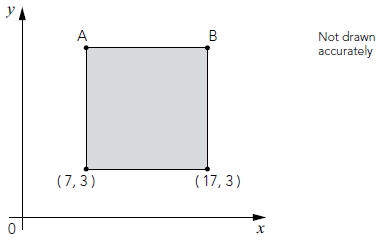
**Q1.**

The shaded shape is a **square**.



What are the coordinates of A and B?



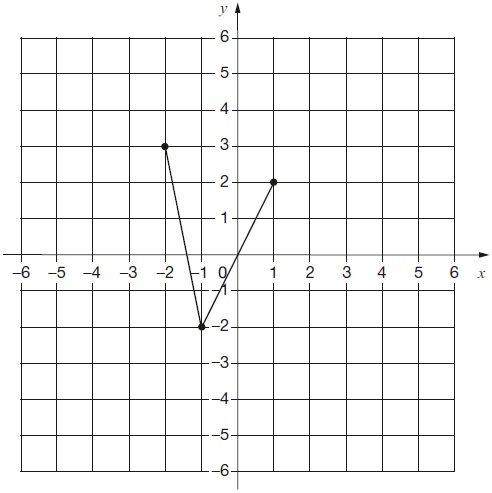
1 mark



1 mark

**Q2.**

On the grid there are three points joined by two lines.



Lara plots **another point** on the grid at **(−1, 2)**.

She joins the points to make a quadrilateral.

Complete Lara’s quadrilateral on the grid.  
Use a ruler.

1 mark

Then Lara translates the quadrilateral **4 squares to the right.**

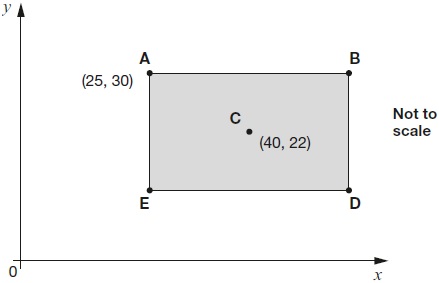
Draw the quadrilateral in its new position on the grid.

1 mark

**Q3.**

**ABDE** is a rectangle on coordinate axes.

The sides of the rectangle are parallel to the axes.



Point **C** is the centre of the rectangle.

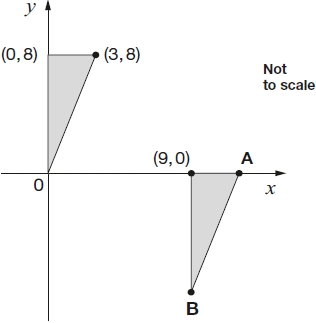
What are the coordinates of **B** and **D**?

|  |  |
| --- | --- |
| **B** is |  |
| **D** is |  |

2 marks

**Q4.**

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



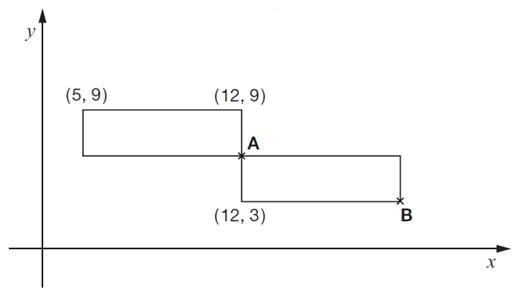
Write the coordinates of points A and B.

|  |  |
| --- | --- |
| **A =** |  |
| **B =** |  |

2 marks

**Q5.**

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



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



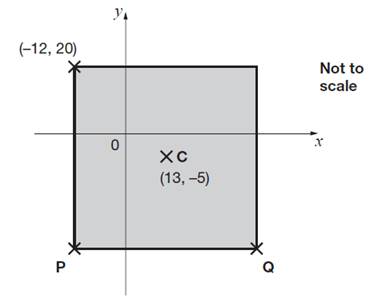
1 mark



1 mark

**Q6.**

Here is a square on coordinate axes.



**C** is the centre of the square.

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



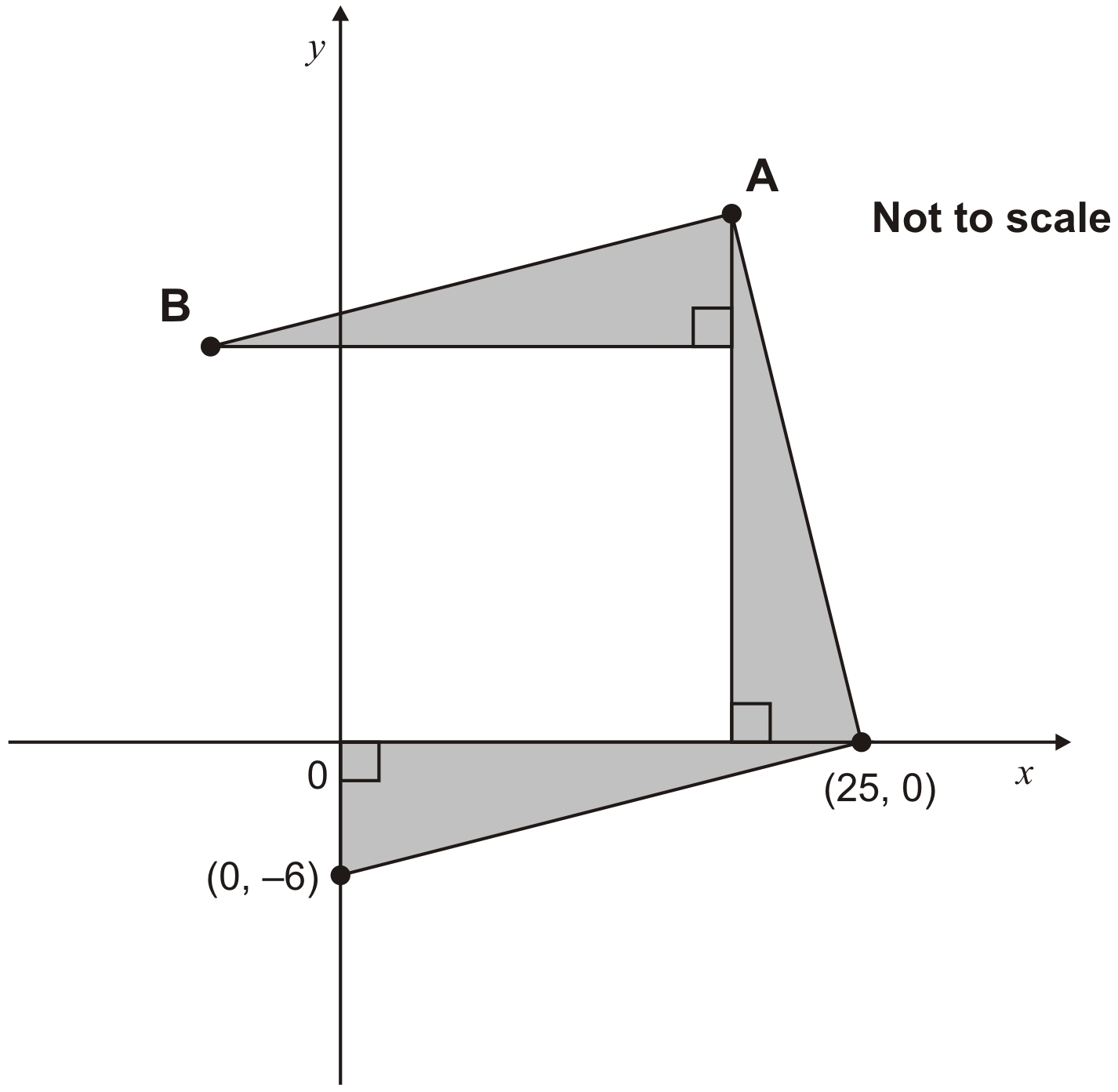
1 mark



1 mark

**Q7.**

The diagram shows three **identical** shaded triangles on coordinate axes.



What are the coordinates of **A** and **B**?



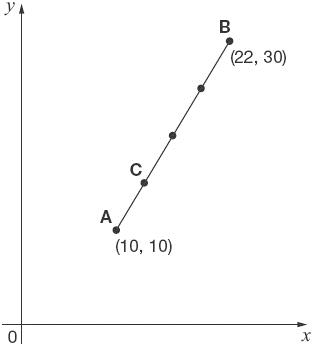
1 mark



1 mark

**Q8.**

**A** and **B** are joined by a straight line on coordinate axes.



The dots on the line are equally spaced.

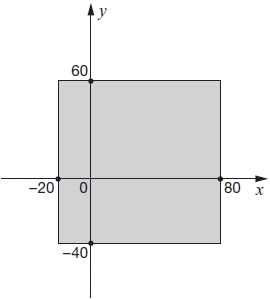
What are the coordinates of **C**?



2 marks

**Q9.**

Here is a shaded square on *x* and *y* axes.



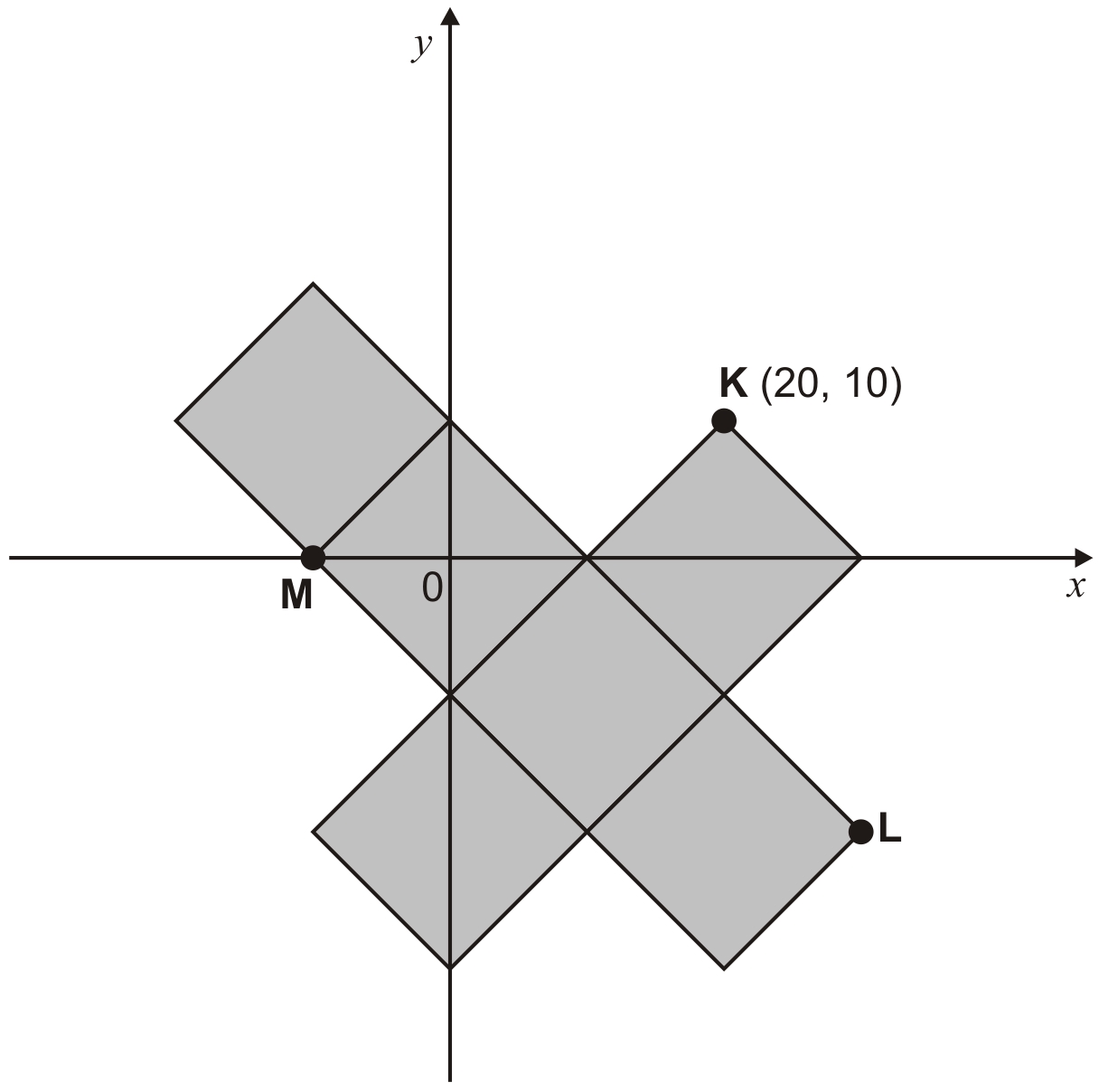
For each of these points, put a tick (✔) to show if it is inside the square or outside the square.

|  |  |  |
| --- | --- | --- |
|  | inside the square | outside the square |
| (50, 70) |  |  |
| (60, –30) |  |  |
| (–10, 50) |  |  |
| (–30, –30) |  |  |

2 marks

**Q10.**

The diagram shows **6 shaded squares**.



**K** is the point **(20, 10)**

What are the coordinates of **L** and **M**?

|  |  |
| --- | --- |
| **L is** |  |

1 mark

|  |  |
| --- | --- |
| **M is** |  |

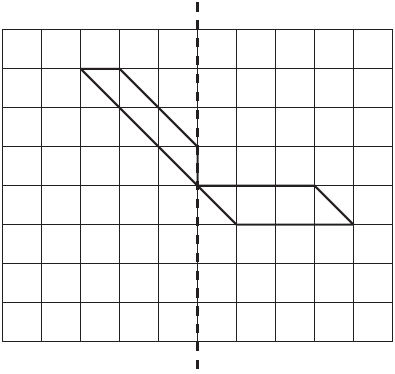
1 mark

**Q11.**

Here is a design on a square grid.

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

Use a ruler.

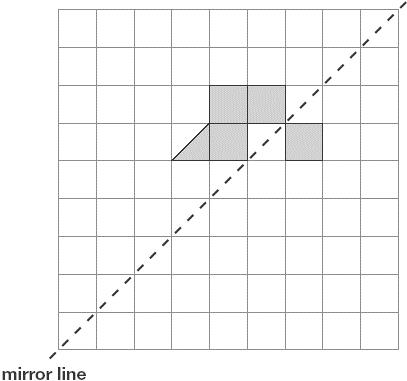


**mirror line**

1 mark

**Q12.**

Shade **two** squares and **one** triangle to make this design symmetrical about the mirror line.



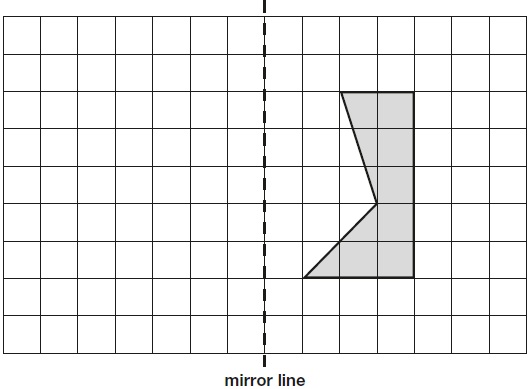
1 mark

**Q13.**

Here is a shaded shape on a square grid.

Reflect the shape in the mirror line.

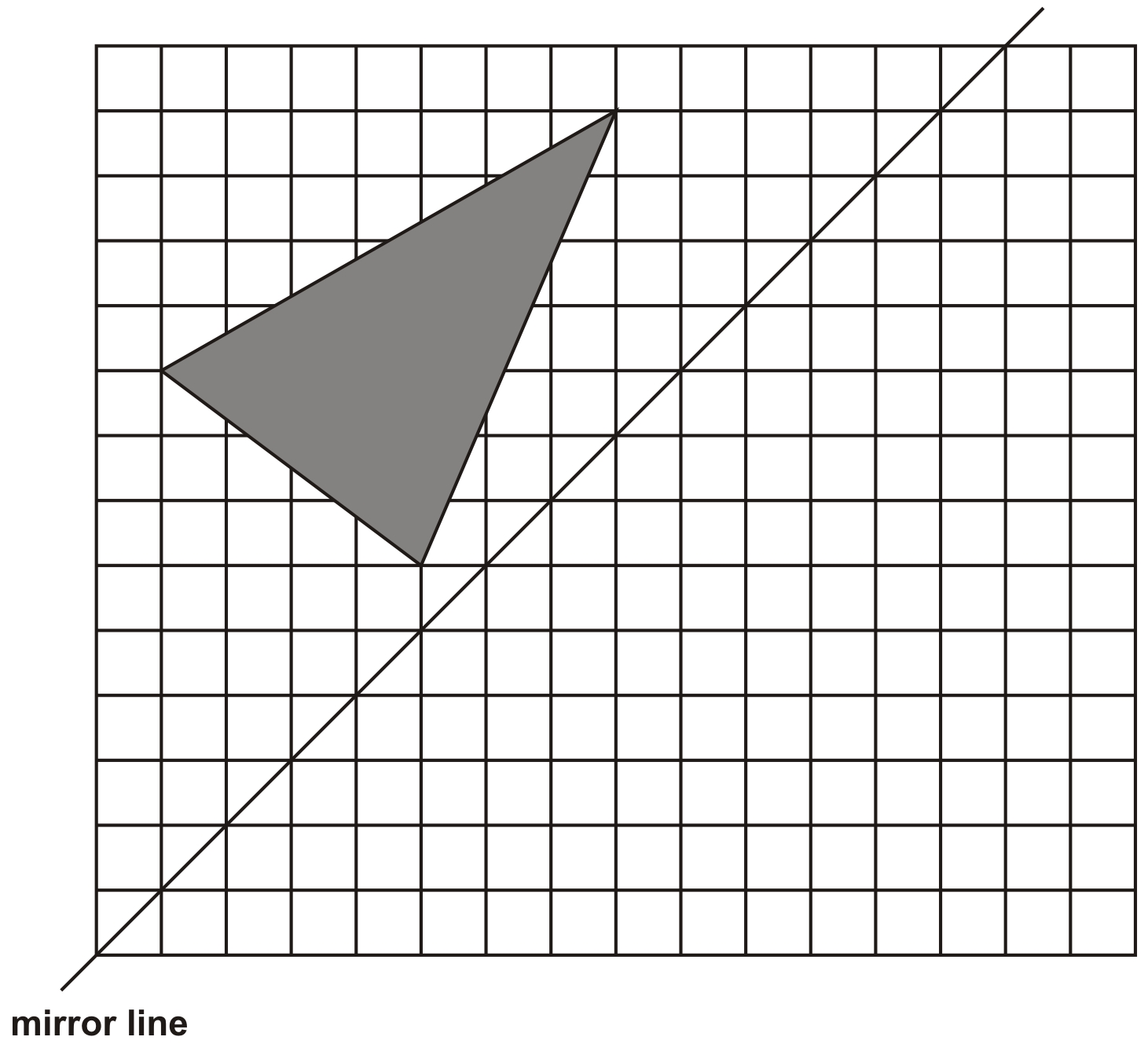
Use a ruler.



1 mark

**Q14.**

Draw the **reflection** of the shaded triangle in the mirror line.

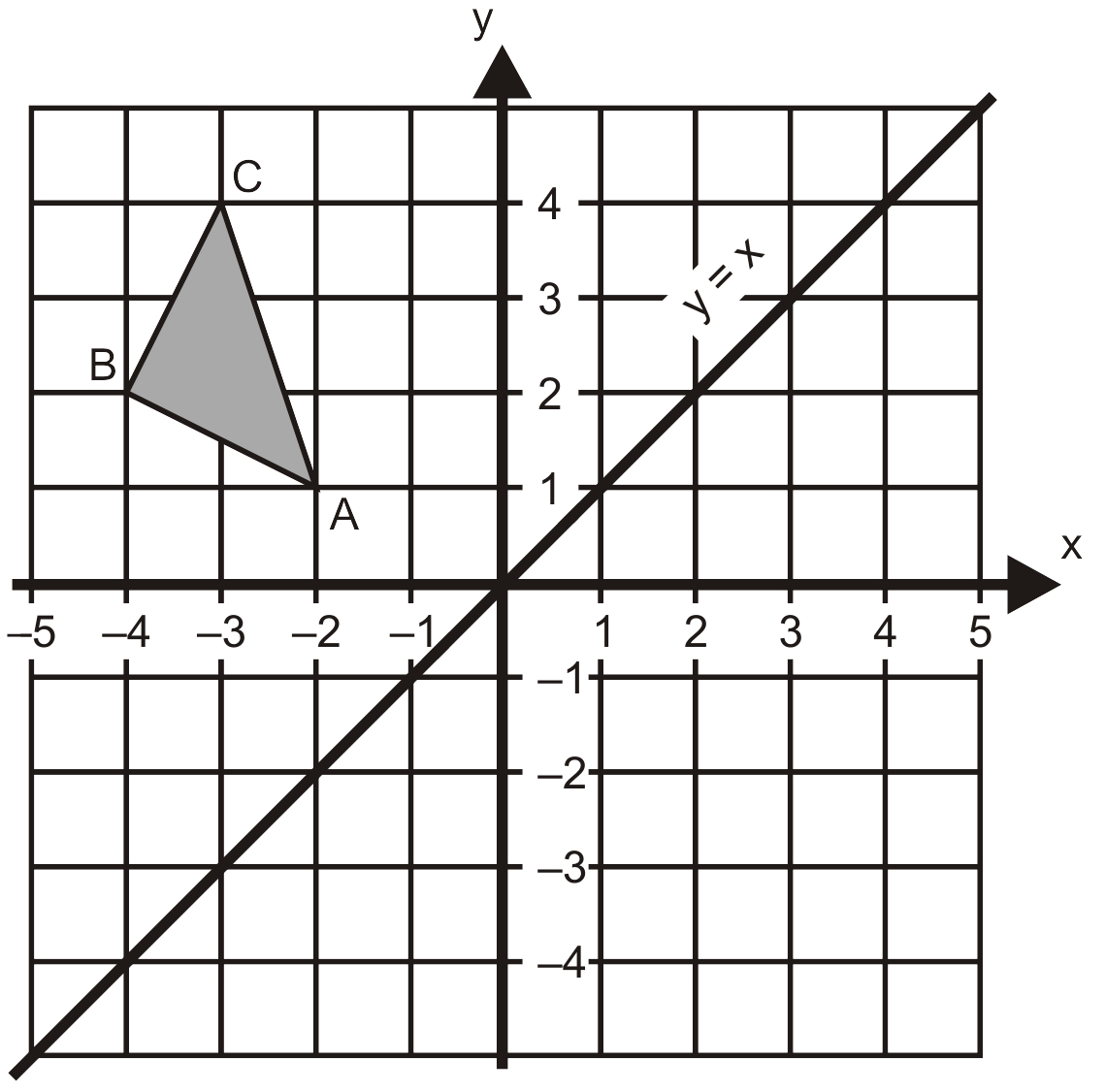


2 marks

**Q15.**

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

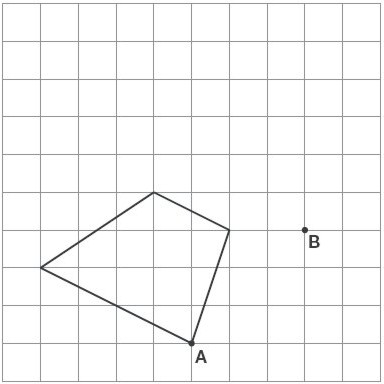
**Q16.**

Here is a quadrilateral on a square grid.

The quadrilateral is translated so that point **A** moves to point **B**.

Draw the quadrilateral in its new position.

Use a ruler.



1 mark

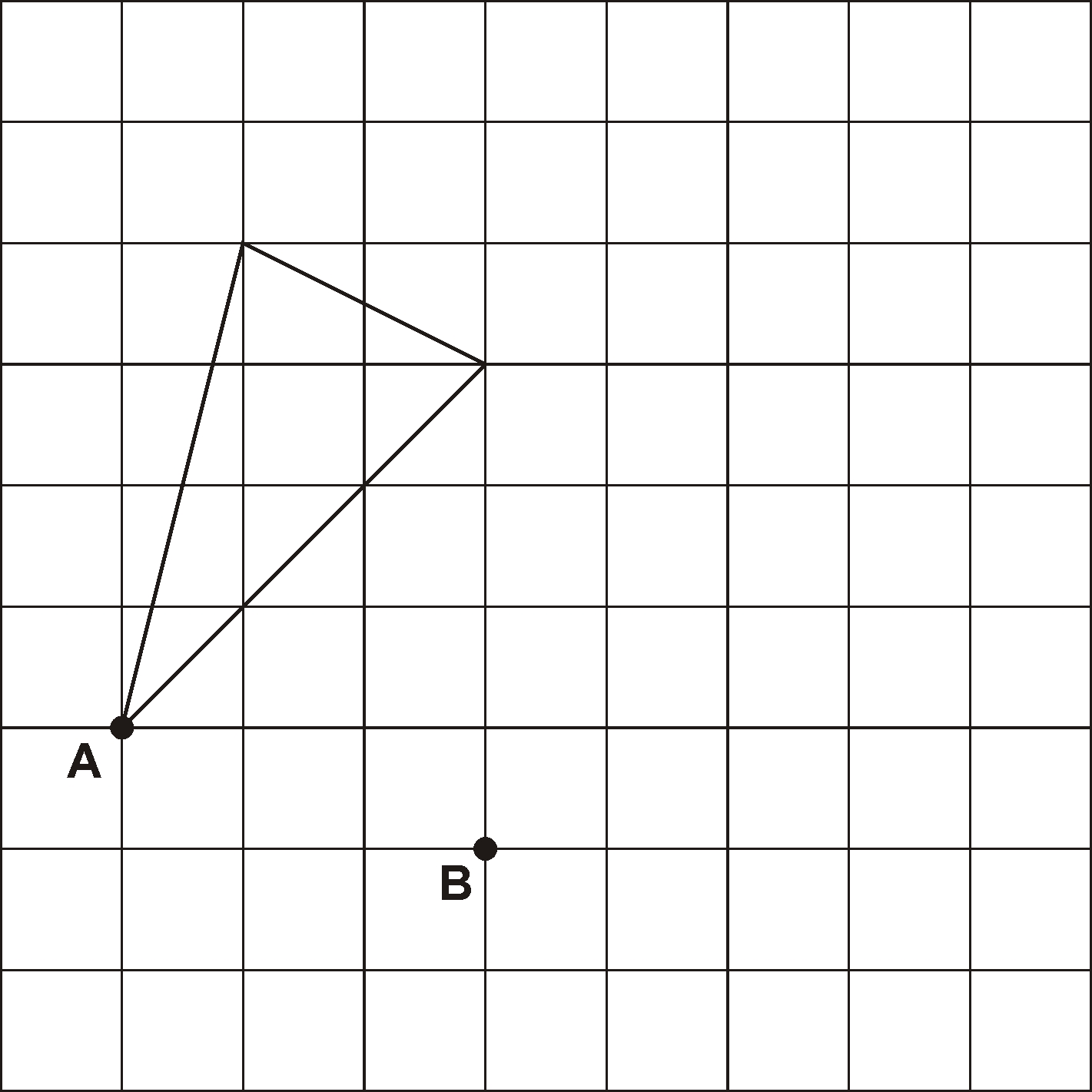
**Q17.**

Here is a triangle on a square grid.

The triangle is translated so that point **A** moves to point **B**.

Draw the triangle in its new position.

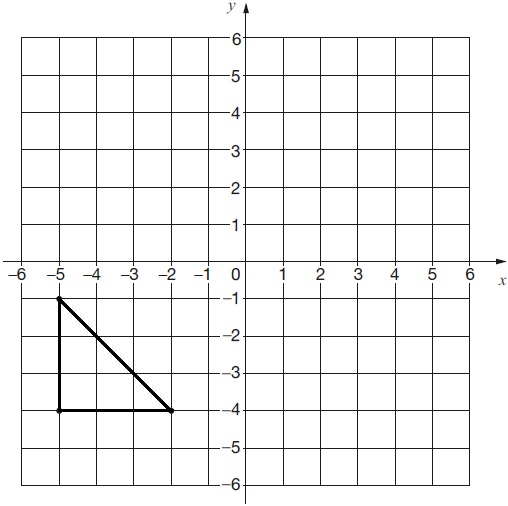
Use a ruler.



1 mark

**Q18.**

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

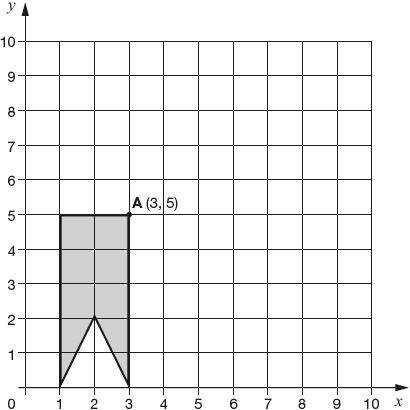
**Q19.**

Here is a shape on a grid.

The shape is translated so that point **A** moves to (7, 8).

Draw the shape in its new position.

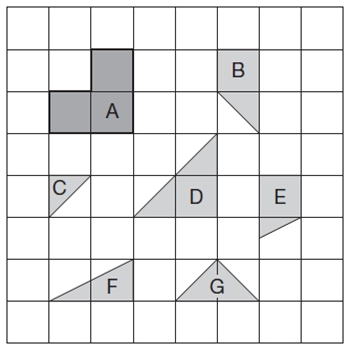
Use a ruler.



1 mark

**Q20.**

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

Mark schemes

**Q1.**

Indicates correct coordinates for both points, ie A as (7, 13) and B as (17, 13)

**2**

*or*

Indicates correct coordinates for one point

*or*

Transposes the responses, ie A as (17, 13) and B as (7, 13)

*or*

The only error is to indicate incorrect, but consistent, *y* ordinates, provided *y* > 3

eg

•      A as (7, 12) and B as (17, 12)

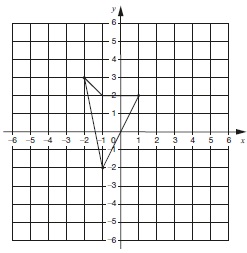
**1**

**U2**

**[2]**

**Q2.**

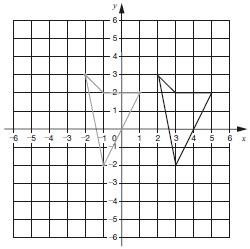
(a)  Quadrilateral completed, as shown:



*Accept slight inaccuracies in drawing provided the intention is clear.*

**1**

(b)  Quadrilateral translated correctly, as shown:



*Accept slight inaccuracies in drawing provided the intention is clear.*

*Award* ***ONE*** *mark if the answer to (b) is a quadrilateral with sides drawn and is a correct translation of their answer to (a).*

**1**

**[2]**

**Q3.**

(a)  Award **ONE** mark for **B** is (55, 30)

**1**

(b)  Award **ONE** mark for **D** is (55, 14)

If B and D are incorrect, **ONE** mark may be given for the correct *y* coordinate for both B and D and the same *x* coordinate (incorrect) for both points, i.e.

•   D is (same *x* as B, 14)

**1**

**[2]**

**Q4.**

(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]**

**Q5.**

(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]**

**Q6.**

(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]**

**Q7.**

(a)     (19, 25)

*! Coordinates*

**1**

(b)     (–6, 19)

*! Gives values for A and B transposed*

*Award 1m for part (b) only, ie:*

*•    A is (–6, 19) and B is (19, 25)*

**1**

**[2]**

**Q8.**

(a)     13 for the *x* coordinate

*Accept unambiguous answers written on the diagram.*

**U1**

(b)     15 for the *y* coordinate

*Accept unambiguous answers written on the diagram.*

**1**

*If the answer to (a) is 15* ***AND*** *the answer to (b) is 13, then award* ***ONE*** *mark for (b).*

**[2]**

**Q9.**

Award **TWO** marks for four rows ticked correctly, as shown:



If the answer is incorrect, award **ONE** mark for three rows ticked correctly.

*Accept: alternative unambiguous indications such as  or* ***Y****.*



**Up to 2**

**[2]**

**Q10.**

(a)     L is (30, –20)

*Coordinates must be in the correct order.*

**1**

(b)     M is (–10, 0)

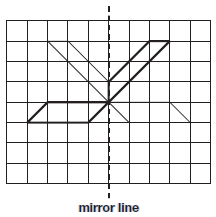
*Accept answers on the diagram, with or without commas or brackets.*

**1**

**[2]**

**Q11.**

Diagram completed as shown:



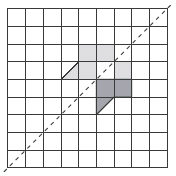
*Accept slight inaccuracies in drawing.*

**[1]**

**Q12.**

Diagram completed as shown:

**mirror line**

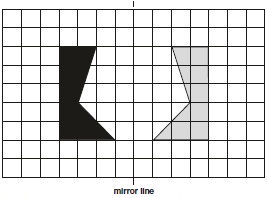


*Accept inaccurate drawing provided the intention is clear.*

**[1]**

**Q13.**

Diagram completed, as shown:



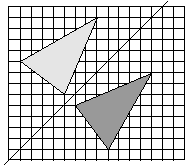
*Accept slight inaccuracies in drawing.*

*Shape need not be shaded for the award of* ***ONE*** *mark.*

**[1]**

**Q14.**

Award **TWO** marks for the correct drawing as shown below.



          If the triangle is drawn incorrectly, award **ONE** mark for **TWO** vertices of the  
reflection correctly located on the grid.

          If all of the vertices are drawn correctly but the triangle is not drawn or is  
incomplete, award **ONE** mark.

*Accept drawing errors of up to 1mm from a correct vertex.*

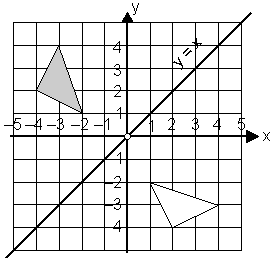
*Triangle need not be shaded.*

**Up to 2**

**[2]**

**Q15.**

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



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

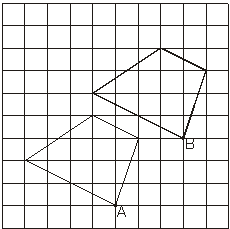
***No mark*** *is awarded if* ***2 or more*** *vertices are* ***incorrectly*** *positioned.*

**Up to 2**

**[2]**

**Q16.**

Diagram completed as shown:

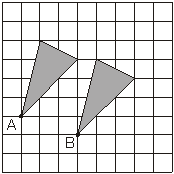


*Accept slight inaccuracies in drawing*

**[1]**

**Q17.**

Diagram completed as shown:

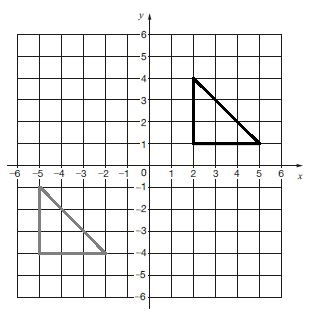


*Accept slight inaccuracies in drawing     
(see page 3 for guidance).*

**[1]**

**Q18.**

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

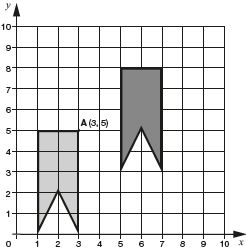


*Accept slight inaccuracies in drawing*

**[1]**

**Q19.**

Shape located correctly, as shown:



*Accept slight inaccuracies in drawing (see guidance).*

*Shape need not be shaded for the award of* ***ONE*** *mark.*

**[1]**

**Q20.**

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

*Letters may be given in any order.*

**U1**

**[1]**