

**Question 1**

The scale drawing below shows the positions of an airport tower,  $T$ , and a radio mast,  $M$ .

1 cm on the diagram represents 20 km.



- (a)
  - i) Measure, in centimetres, the distance  $TM$ .
  - ii) Work out the distance in km of the airport tower from the radio mast.
- (b)
  - i) Measure and write down the bearing of the airport tower from the radio mast.
  - ii) Write down the bearing of the radio mast from the airport tower.

A plane is 80 km from the radio mast on a bearing of  $220^\circ$ .

- (c) Plot the position of the plane, using a scale of 1 cm to 20 km on the scale diagram.

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**Question 2**

Here is a sketch of a triangle.

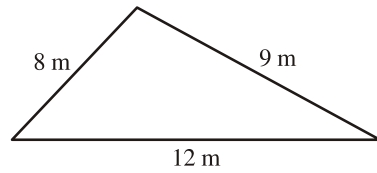


Diagram **NOT**  
accurately drawn.

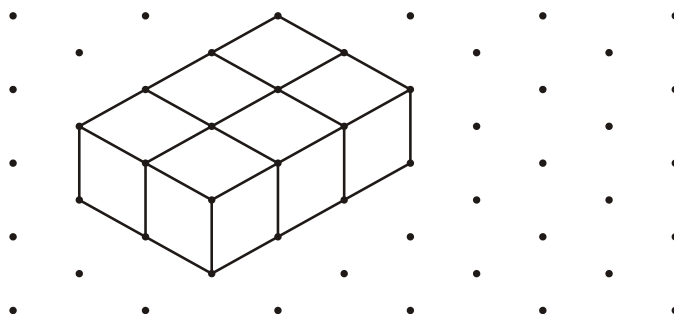
The lengths of the sides of the triangle are 8 m, 9 m and 12 m.

Use a scale of 1 cm to 2 m to make an accurate scale drawing of the triangle.

**( 3 marks)**

### Question 3

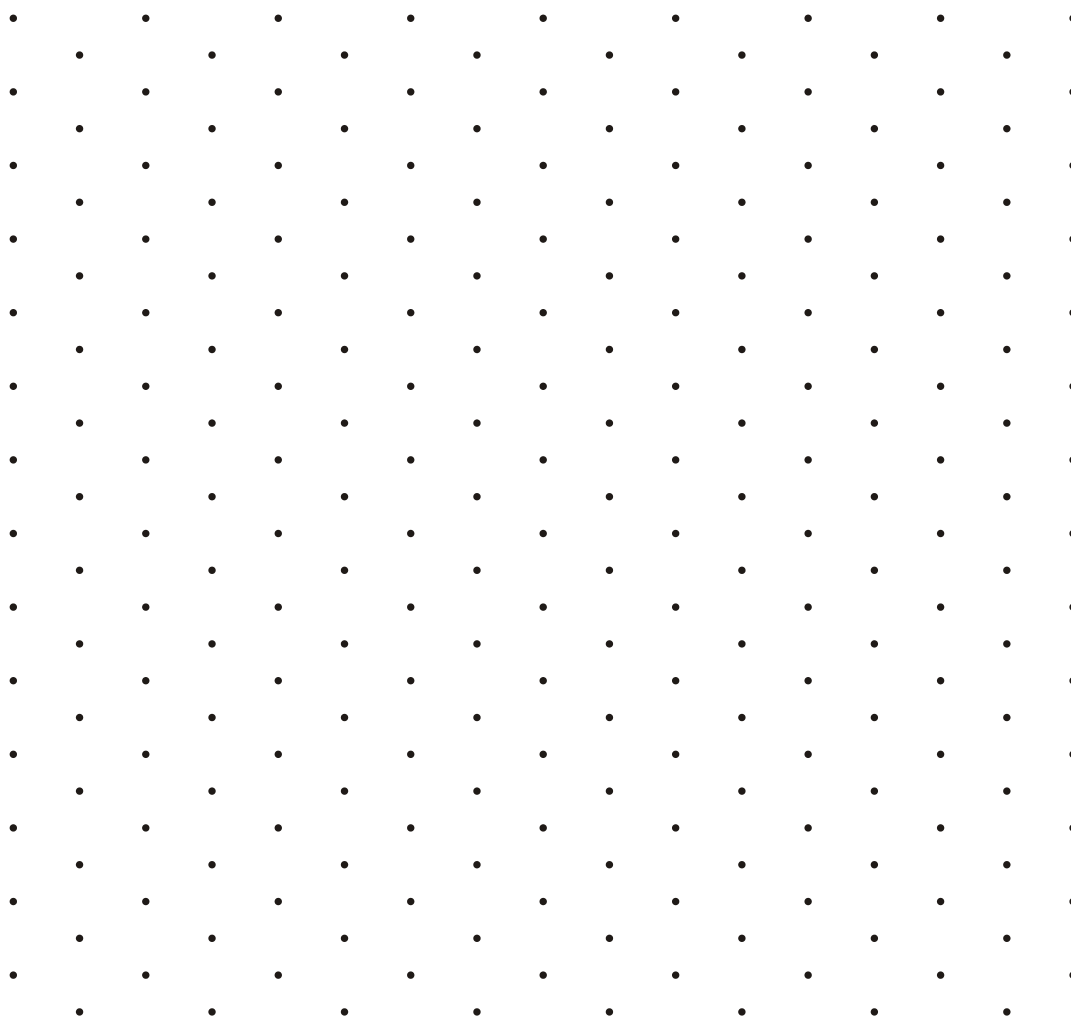
The measurements of the cuboid on Grid A are 3 cm by 2 cm by 1 cm.



GRID A

On Grid B draw a cuboid with measurements which are **double** the measurements of the cuboid on Grid A.

GRID B



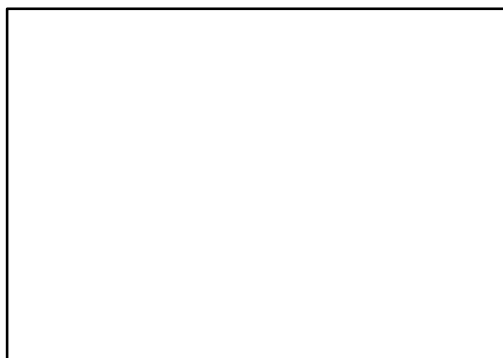
(2 marks)



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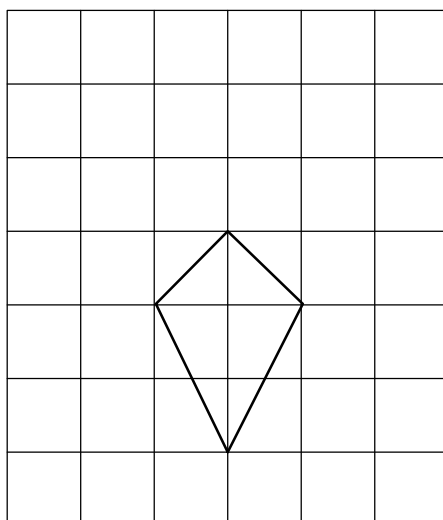
**Question 4**

- (a)** Draw in all the lines of symmetry for this rectangle. **(2 marks)**



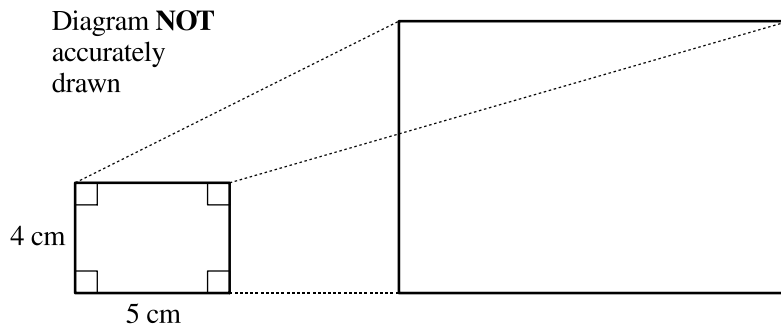
- (b)** Write down the name of a four sided shape that has rotational symmetry of order 4. **(1 mark)**

- (c)** On the grid below, show how this kite will tessellate. You should draw at least 6 kites. **(2 marks)**



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**Question 5**



The diagram represents two photographs.

- (a)** Work out the area of the small photograph.

State the units of your answer.

**(2 marks)**

The photograph is to be enlarged by scale factor 3.

- (b)** Write down the measurements of the enlarged photograph.

**(2 marks)**

- (c)** How many times bigger is the area of the enlarged photograph than the area of the small photograph?

**(2 marks)**

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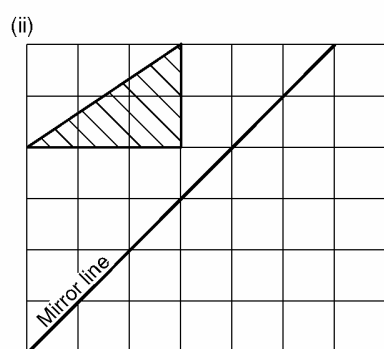
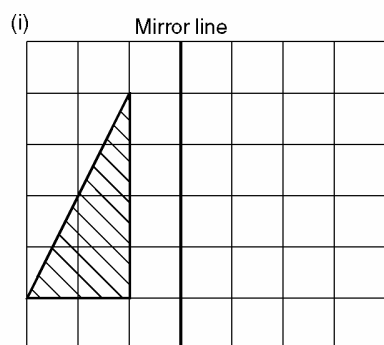
**Question 6**

Make an accurate drawing of a rectangle 8 cm long and 4.5 cm wide.

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**Question 7**

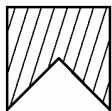
Reflect these shapes in the Mirror lines.



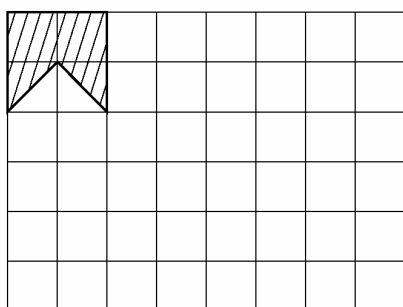
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**Question 8**

Show how this shape will tessellate on the grid below.



The first one has been drawn in for you.  
You should draw at least 8 shapes.

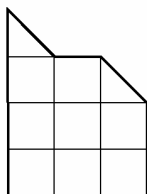




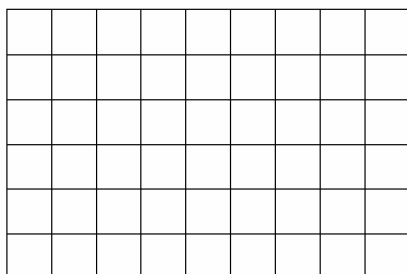
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**Question 9**

The shape shown can be used to tessellate the inside of the rectangle shown.



Show, on the grid below, how this shape tessellates.



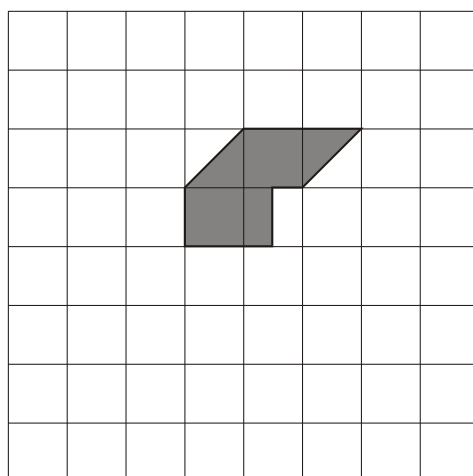
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**Question 10**

Rashmi uses a map with a scale of 1 to 50 000.  
She measures the distance between two points on the map.  
The distance that Rashmi measures on the map is 8.2 cm.  
Work out the actual distance between the two points  
Give your answer in kilometres.

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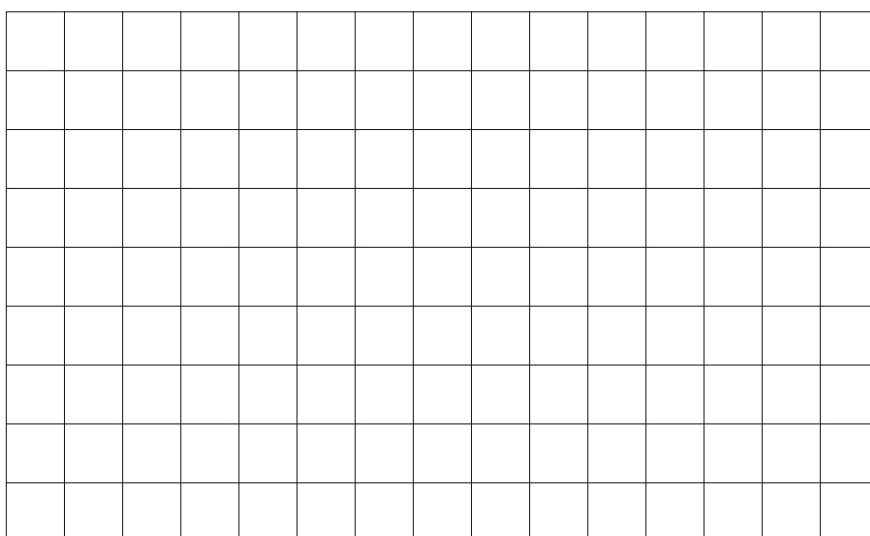
**Question 11**



GRID A

A shaded shape is shown on grid A.

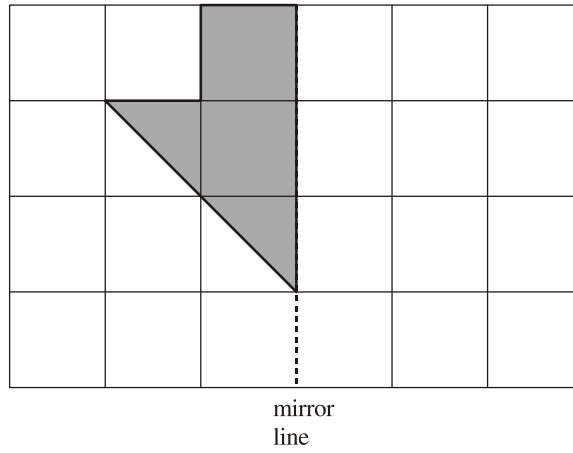
On grid B, draw an enlargement, scale factor 2, of the shaded shape. **(2 marks)**



GRID B

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**Question 12**



Draw the reflection of this shape in the mirror line.

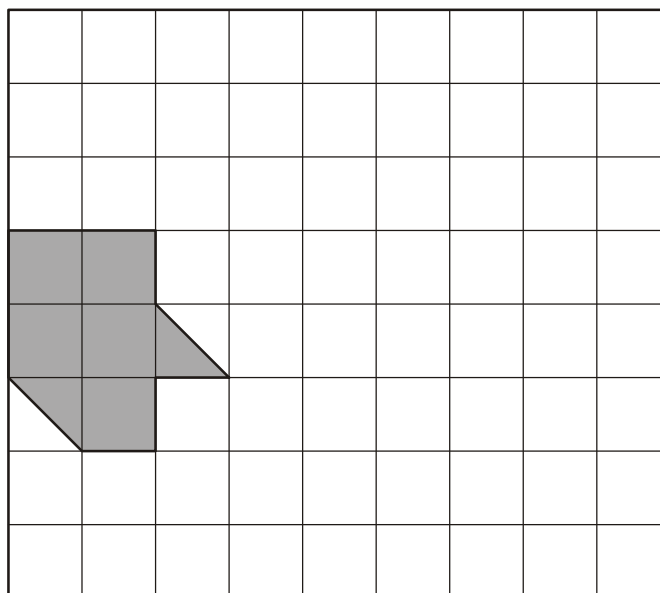
**(2 marks)**

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**Question 13**

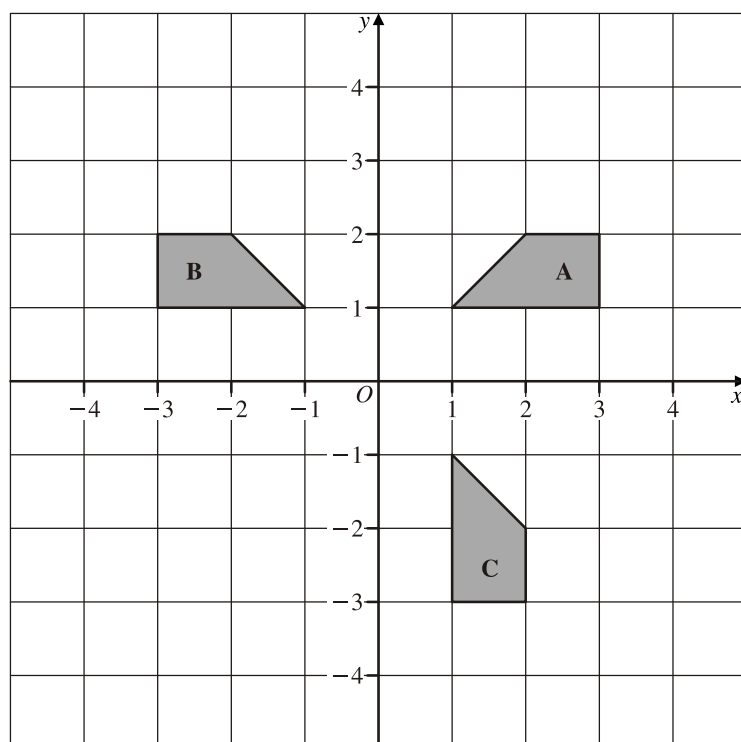
On the grid below, show how the shaded shape will tessellate.

You should draw at least 5 shapes.



**(3 marks)**

**Question 14**



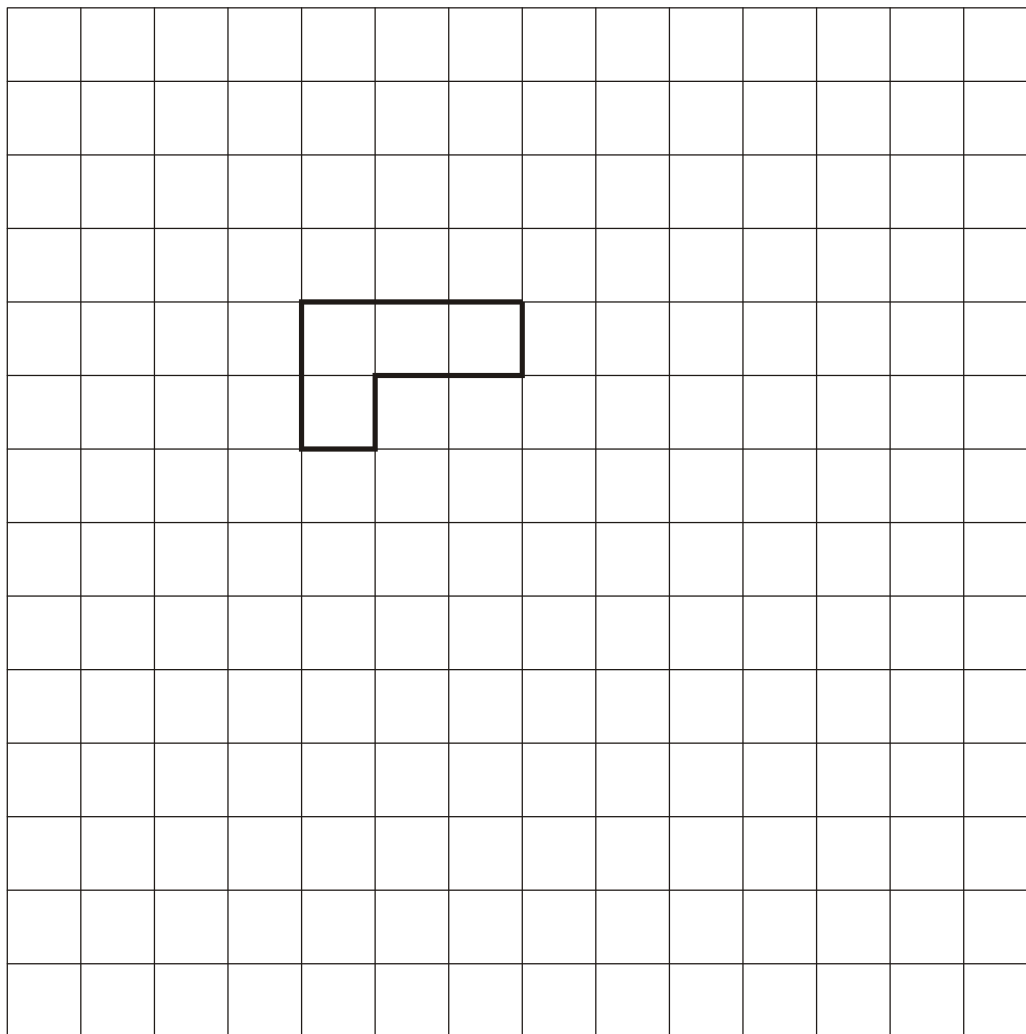
- (a) Describe fully the single transformation which takes shape **A** onto shape **B**. **(2 marks)**
- (b) Describe fully the single transformation which takes shape **A** onto shape **C**. **(3 marks)**

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**Question 15**

On the grid below, show how this shape will tessellate.

You should draw at least 6 shapes.



**(2 marks)**