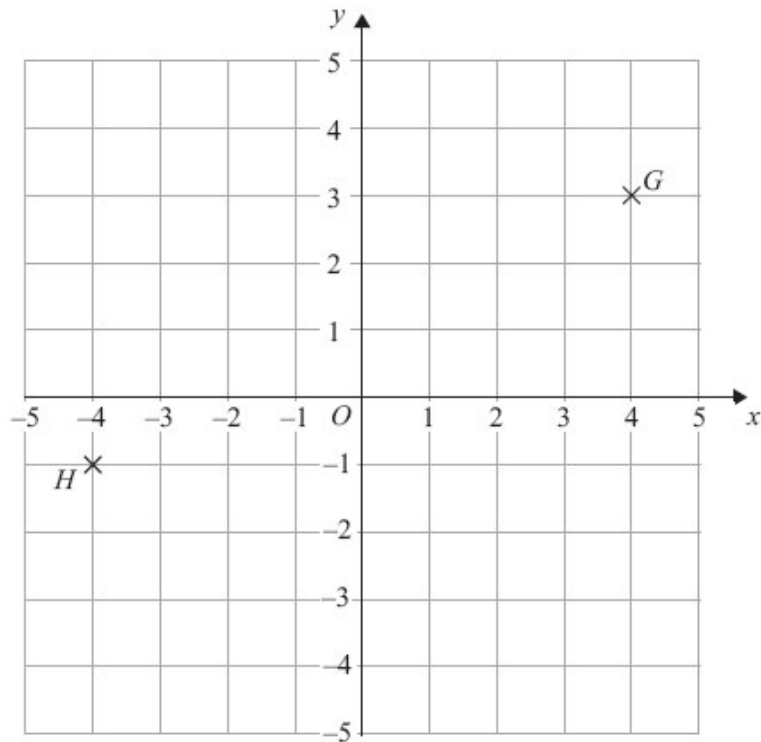


## G012 Coordinates and 2D shapes

Q1.



(a) (i) Write down the coordinates of the point  $G$ .

.....

(ii) Write down the coordinates of the point  $H$ .

.....

(2)

(b) Find the coordinates of the midpoint of  $GH$ .

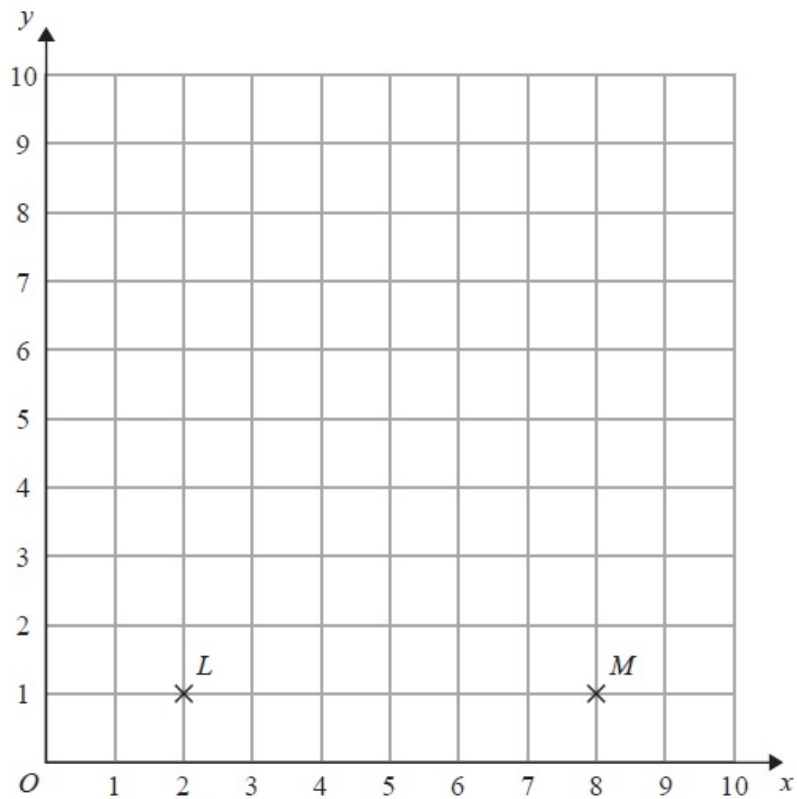
.....

(2)

**(Total for Question is 4 marks)**

**Q2.**

Here is a coordinate grid.



(a) Write down the coordinates of the point  $M$ .

(....., .....) )

(1)

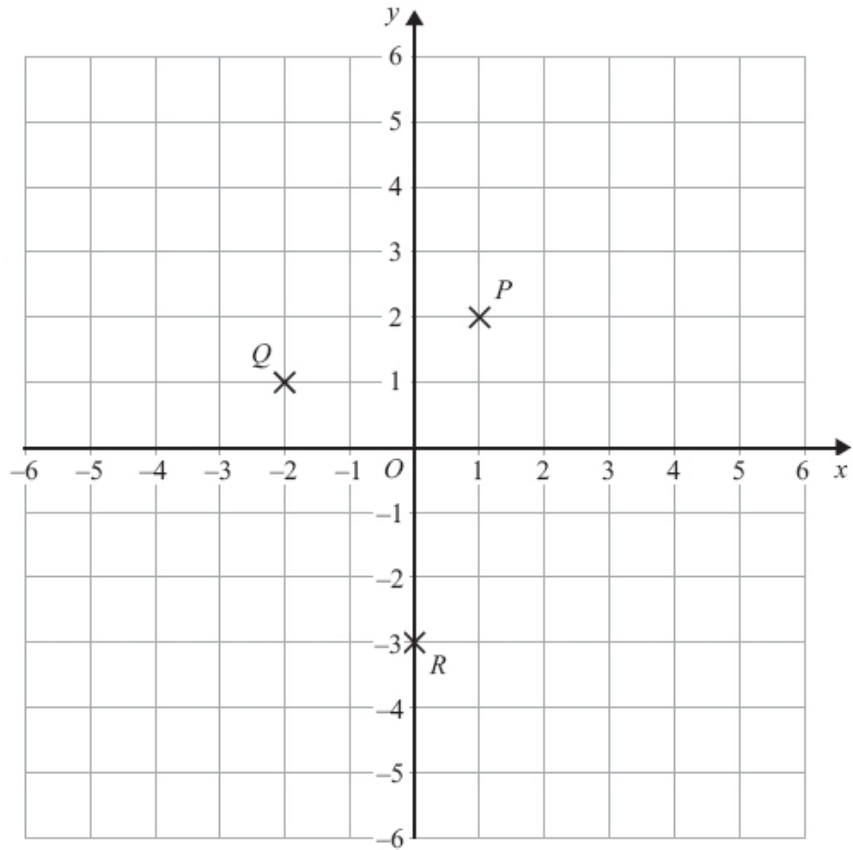
$LM$  is the shortest side of an isosceles triangle.

(b) Mark with a cross ( $\times$ ) a point  $N$ , so that  $LNM$  is an isosceles triangle.

(2)

**(Total for Question is 3 marks)**

**Q3.**



(a) Write down the coordinates of the point *P*.

(.....,.....)  
(1)

(b) Write down the coordinates of the point *R*.

(.....,.....)  
(1)

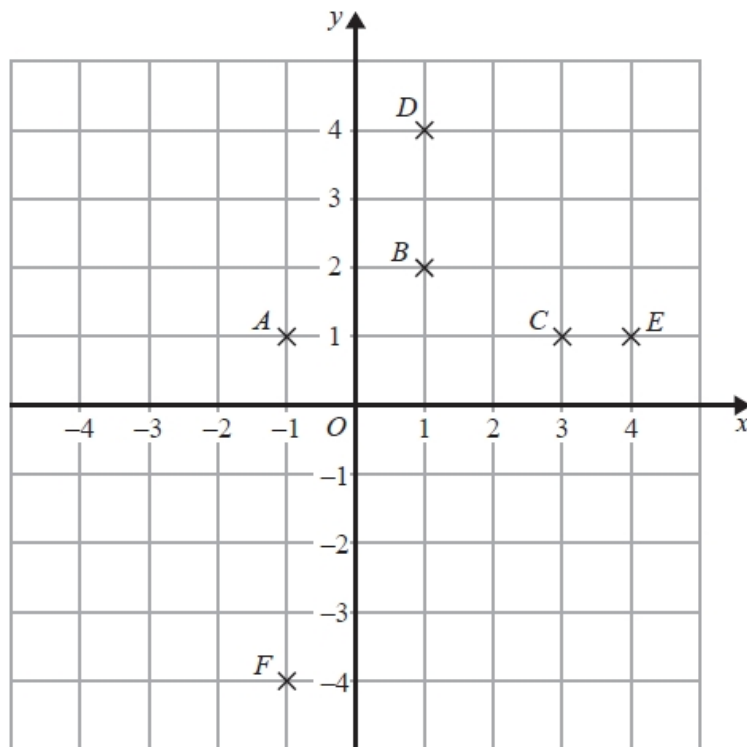
*P*, *Q* and *R* are three vertices of a parallelogram.

(c) Write down the coordinates of the fourth vertex of this parallelogram.

(.....,.....)  
(1)

**(Total for Question is 3 marks)**

**Q4.**



The points *A*, *B*, *C*, *D*, *E* and *F* are shown on the grid.

One of these points has coordinates (4, 1).

(a) Which point?

.....

(1)

(b) (i) On the grid, mark with a cross (x) a point *P* such that the shape *ABCP* is a kite.

Label your point *P*.

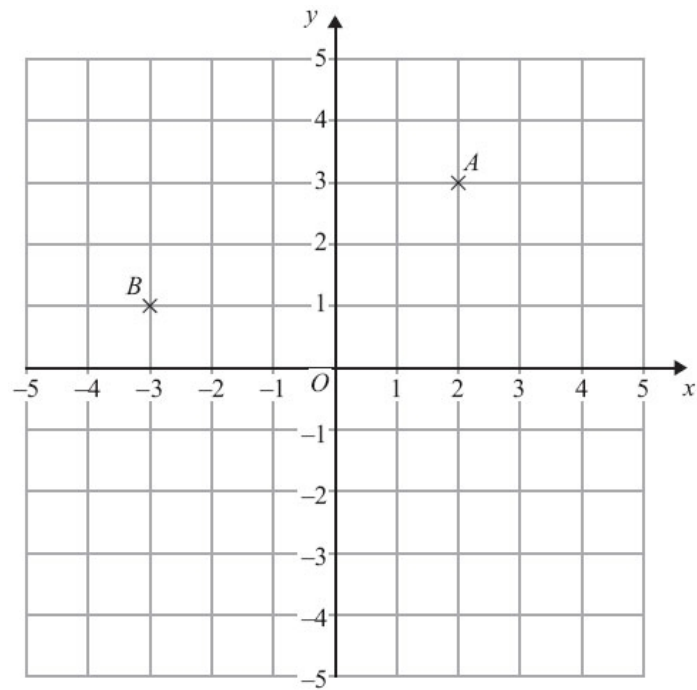
(ii) Write down the coordinates of your point *P*.

(..... , .....)

(2)

**(Total for question = 3 marks)**

**Q5.**



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

( ..... , ..... )

(ii) Write down the coordinates of the point *B*.

( ..... , ..... )

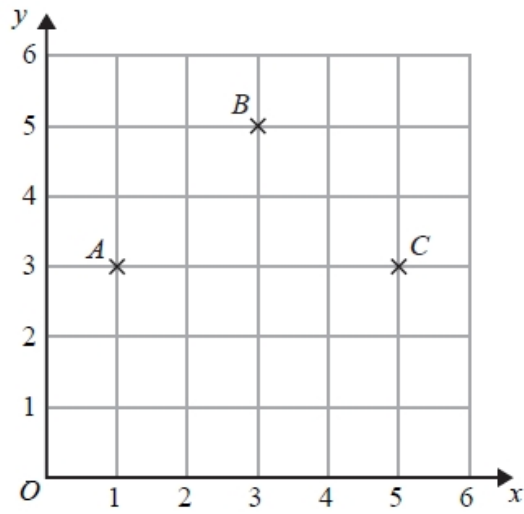
(2)

(b) On the grid, mark with a cross (×) the point (3, -4).  
Label this point *C*.

(1)

**(Total for Question is 3 marks)**

**Q6.**



(a) Write down the coordinates of point C.

(....., .....)  
(1)

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

(....., .....)  
(1)

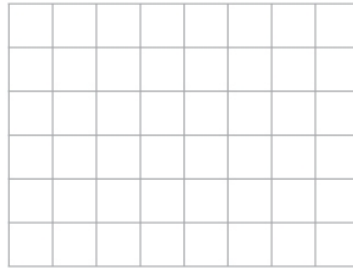
(c) On the grid, mark with a cross (x) the point D so that ABCD is a square. Label this point D.

(1)

**(Total for Question is 3 marks)**

**Q7.**

(a) On the grid, draw a kite.



(1)

(b) Here is a quadrilateral.



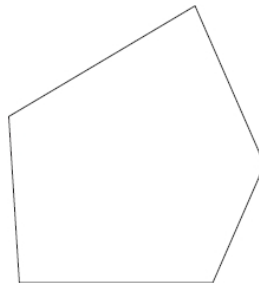
Write down the special name of this quadrilateral.

.....  
(1)

**(Total for Question is 2 marks)**

**Q8.**

Here is a polygon.



(a) Write down the mathematical name of this polygon.

.....  
(1)

Here is a straight line.



(b) In the space above, draw a line parallel to this line.

(1)

**(Total for question = 2 marks)**

**Q9.**

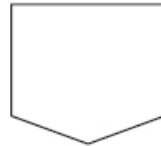
Here are nine shapes.



**A**



**B**



**C**



**D**



**E**



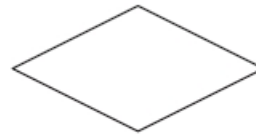
**F**



**G**



**H**



**I**

(a) Write down the letter of a shape that has exactly one line of symmetry.

.....  
(1)

Two of these shapes have rotational symmetry of order 2 and no lines of symmetry.

(b) Write down the letters of these two shapes.

..... and .....

(2)

Shape **D** is a polygon.

(c) Write down the mathematical name of this type of polygon.

.....  
(1)

Shape **E** is a quadrilateral.

(d) Write down the mathematical name of this type of quadrilateral.

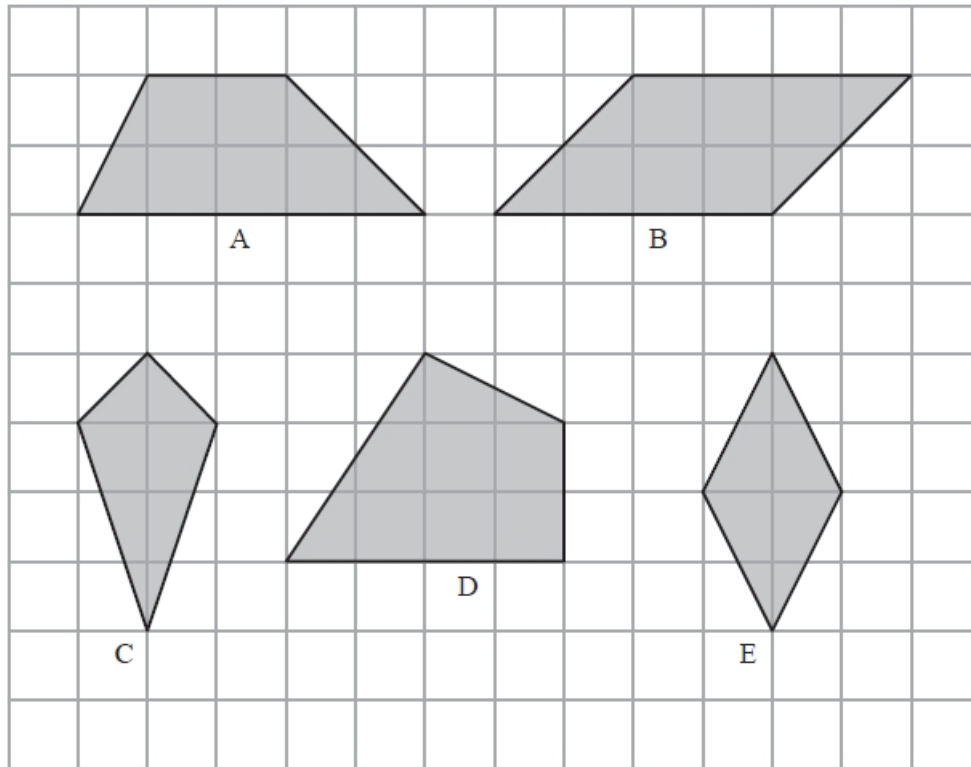
.....  
(1)

**(Total for Question is 5 marks)**



**Q10.**

Here are five shapes on a grid of squares.



(a) Write down the letter of the shape that is a rhombus.

.....  
(1)

(b) How many lines of symmetry does shape C have?

.....  
(1)

Two of the shapes have rotational symmetry of order 2

(c) Write down the letters of these two shapes.

..... and .....  
(1)

**(Total for question = 3 marks)**

**Q11.**

Here is a parallelogram.

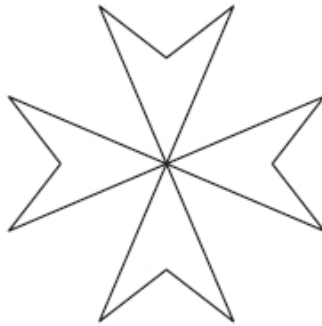


(a) Write down the order of rotational symmetry of this parallelogram.

.....

(1)

Here is a shape.

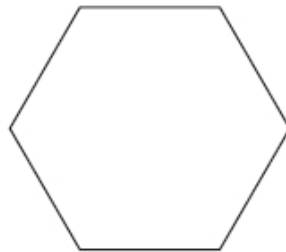


(b) Draw all the lines of symmetry on this shape.

(2)

**(Total for question = 3 marks)**

**Q12.**



(a) Write down the mathematical name of this polygon.

.....

(1)

(b) How many sides has an octagon?

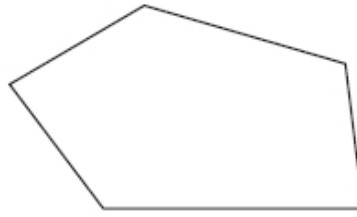
.....

(1)

**(Total for question = 2 marks)**

**Q13.**

Here is a polygon.



(a) Write down the mathematical name of the polygon.

.....  
(1)

(b) Draw a sketch of a hexagon.

(1)

(c) In the space below, draw accurately a rectangle with a length of 5 cm and a width of 3 cm.

(2)

**(Total for Question is 4 marks)**