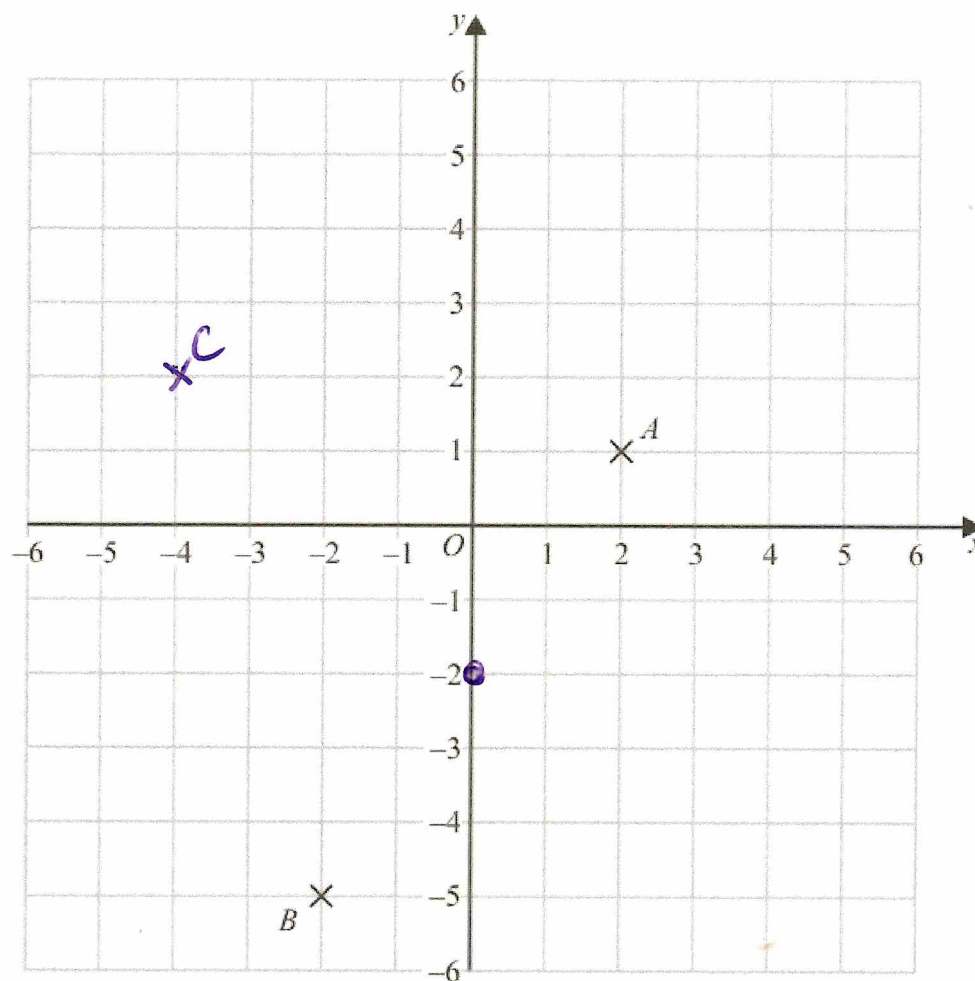
Yes it does $9 = 4(2) + 1$

(1)

- (c) On the grid, draw the line with equation $x = -2$

(1)

8 The points A and B are shown on the grid.



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

(2 , 1)
(1)

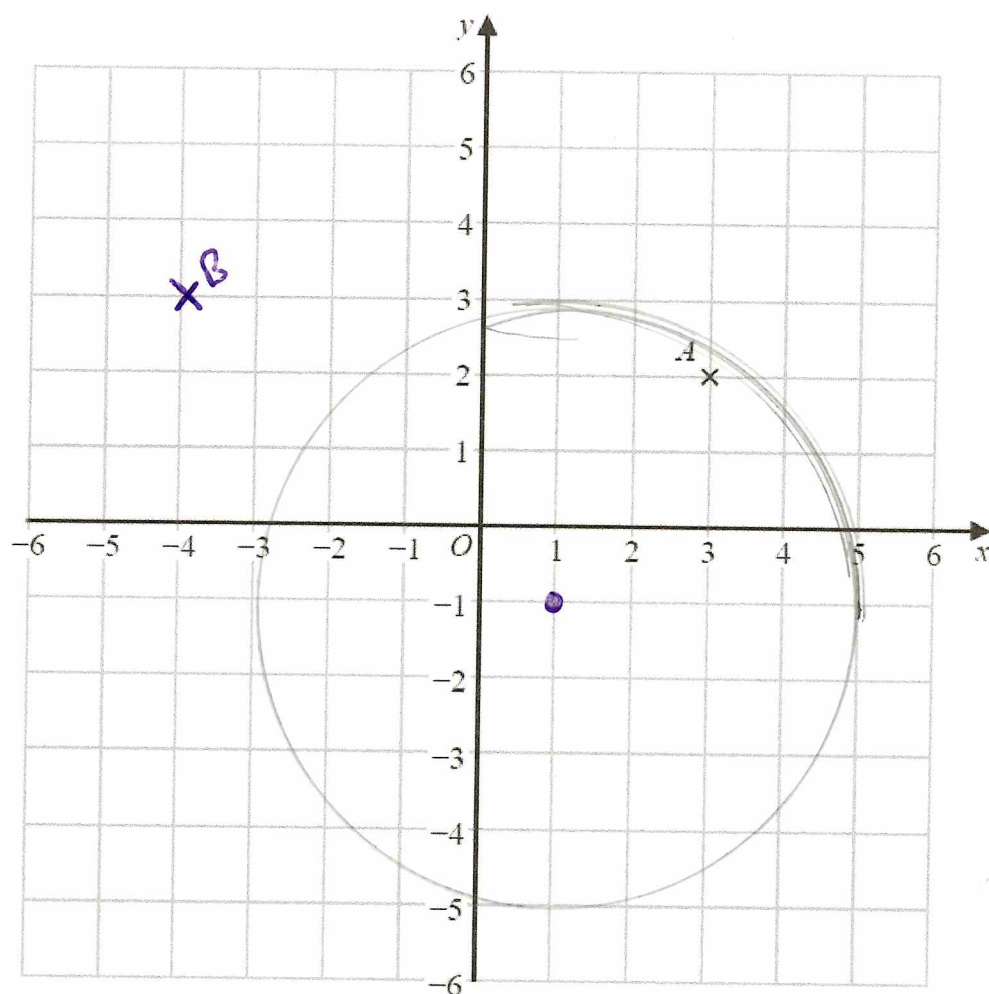
(b) Find the coordinates of the midpoint of AB .

(0 , -2)
(2)

(c) On the grid, mark with a cross (\times) the point with coordinates $(-4, 2)$
Label this point C .

(1)

8 Here is a centimetre grid.



(a) Write down the coordinates of point A .

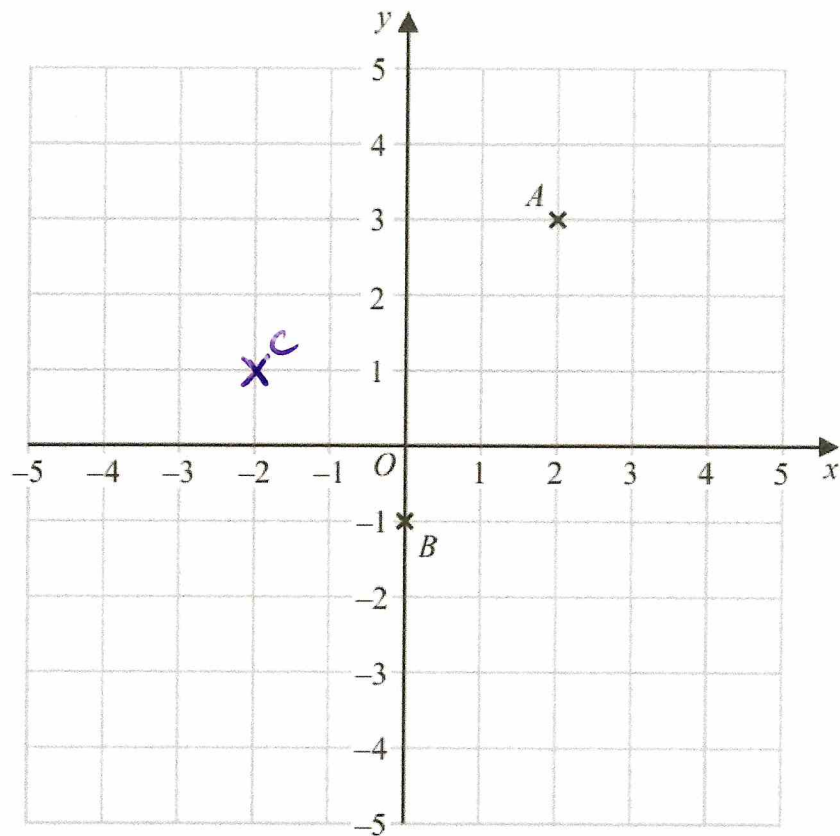
(3 , 2)
(1)

(b) On the grid, mark with a cross (\times) the point with coordinates $(-4, 3)$
Label this point B .

(1)

(c) On the grid, draw the circle with
centre $(1, -1)$
and radius 4 cm.

(2)



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

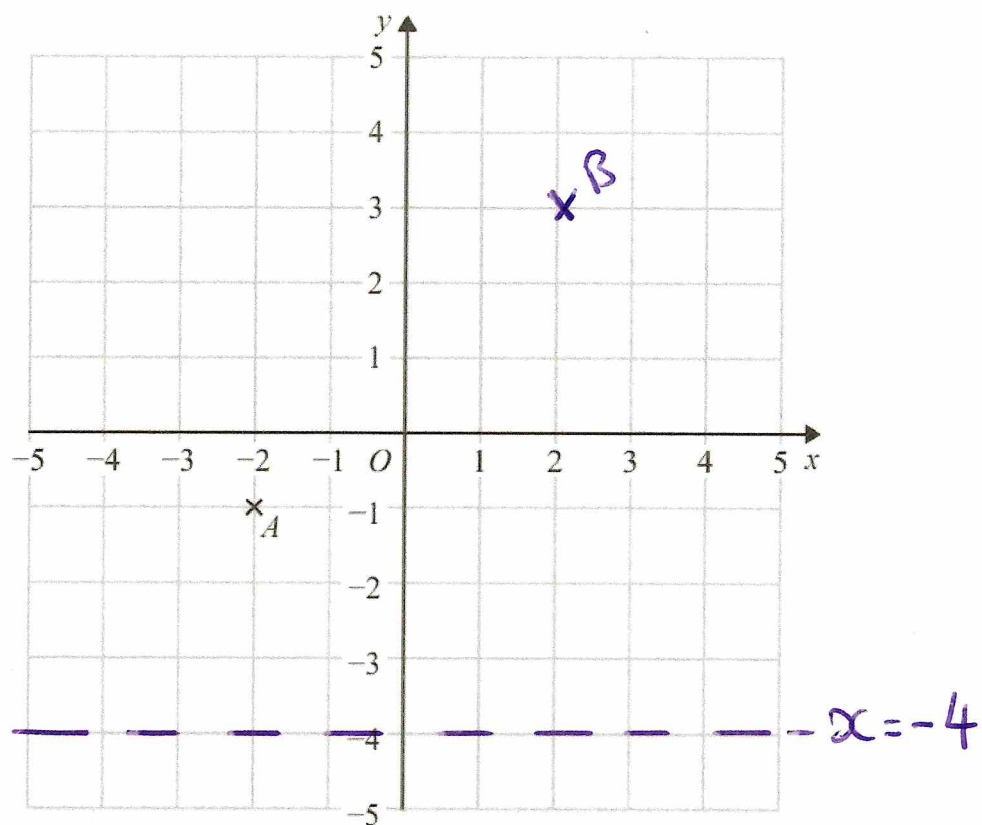
(2, 3)
(1)

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

(0, -1)
(1)

(c) On the grid, mark with a cross (\times) the point $(-2, 1)$
Label this point C .

(1)



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

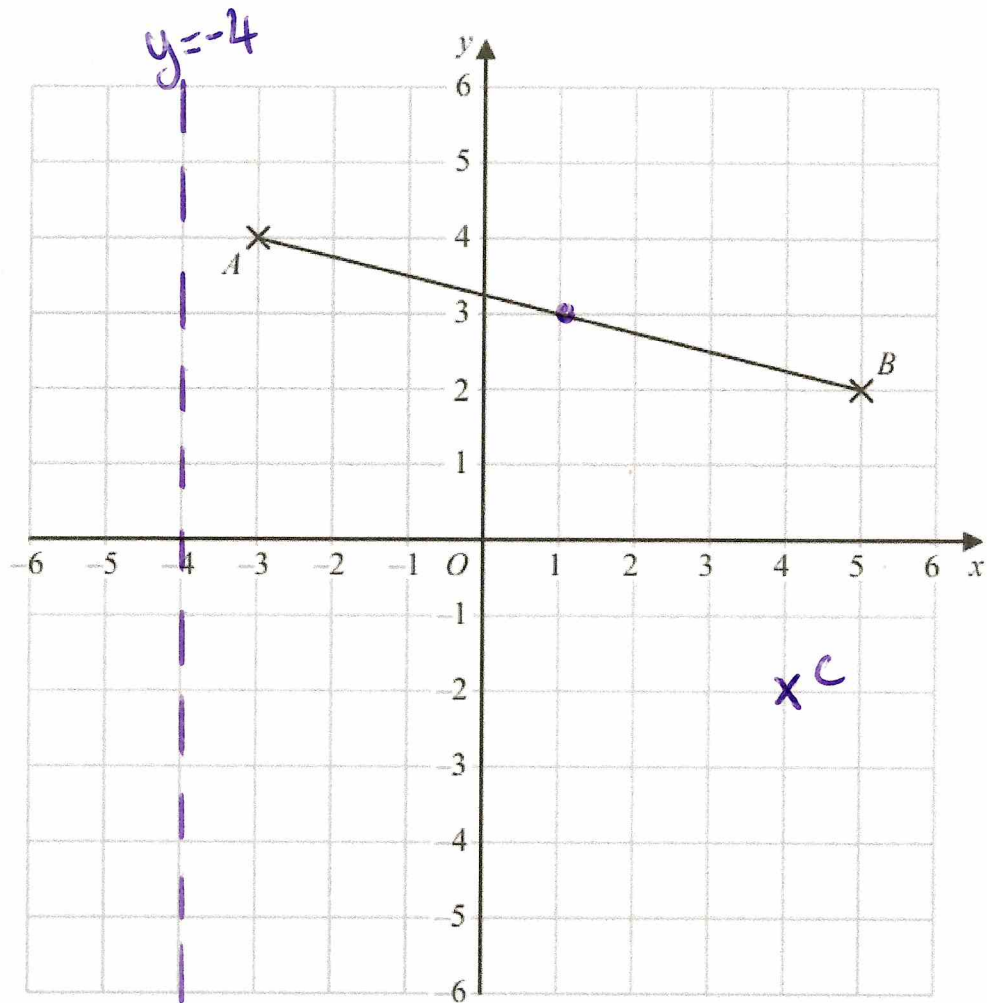
(-2 , -1)
(1)

- (b) On the grid, mark with a cross (x) the point (2, 3)
Label this point B.

(1)

- (c) On the grid, draw the line with equation $x = -4$

(1)



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

(5 , 2)
(1)

- (b) Plot the point with coordinates (4, -2)
Label this point C.

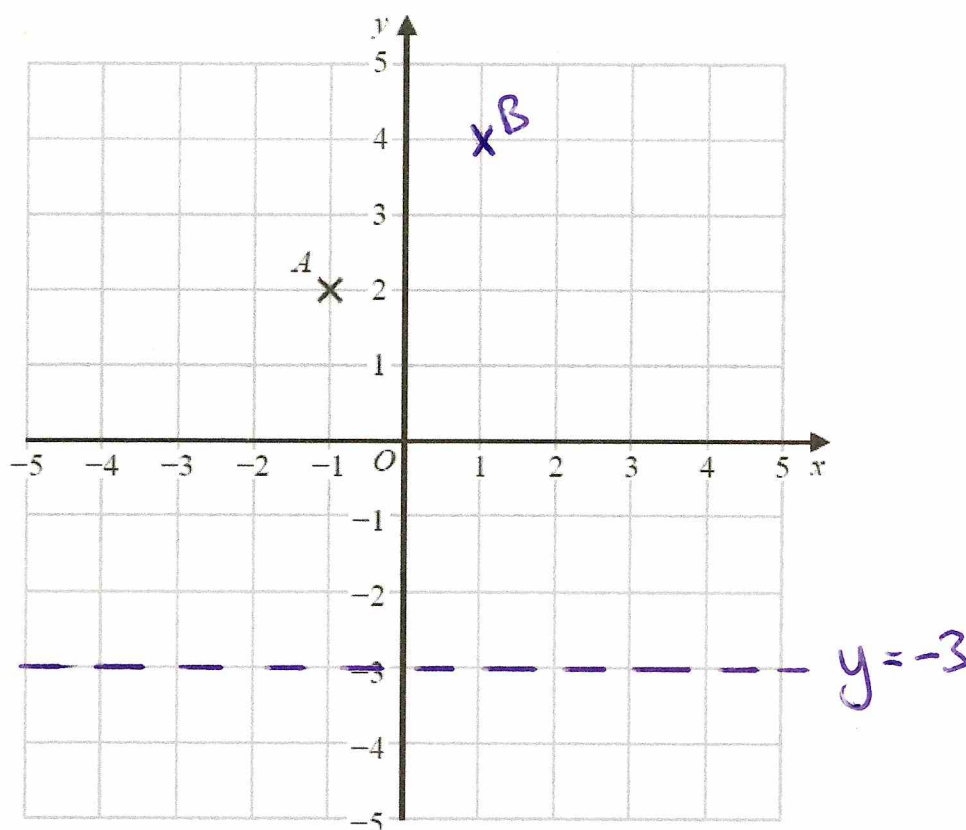
(1)

- (c) Write down the coordinates of the midpoint of AB.

(1 , 3)
(1)

- (d) Draw the line with equation $y = -4$

(1)



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

(-1 , 2)
(1)

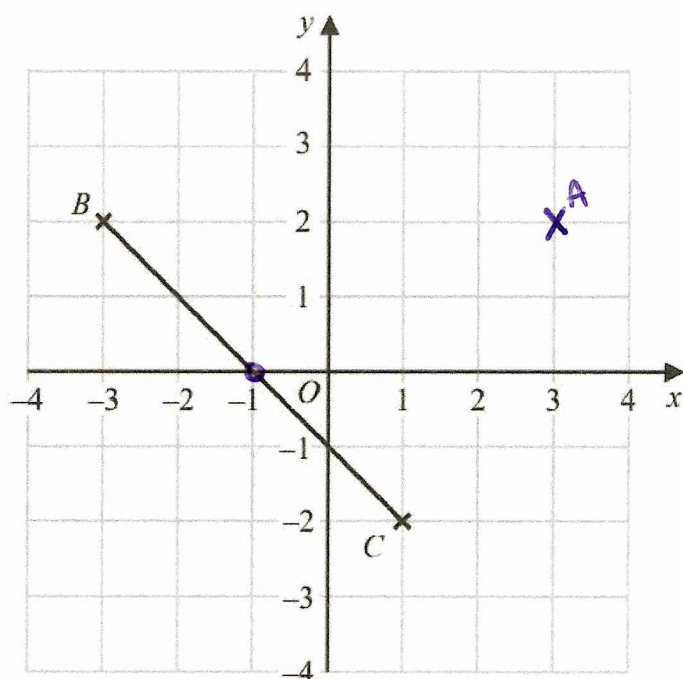
- (b) On the grid, mark with a cross (x) the point (1, 4)
Label this point B.

(1)

- (c) On the grid, draw the line with equation $y = -3$

(1)

10



- (a) Plot the point with coordinates (3, 2)
Label this point *A*.

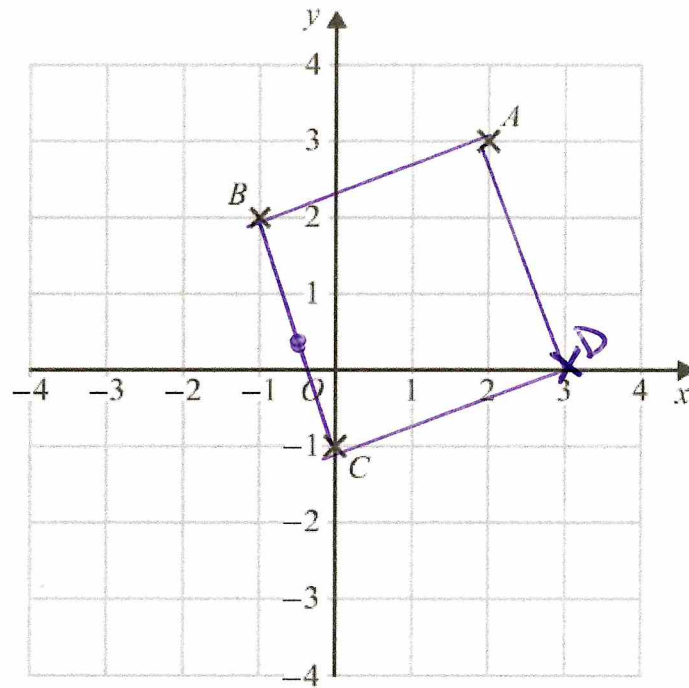
(1)

- (b) Write down the coordinates of the midpoint of *BC*.

(-1 , 0)
(1)

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(Total for Question 10 is 2 marks)



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

(0 , -1)
(1)

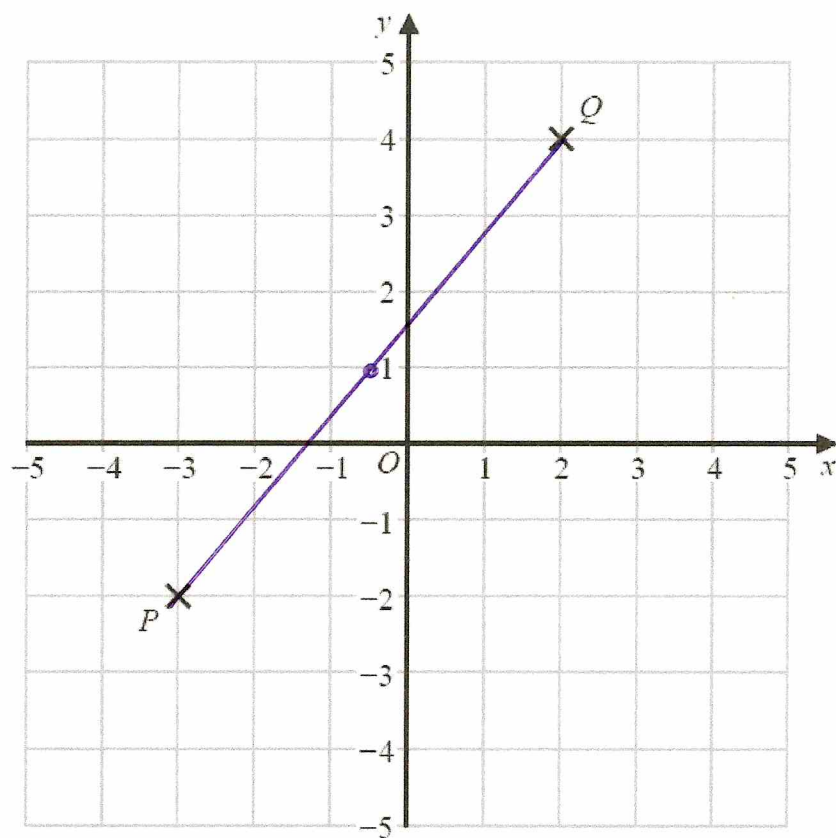
$ABCD$ is a square.

- (b) On the grid, mark with a cross (X) the point D so that $ABCD$ is a square.

(1)

- (c) Write down the coordinates of the midpoint of the line segment BC .

(-0.5 , 0.5)
(1)

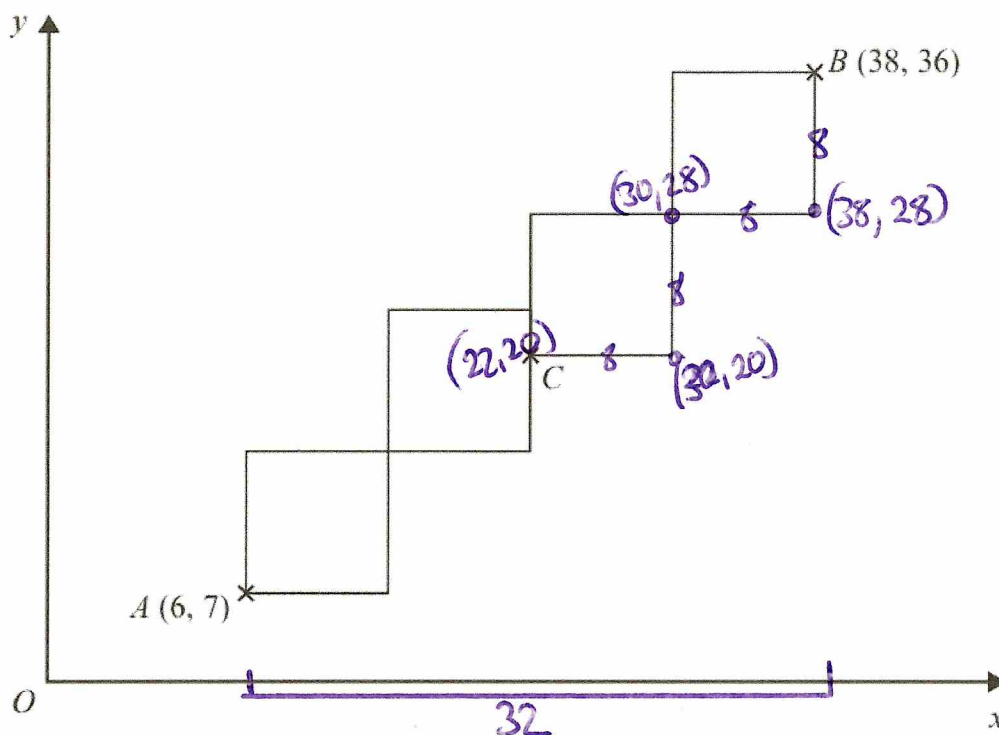


Find the coordinates of the midpoint of PQ .

(-0.5 , 1)

24 A pattern is made from four identical squares.

The sides of the squares are parallel to the axes.

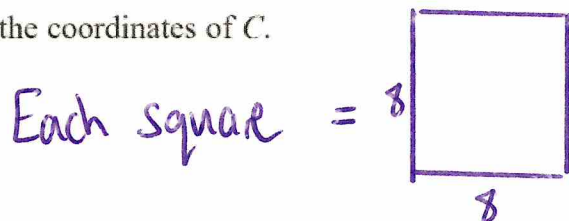


Point A has coordinates $(6, 7)$

Point B has coordinates $(38, 36)$

Point C is marked on the diagram.

Work out the coordinates of C .



(22 , 20)