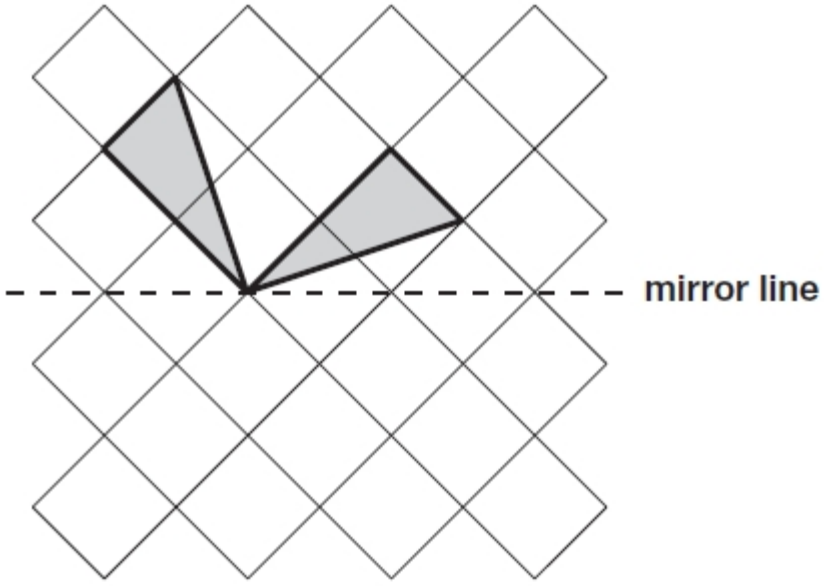
1 Complete this shape so that it is symmetrical about the mirror line.

Use a ruler.

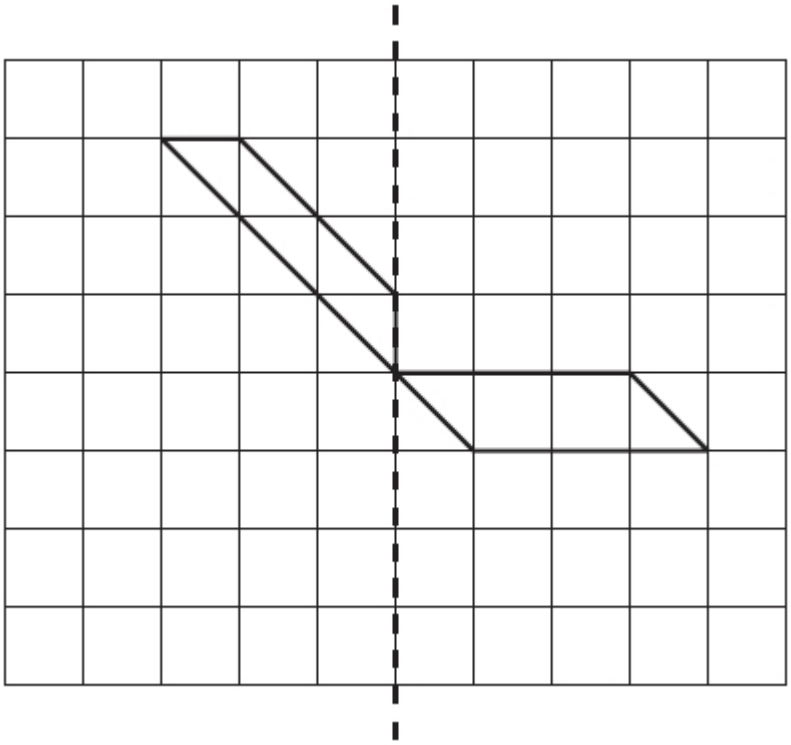


1 mark

2 Here is a design on a square grid.

Complete the design so that it is symmetrical about the mirror line.

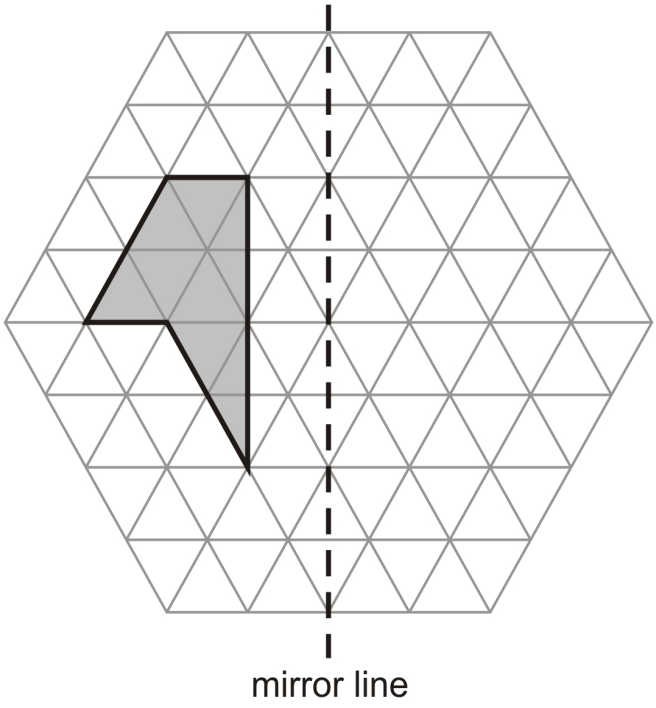
Use a ruler.



mirror line

1 mark

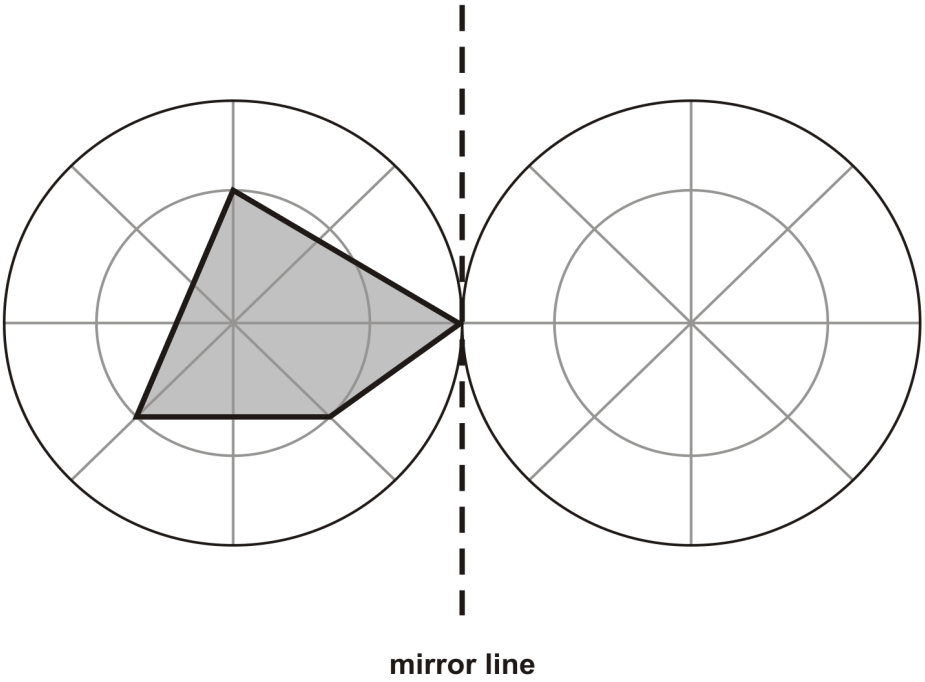
3 Draw the reflection of the shaded shape in the mirror line.



1 mark

4 Draw the reflection of the shaded shape in the mirror line.

Use a ruler.

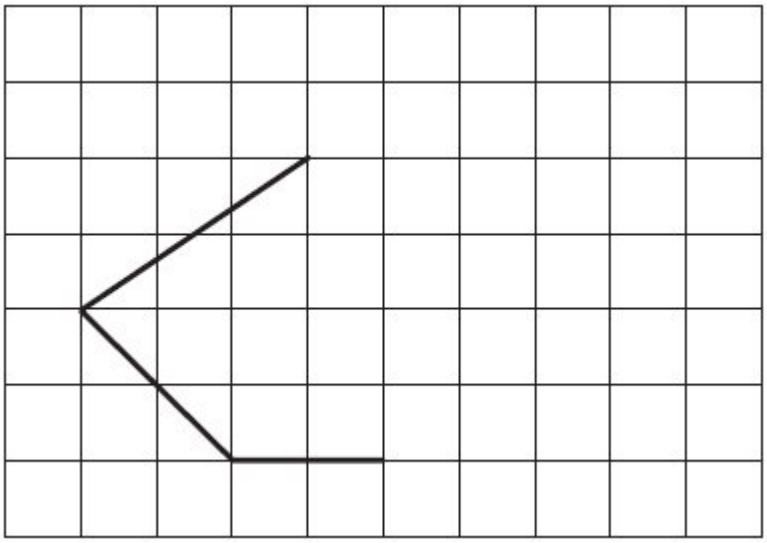


1 mark

5 Here is part of a shape on a square grid.

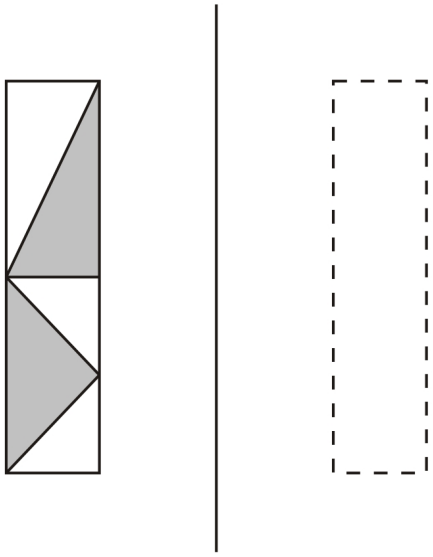
Draw **two more** lines to make a shape which has a line of symmetry.

Use a ruler.



1 mark

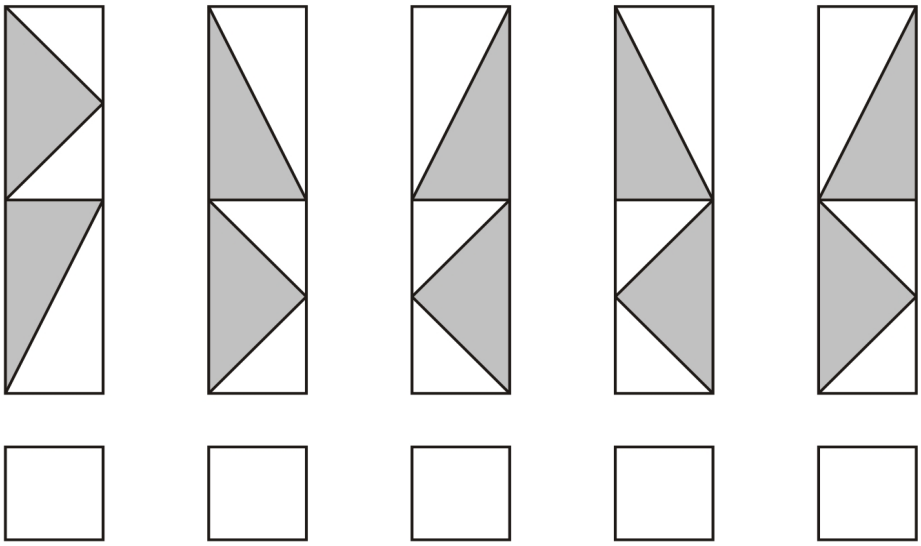
6 Here is a design and a mirror line.



mirror line

Which **one** of the designs below is the reflection of the design in the mirror line?

Tick (✓) the correct design.



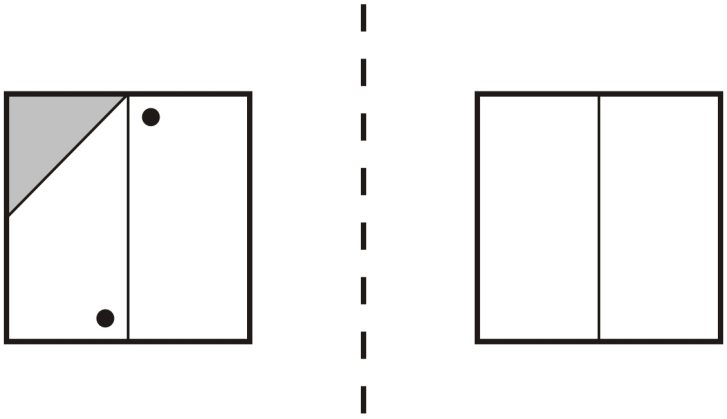
1 mark

7 Here is a square with a design on it.

The square is reflected in the mirror line.

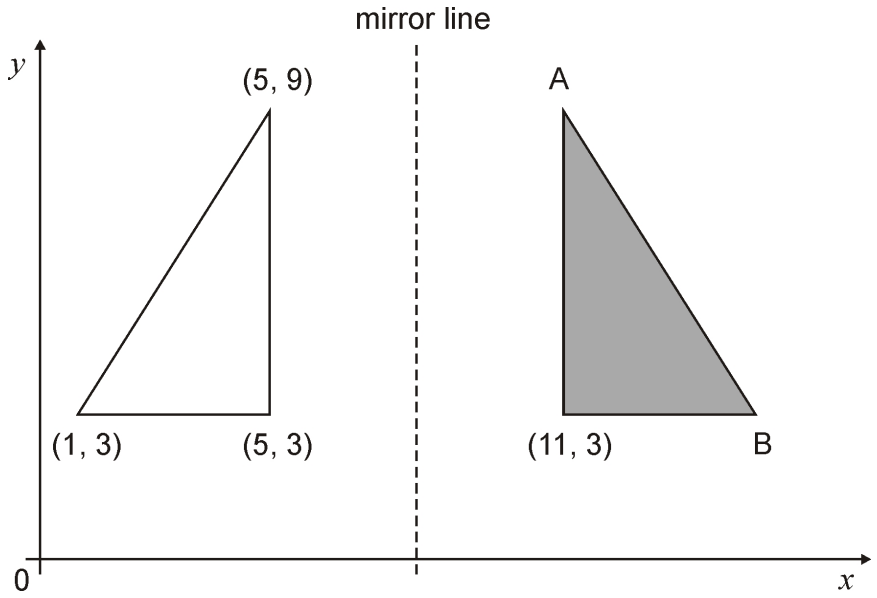
Draw the missing triangle and dots on the reflected square.

You may use a mirror or tracing paper.



1 mark

8 The shaded triangle is a reflection of the white triangle in the mirror line.

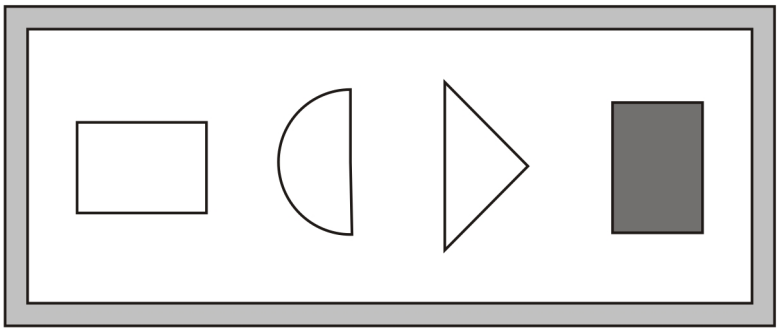


Write the **co-ordinates** of point **A** and point **B**.

A is (,) **B** is (,)

2 mark

9 Here is a pattern on a window.

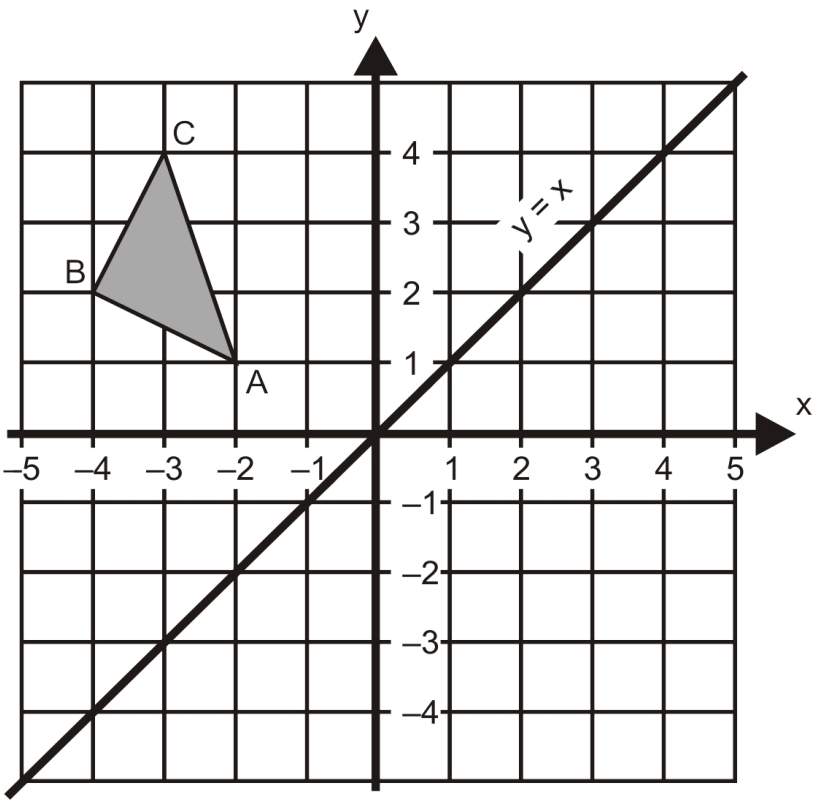


Draw how the pattern would look from the **other side** of the window.

2 marks

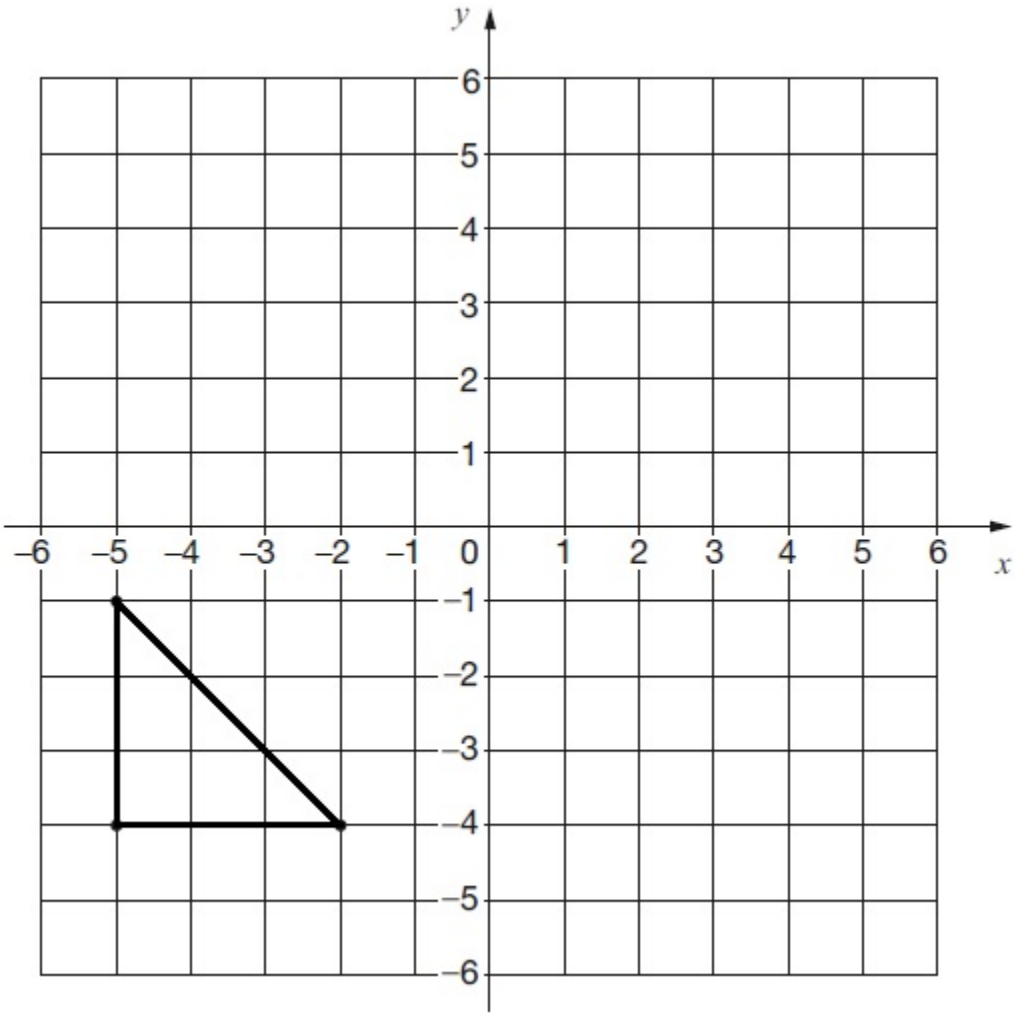
10 The diagram shows the triangle **ABC** and the line **y = x**.

Draw the triangle **PQR** which is the **reflection** of the triangle **ABC** in the line **y = x**.



2 marks

11 Here is a triangle drawn on a coordinate grid.

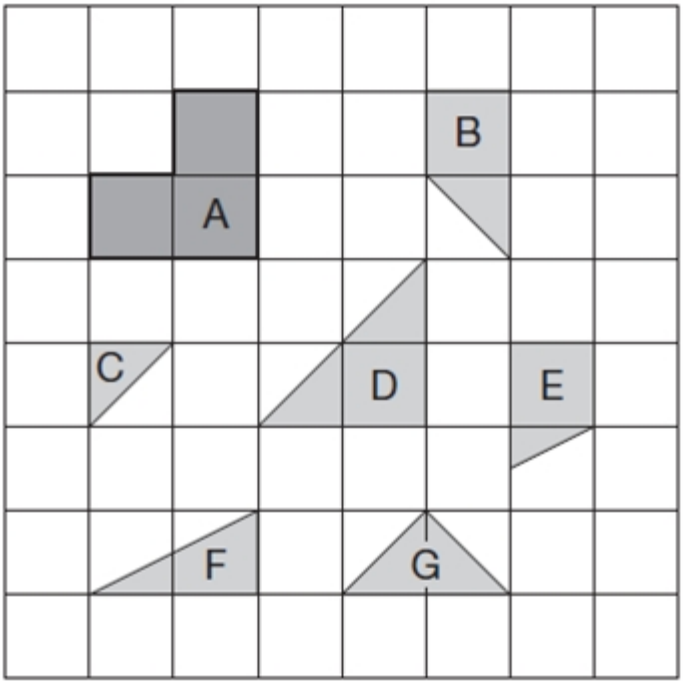


The triangle is translated **7 right** and **5 up**.

Draw the triangle in its new position.

1 mark

12 Here are some tiles on a square grid.



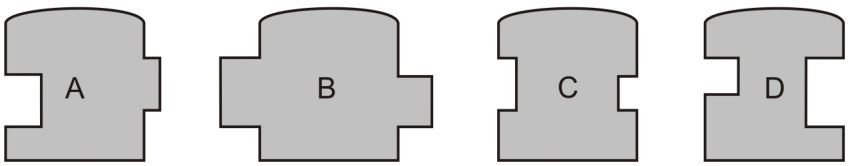
Three different tiles can be fitted together without overlapping to make a shape identical to tile **A**.

Write the letters of the three tiles.

_____ and _____ and _____

1 mark

13 Here are four shapes.

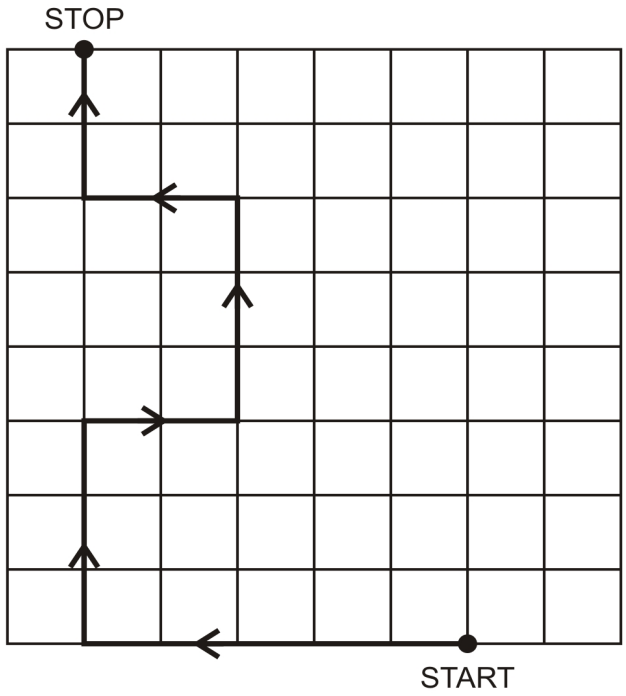


They can be fitted together in a straight line so that there are no gaps between them.

Write the order of the letters of the shapes when they all fit together.

1 mark

14 Follow this route with your pencil.

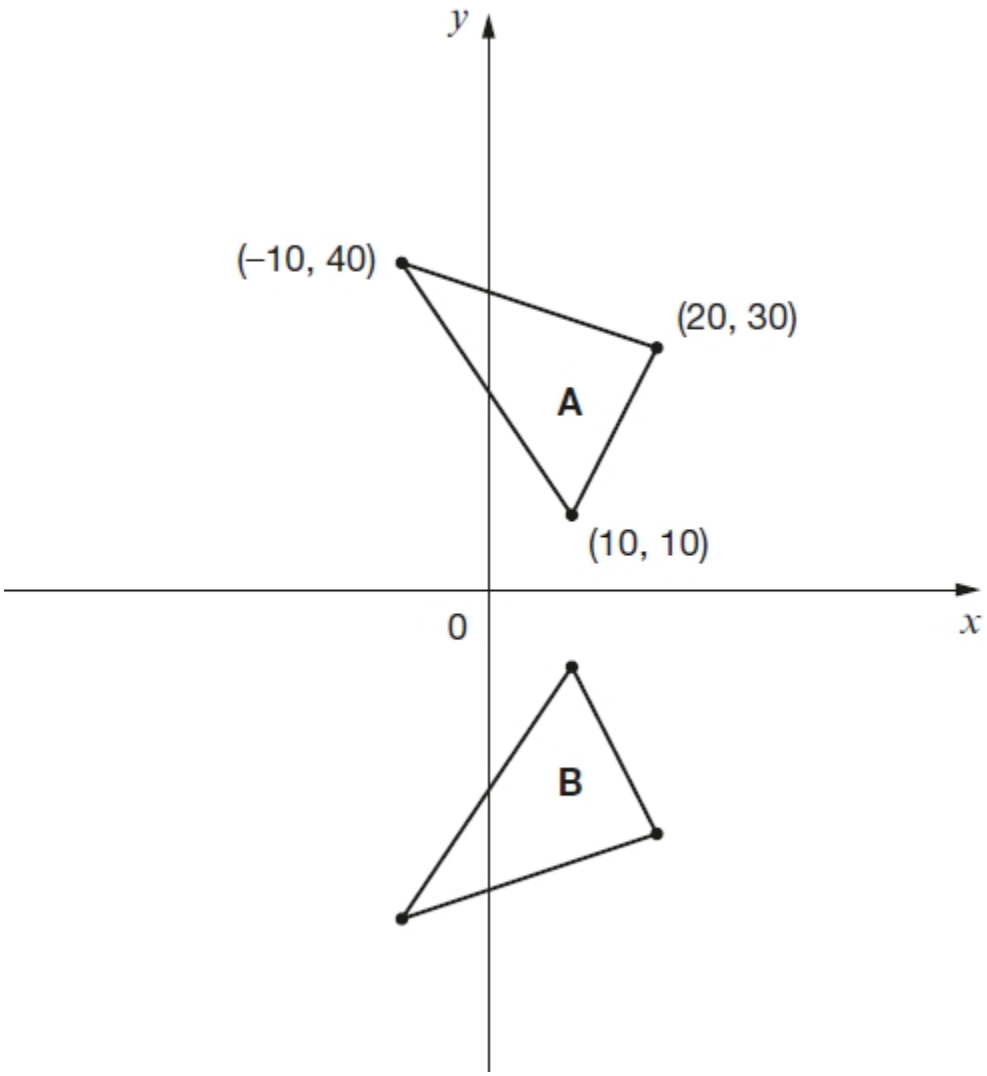


Complete this chart showing the route from START to STOP.

START
left 5
up 3
right 2
_____
_____
_____
STOP

1 mark

15 Here are two triangles drawn on coordinate axes.



Triangle B is a reflection of triangle A in the x-axis.

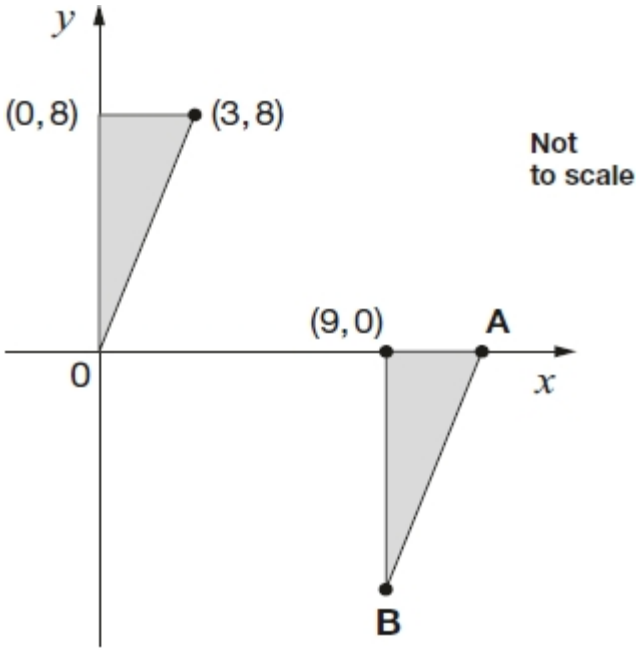
Two of the new vertices of triangle B are (10, −10) and (20, −30).

What are the coordinates of the **third** vertex of triangle B?

(,)

1 mark

16 Here are two **identical** shaded triangles on coordinate axes.



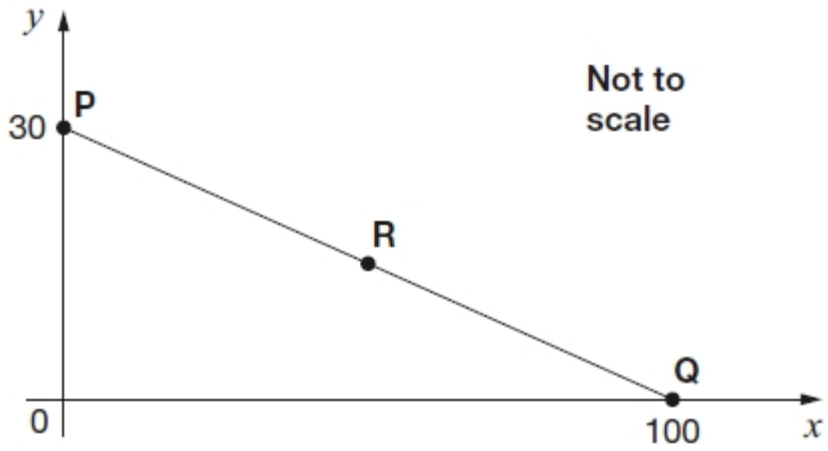
Write the coordinates of points A and B.

A = (,)

B = (,)

2 marks

17 In this diagram **R** is an equal distance from **P** and **Q**.

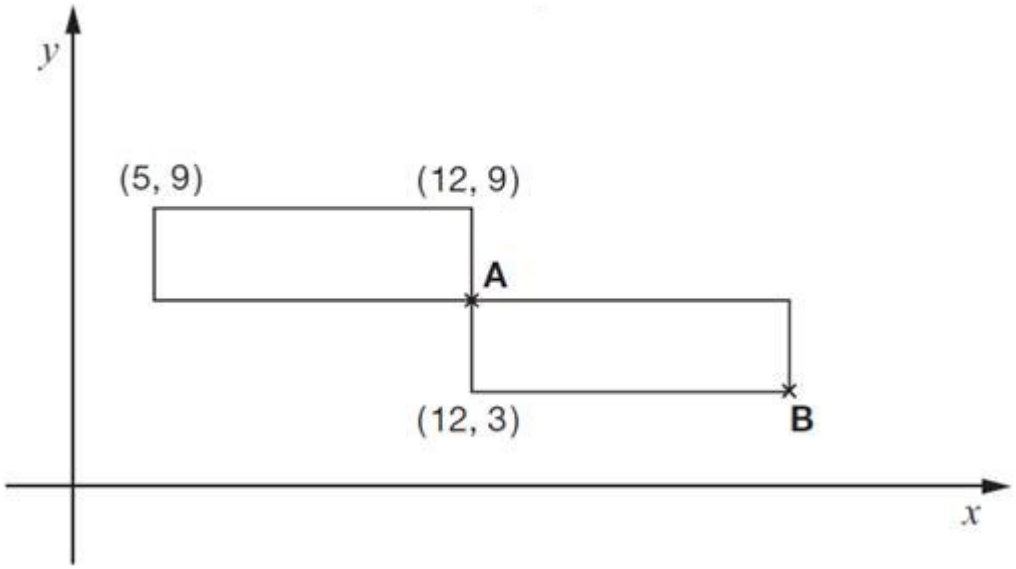


What are the coordinates of **R**?

R = (,)

1 mark

18 This diagram shows two **identical** rectangles on coordinate axes.



Write the **coordinates** of point **A** and point **B**.

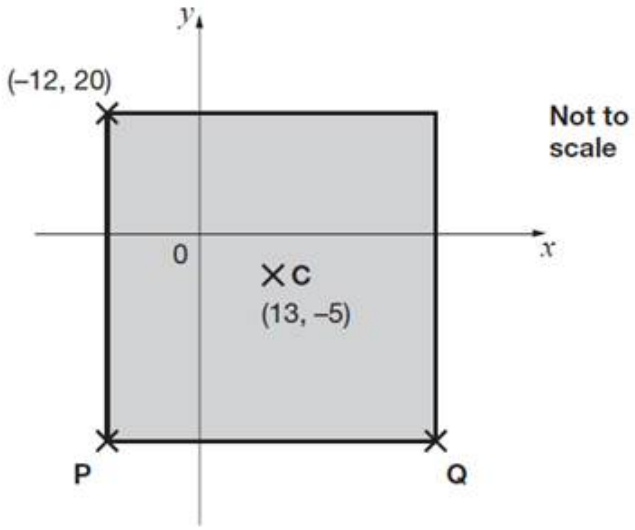
A is (,)

1 mark

B is (,)

1 mark

19 Here is a square on coordinate axes.



C is the centre of the square.

Find the coordinates of **P** and **Q**.

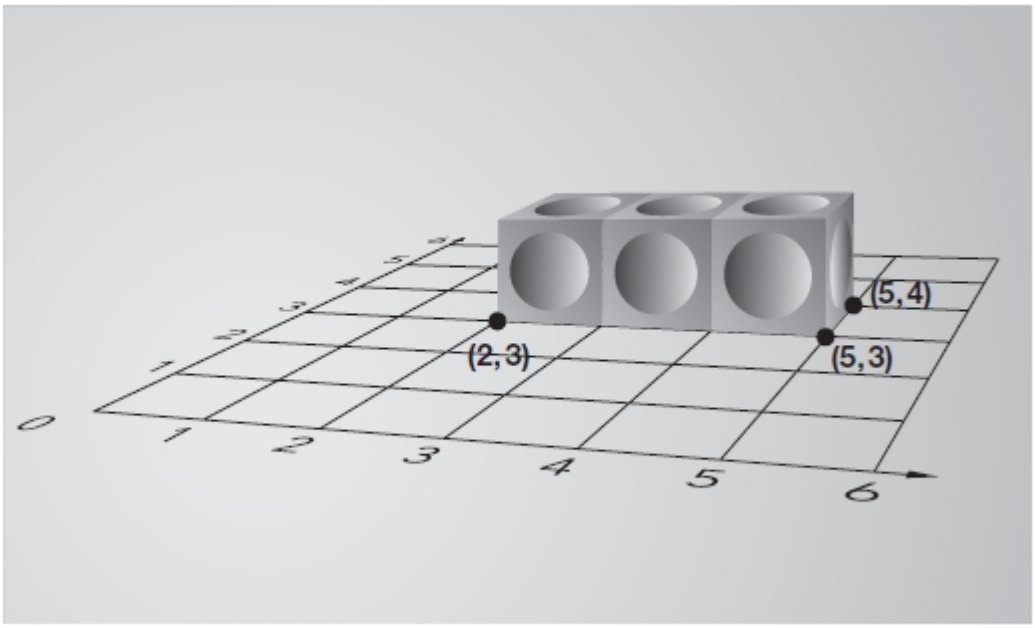
P is (,)

1 mark

Q is (,)

1 mark

20 Alfie places three cubes on a coordinate grid.
The base of his shape is a rectangle.



Complete this sentence:

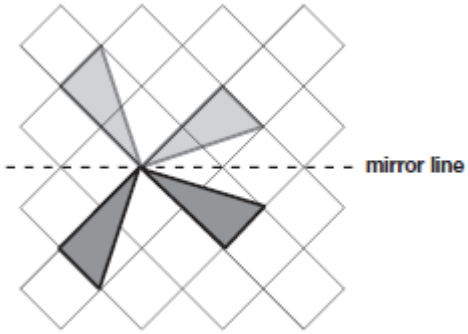
The four **vertices** of the rectangle are

(2, 3), (5, 3), (5, 4) and (,)

1 mark

Mark schemes

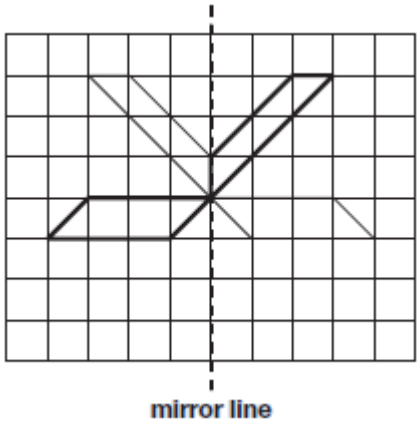
1 Diagram completed as shown:



Accept slight inaccuracies in drawing.
Diagram need not be shaded.

[1]

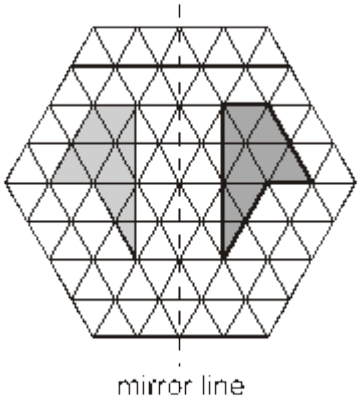
2 Diagram completed as shown:



Accept slight inaccuracies in drawing.

[1]

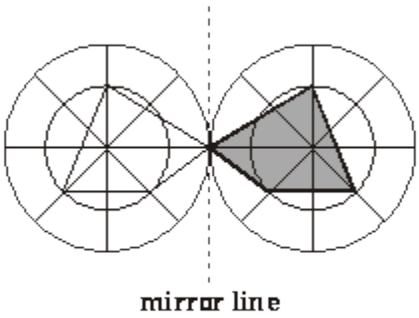
3 Diagram completed as shown:



Accept slight inaccuracies in drawing
Shape need not be shaded.

[1]

4 Diagram completed as shown:

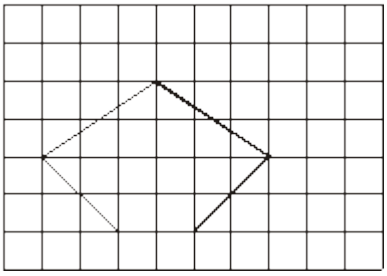


Accept slight inaccuracies in drawing.

Shape need not be shaded.

[1]

5 Two more lines drawn as shown:



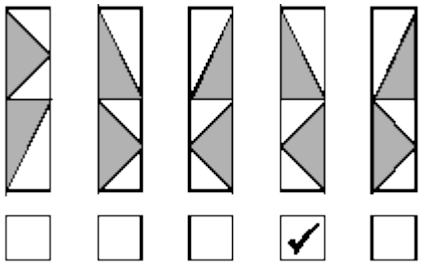
Accept slight inaccuracies in drawing.

***Do not** accept lines drawn outside of the grid.*

Ignore line of symmetry if drawn.

[1]

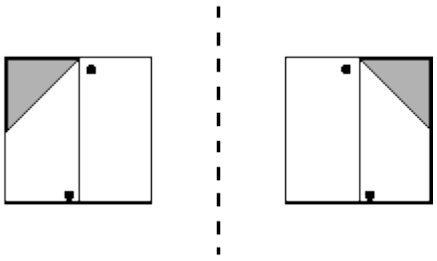
6 The correct shape ticked, as follows:



Accept alternative indications, eg shapes ringed, as long as the intention is clear.

[1]

7 Diagram completed as shown:



Accept slight inaccuracies in drawing provided the intention is clear.
Accept answers without shading.

[1]

8 (a) (11,9)

1

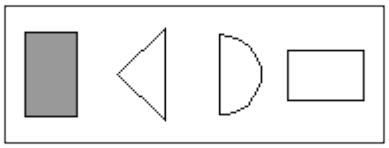
(b) (15,3)

Accept answers written on the diagram with or without brackets and commas. Co-ordinates must be in the correct order.

1

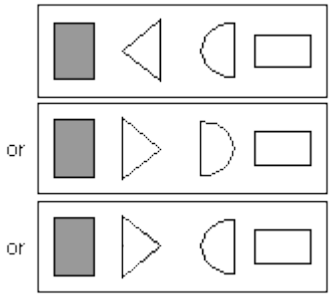
[2]

9 Award **TWO** marks for the correct drawing as below:

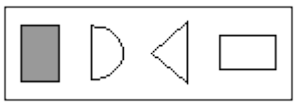


Accept inaccurate but recognisable triangles and semi-circles.

If the drawing is incorrect, award **ONE** mark for the correct location of **BOTH** shapes (triangle on left of semi-circle), ie



OR award **ONE** mark for the correct **orientation** of **BOTH** shapes, ie

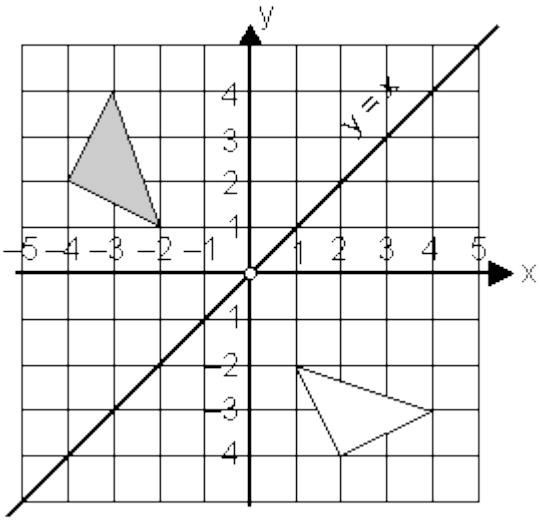


***No** marks are awarded for drawings of only **ONE** shape.*

Up to 2

[2]

10 Award **TWO** marks if **all 3** vertices are in the correct positions.



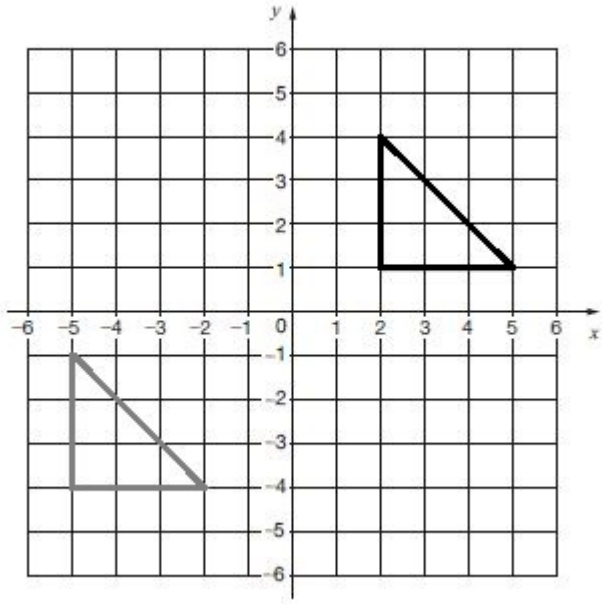
Award **ONE** mark if **only** 2 vertices are in the correct positions.

***No mark** is awarded if **2 or more** vertices are **incorrectly** positioned.*

Up to 2

[2]

11 Triangle with vertices at (2,1) **AND** (2,4) **AND** (5,1) drawn on the grid as shown:



Accept slight inaccuracies in drawing

[1]

12 B **AND** C **AND** G

Letters may be given in any order.

U1

[1]

13 D B A C

Accept C A B D.

U1

[1]

14 up 3
left 2
up 2

All correct for 1 mark.

[1]

15 (–10, –40)

[1]

16 (a) (12, 0)

Accept unambiguous answers written on the diagram.

1

(b) (9, –8)

If the answer to (a) is (9, –8) ***AND*** *the answer to (b) is (12, 0) then award* ***ONE*** *mark for (b).*

1

[2]

17 (50, 15)

[1]

18 (a) A is (12, 6)

1

(b) B is (19, 3)

1

Coordinates must be given in the correct order.

If the answer to (a) is (19, 3) ***AND*** *the answer to (b) is (12, 6) then award* ***ONE*** *mark for (b)*

Accept unambiguous answers written on the diagram.

[2]

19 (a) P is (−12, −30)

! Coordinates

Accept unambiguous answers written on the diagram

1

(b) Q is (38, −30)

! Answers for P and Q transposed

Award 1 mark for Q only, ie:

- *P is (38, –30)*

  Q is (–12, –30)

! Answer for Q correctly follows through from an incorrect answer for P

Award 1m for Q for follow-through from P as

('their x' + 50, 'their y')

1

[2]

20 (2, 4)

[1]