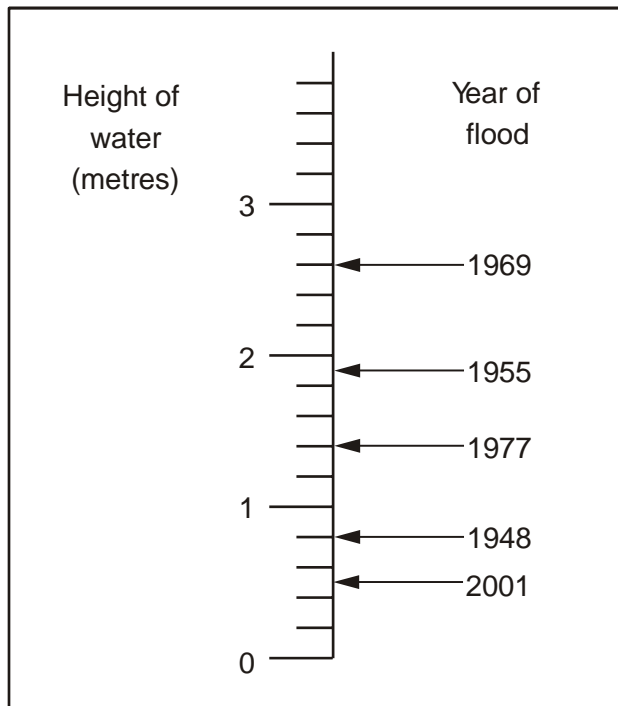


1. This scale shows the dates of floods and the height of the water in the floods.



How high was the water in the 1955 flood?

 m

1 mark

How much higher was the water in the 1969 flood than in the 1948 flood?

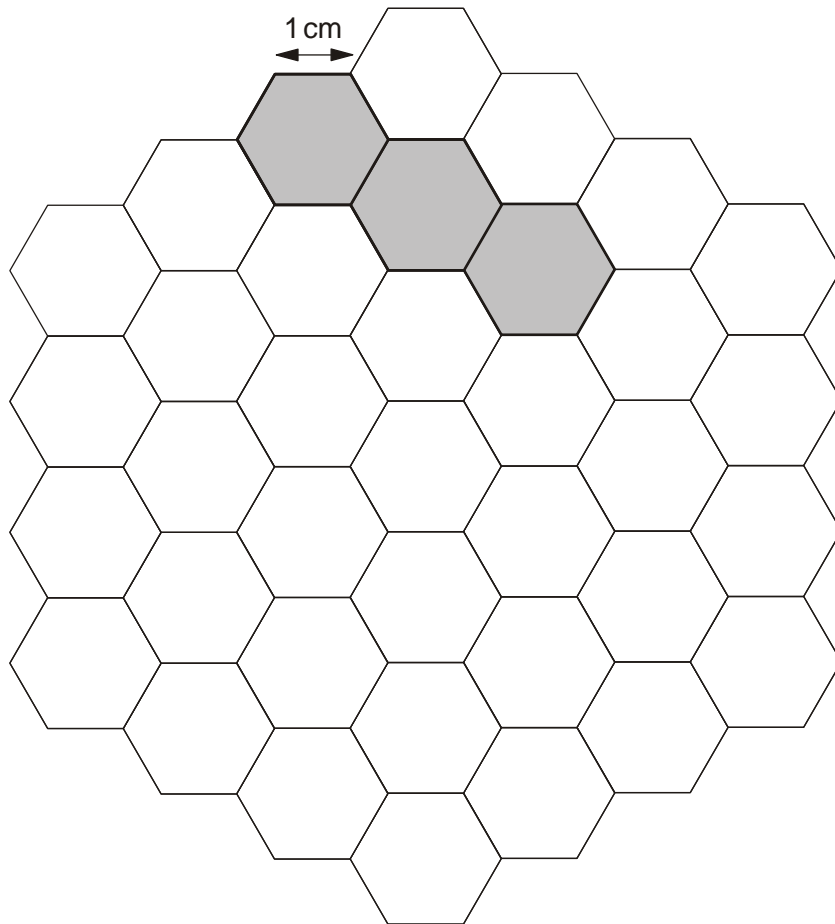
 m

1 mark

2. Here is a grid of regular hexagons.

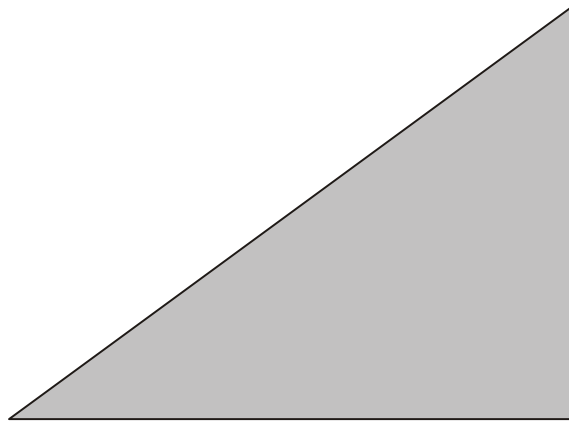
The shaded shape has an area of 3 hexagons and a perimeter of 14cm.

Draw another shape on the grid which has an **area** of 4 hexagons and a **perimeter** of 14cm.



1 mark

3.



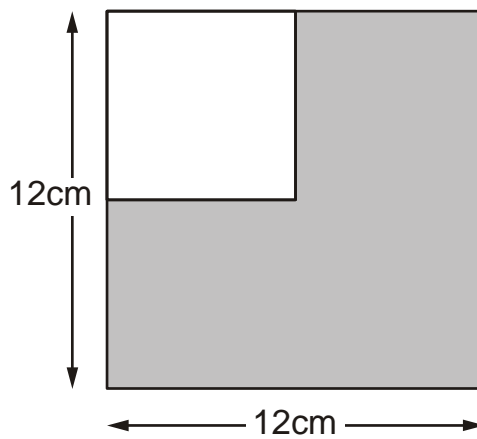
Measure accurately the length of the **shortest** side of this triangle. Write your answer in centimetres.

cm

1 mark

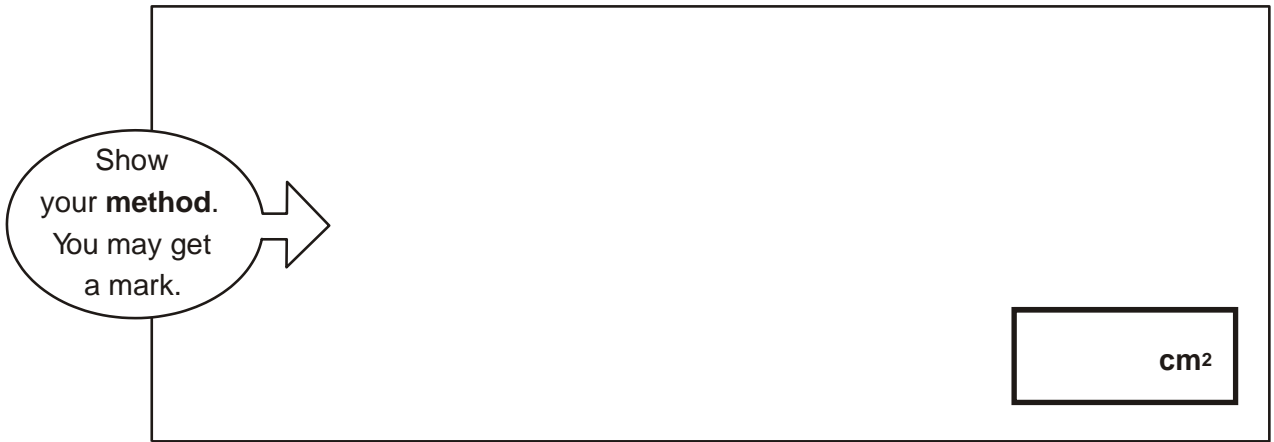
4. A white square is painted in one corner of a grey square.

Each side of the white square is **half** the length of a side of the grey square.



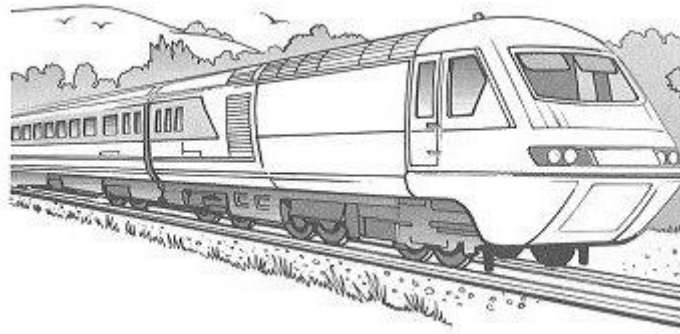
Not actual size

What is the **area** of the grey section?

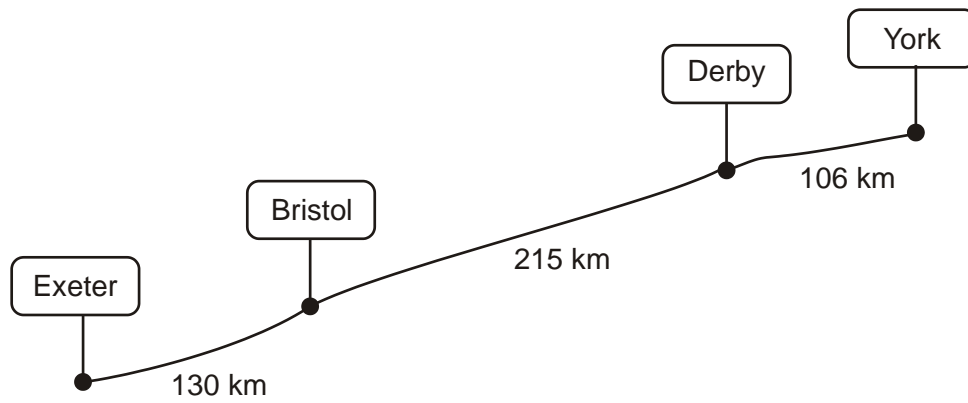


2 marks


5.



The diagram shows distances on a train journey from Exeter to York.




How many kilometres is it altogether from **Exeter** to **York**?

 km

1 mark

What is the distance from **Derby** to **York** rounded to the nearest 10km?

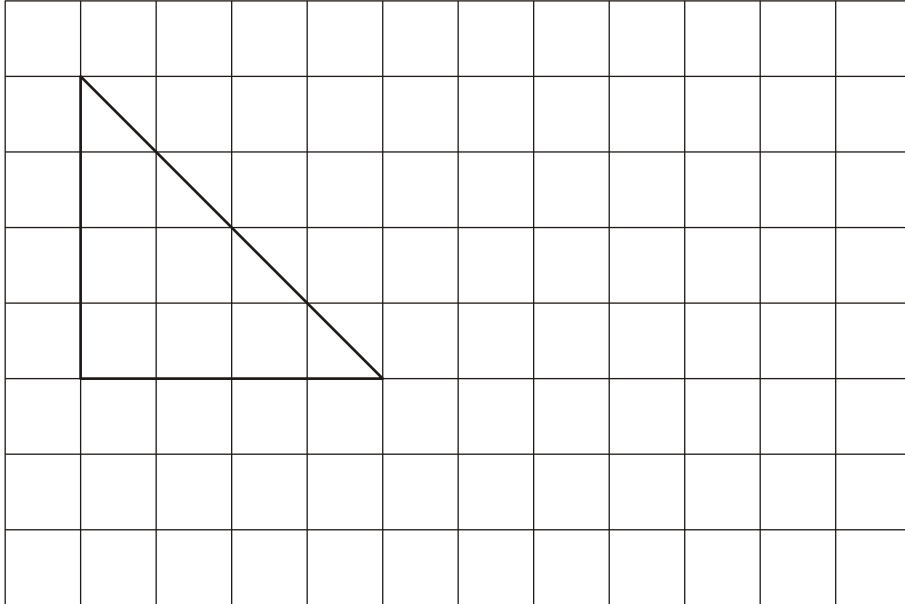
 km

1 mark

6. Here is a triangle drawn on a square grid.

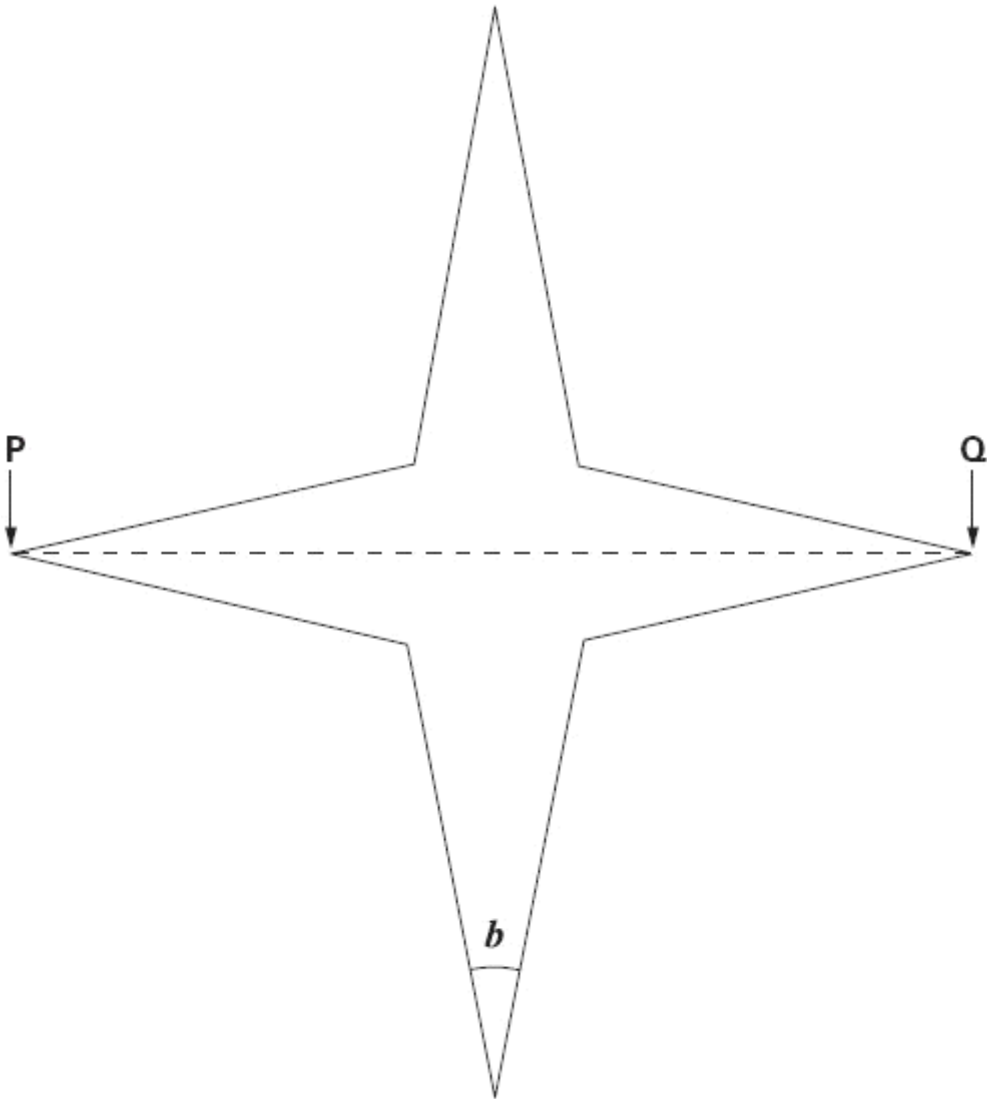
Draw a **rectangle** on the grid with the same area as the triangle.

Use a ruler.




1 mark

7. Look at this star.



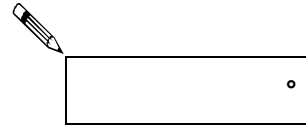
Use a ruler to measure **accurately** the **width** of the star, from **P** to **Q**.

Give your answer in **millimetres**.

 mm

1 mark

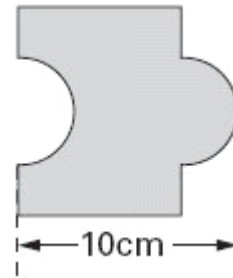
Use a protractor (angle measurer) to measure **angle *b***.



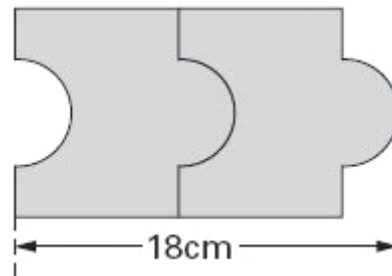
1 mark

8. Josh has some tiles.

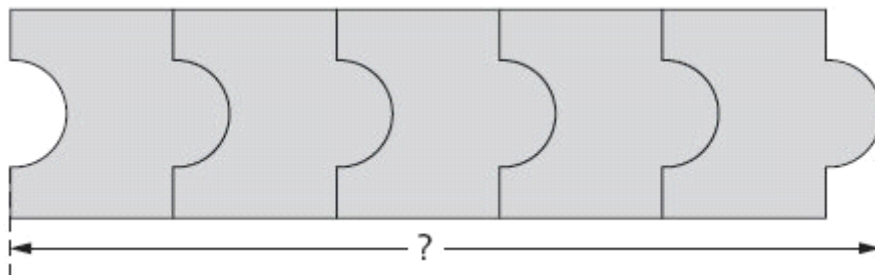
Not actual size



Each tile is 10cm long.



Two tiles fitted together are 18cm long.



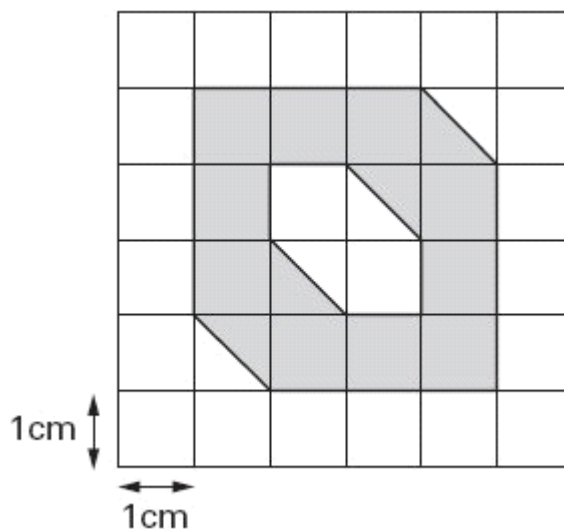
Calculate the length of **five** tiles fitted together.

Show your **working**.
You may get a mark.

cm

2 marks

9. Here is a 1cm square grid.
Some of the grid is shaded.

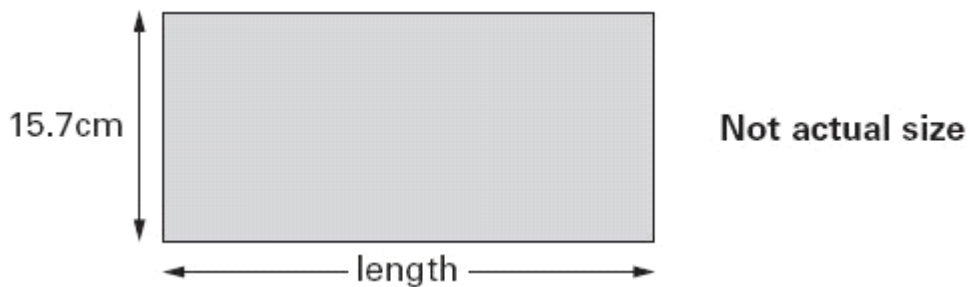


What is the **area** that is shaded?

cm²

1 mark

10. Here is a rectangle with a width of 15.7 centimetres.



The **perimeter** of this rectangle is 85 centimetres.

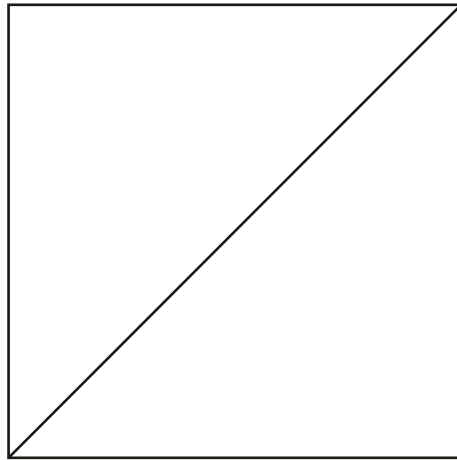
Calculate the length of the rectangle.

Show your **method**.
You may get a mark.

cm

2 marks

11.



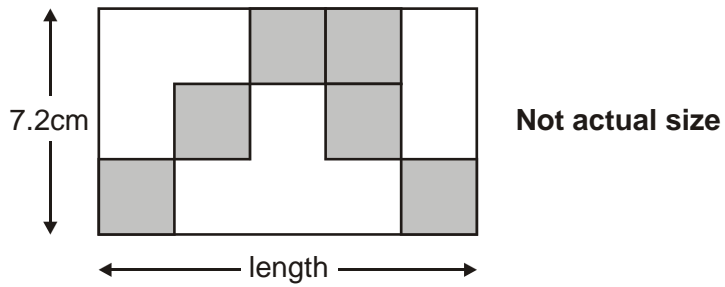
Measure accurately the length of the **diagonal** of this square.

Give your answer in **centimetres**.

A small icon of a pencil is positioned to the left of a rectangular box. The box is empty and has the letters "cm" written at its right end, indicating the unit for the answer.

1 mark

12. Here is a rectangle with six identical shaded squares inside it.



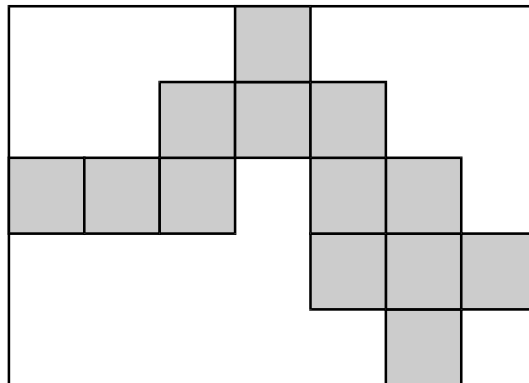
The width of the rectangle is **7.2 centimetres**.

Calculate the **length** of the rectangle.

A large empty rectangle is provided for the student to show their method. A pencil icon is at the top left. A speech bubble on the left contains the text: "Show your **method**. You may get a mark." with an arrow pointing to the right. A small box labeled "cm" is at the bottom right of the large rectangle.

2 marks

13. Here is a rectangle with 13 identical shaded squares inside it.



What fraction of the rectangle is shaded?

1 mark

14. Write these lengths in order, starting with the shortest.

$\frac{1}{2}$ m

3.5cm

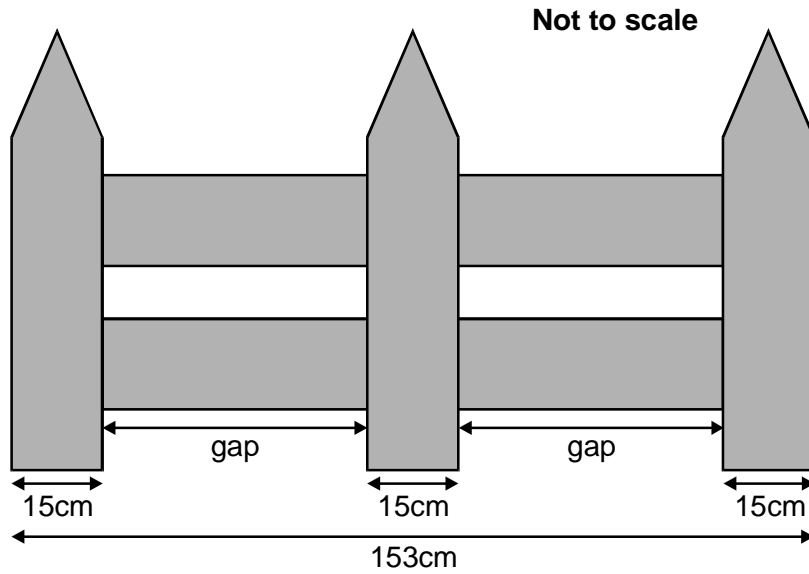
25mm

20cm

shortest

1 mark


15. This fence has three posts, equally spaced.



Each post is **15 centimetres** wide.

The length of the fence is **153 centimetres**.

Calculate the length of **one gap** between two posts.

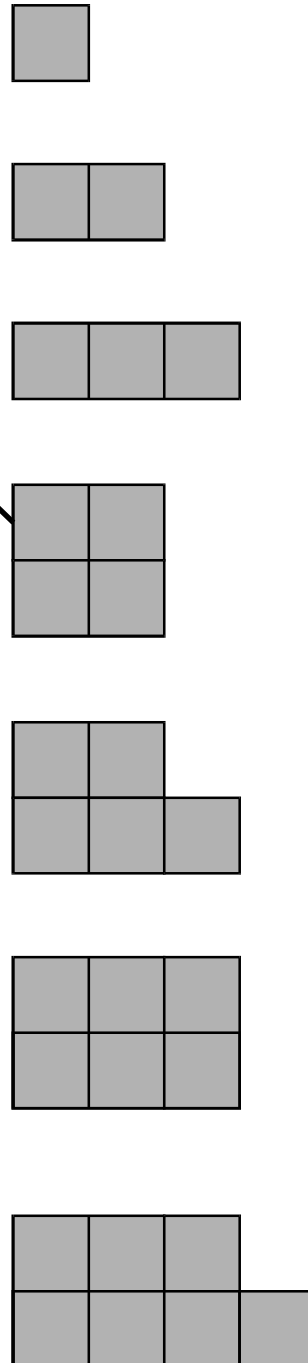
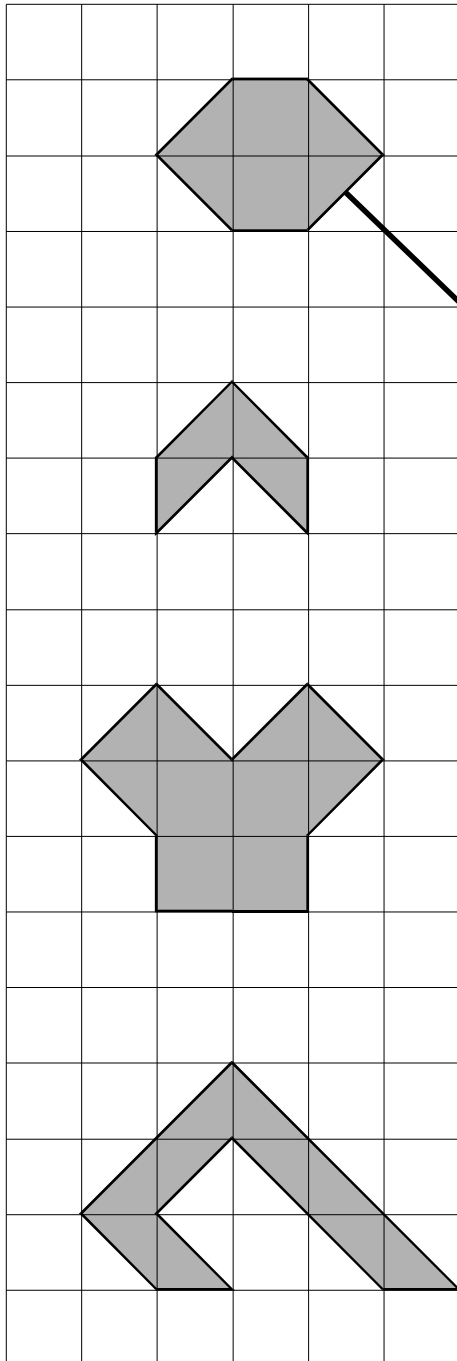
 Show your **method**. You may get a mark.

cm

2 marks

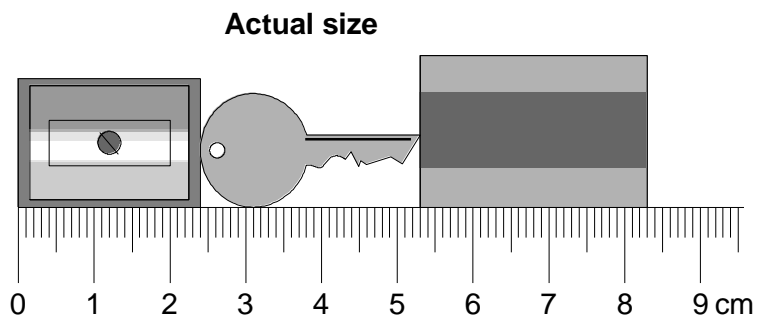
16. Match each shape on the left to one with **equal area** on the right.

One has been done for you.




2 marks

17. Here are a pencil sharpener, a key and a rubber.



What is the length of **all three things** together?


Give your answer in **millimetres**.

 mm

1 mark

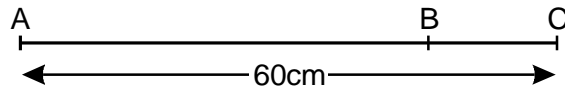
What is the length of the **key**?

Give your answer in **millimetres**.

 mm

1 mark

18.



Not drawn to scale

The distance from **A to B** is three times as far as from **B to C**.

The distance from **A to C** is **60 centimetres**.

Calculate the distance from **A to B**.

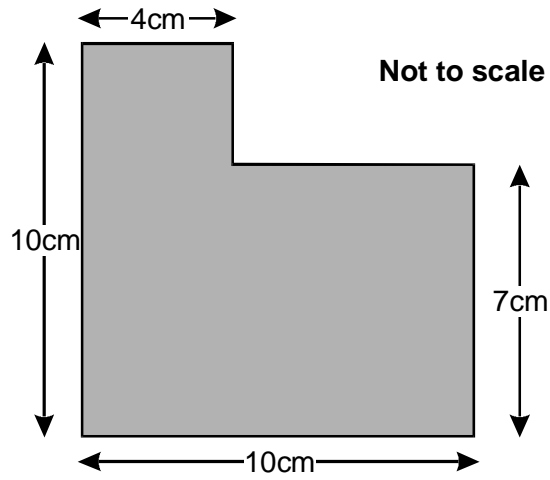


Show
your **method**.
You may get
a mark.

cm

2 marks

19. What is the **area** of this shape?



Show your **method**.
You may get a mark.

cm²

2 marks

20. This is a centimetre grid.

Draw **3 more lines** to make a **parallelogram** with an **area of 10cm^2**

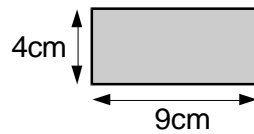
Use a ruler.



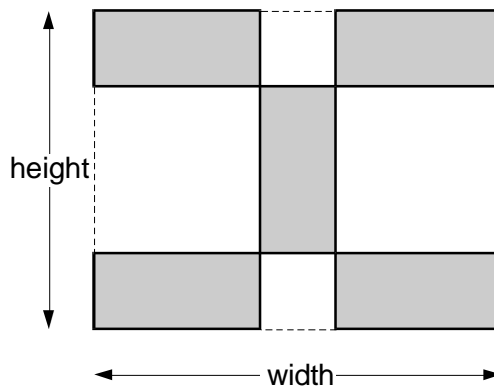
1 mark

21. Kim has some rectangular tiles.

Each one is **4 centimetres** by **9 centimetres**.



She makes a design with them.



Calculate the **width** and **height** of her design.



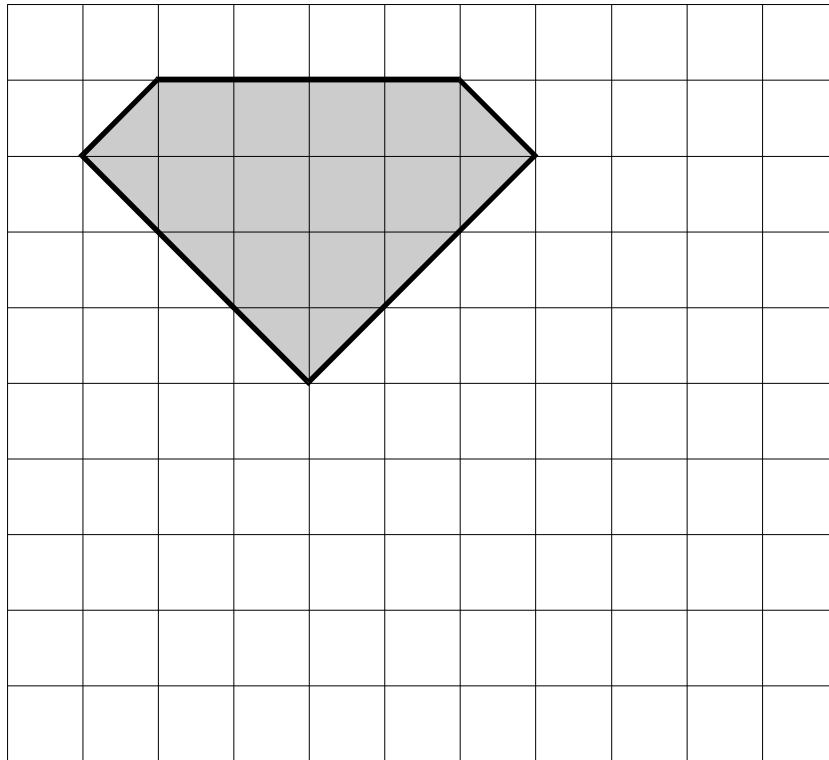
width = cm

height = cm

2 marks

22. On the grid, draw a **rectangle** which has the **same area** as this shaded pentagon.

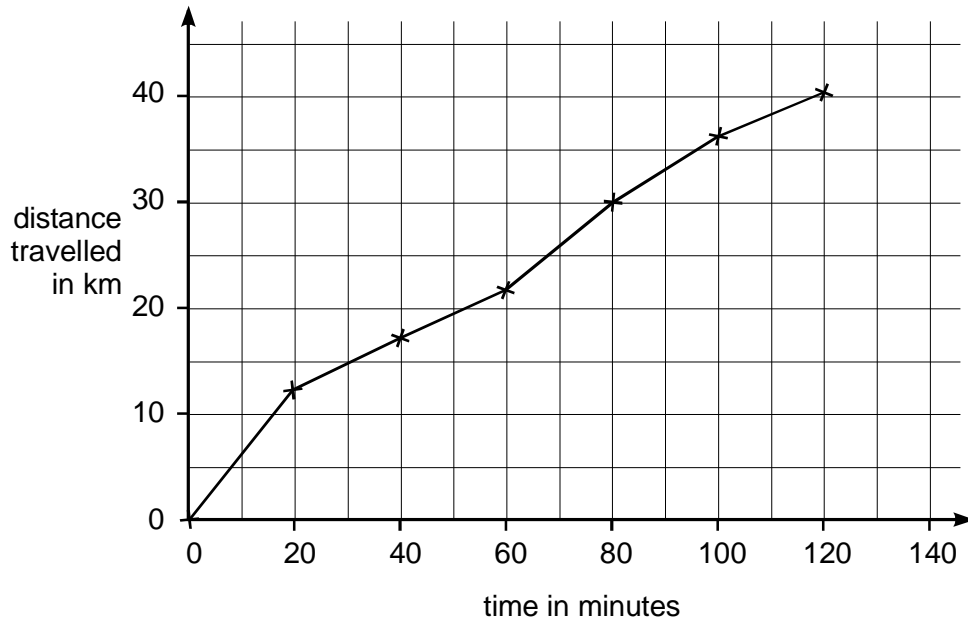
Use a ruler.



1 mark

23. Carol went on a **40-kilometre** cycle ride.

This is a graph of how far she had gone at different times.



How many minutes did Carol take to travel the **last 10 kilometres** of the ride?



minutes

1 mark

Use the graph to estimate the distance travelled in the **first 20 minutes** of the ride.



km

1 mark

Samira bought this present in France.




44.85 FF

She paid **44.85 French Francs** for it.

9.75 French Francs equal **£1**

What was the cost of the present in **pounds and pence**?

 Show your **method**. You may get a mark.

£

2 marks

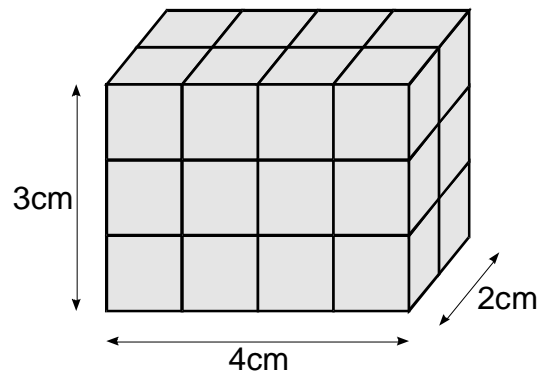
25. Draw **one line** from each shape to the rectangle which has the **same area**.

One is done for you.



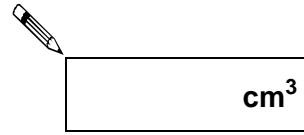
2 marks

26. This cuboid is made from centimetre cubes.



It is 4 centimetres by 3 centimetres by 2 centimetres.

What is the **volume** of the cuboid?




1 mark

Another cuboid is made from centimere cubes.

It has a volume of **30 cubic centimetres**.

What could the **length**, **height** and **width** be?

 length

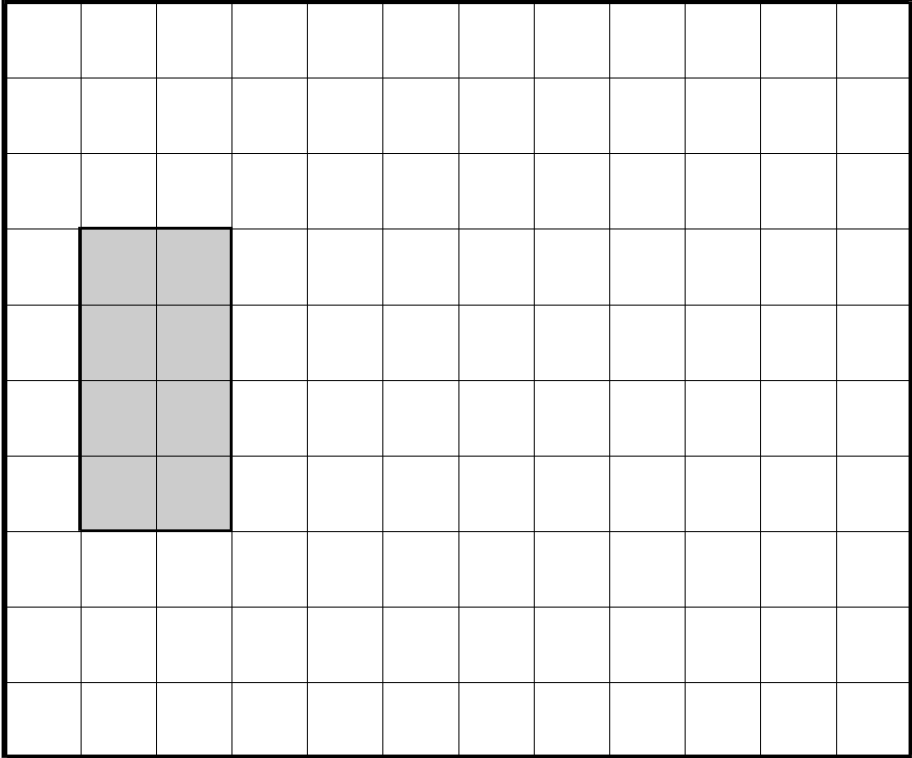
height

width

1 mark

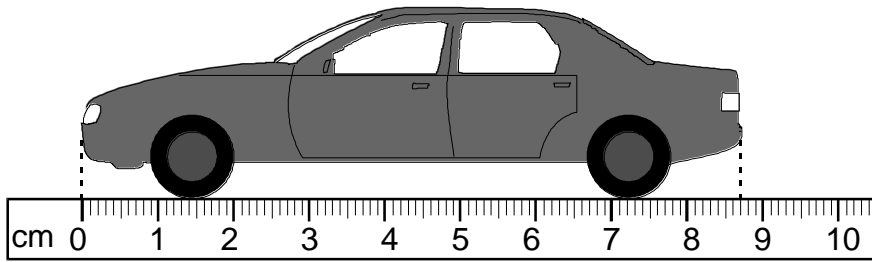
27. On the grid draw a **triangle** with the **same area** as the shaded rectangle.

Use a ruler.




1 mark

28. Here is a drawing of a model car.



What is the **length** of the model?

Give your answer in **centimetres**, correct to one decimal place.

 cm

1 mark

The height of the model is **2.8 centimetres**.

The height of the real car is **50** times the height of the model.

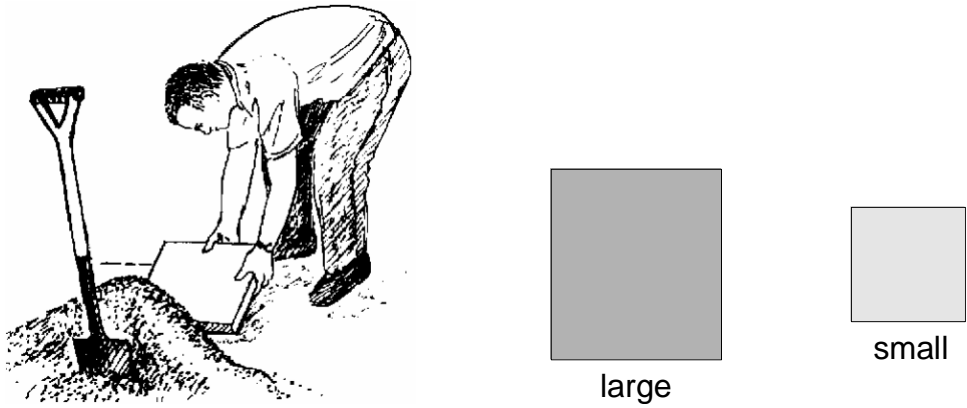
What is the **height** of the **real car**?

Give your answer in **metres**.

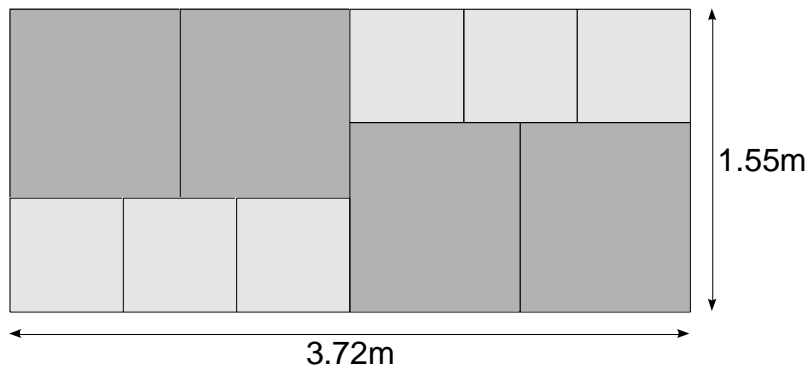
  m

2 marks

29. Mr Jones has two sizes of square paving stones.



He uses them to make a path.



The path measures **1.55 metres** by **3.72 metres**.

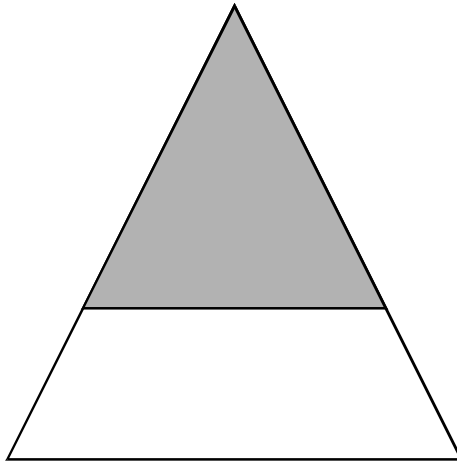
Calculate the **width** of a **small paving stone**.

Show your **method**.
You may get a mark.

A large rectangular box for showing the method. In the bottom right corner of this box, there is a smaller, empty rectangular box.

2 marks

30. The diagram shows a shaded triangle inside a larger triangle.



The area of the **shaded** triangle is 52 cm^2 .

The area of the shaded triangle is $\frac{4}{9}$ of the area of the larger triangle.

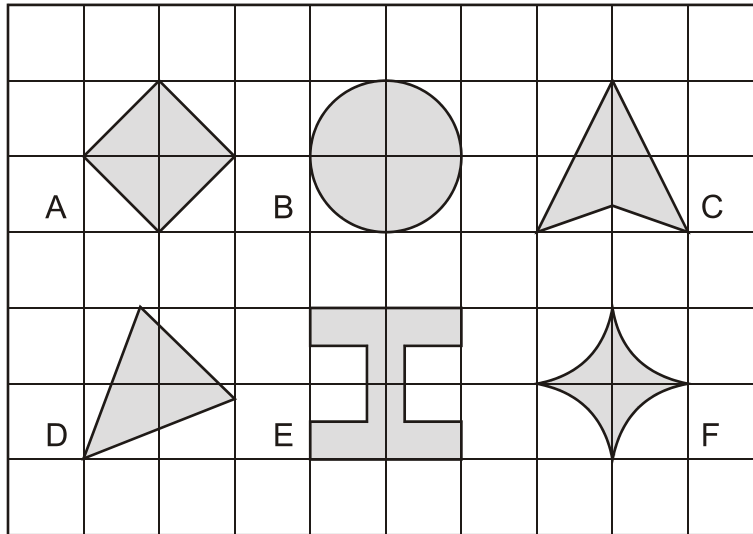
Calculate the **area** of the **larger triangle**.

 Show your **method**. You may get a mark.


cm

2 marks

31. Here are some shapes on a grid.




Which shape has the **longest perimeter**?



1 mark

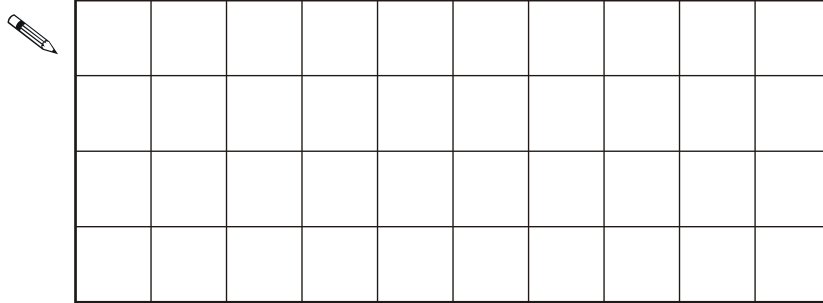
Which shape has the **largest area**?



1 mark

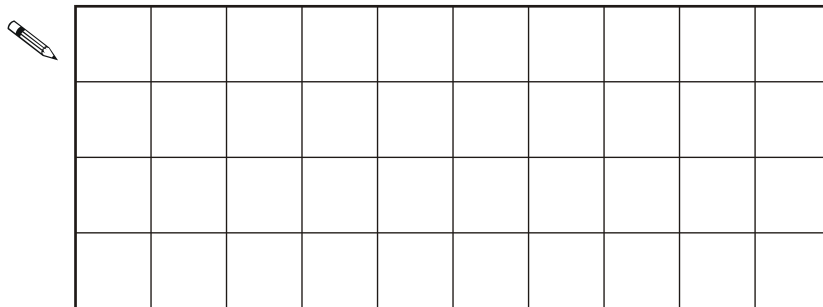
32. Here is a centimetre square grid.

On the grid draw a **shape** which has an **area** of **10** square centimetres.



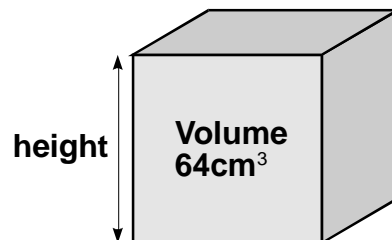
1 mark

On the grid below draw a **rectangle** which has a **perimeter** of **10** centimetres.

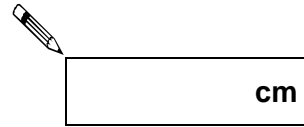


1 mark

33. This cube has a volume of **64 cubic centimetres**.



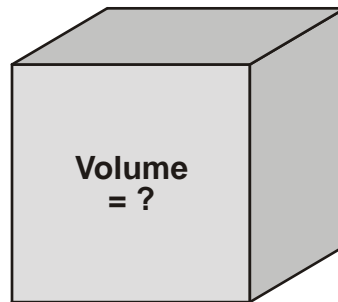
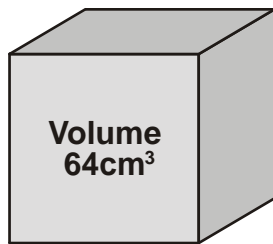
Calculate the **height** of the cube.



cm

1 mark

These two cubes are not drawn to scale.



1 mark

The ratio of the **volumes** of the two cubes is **2:3**

Calculate the **volume** of the larger cube.

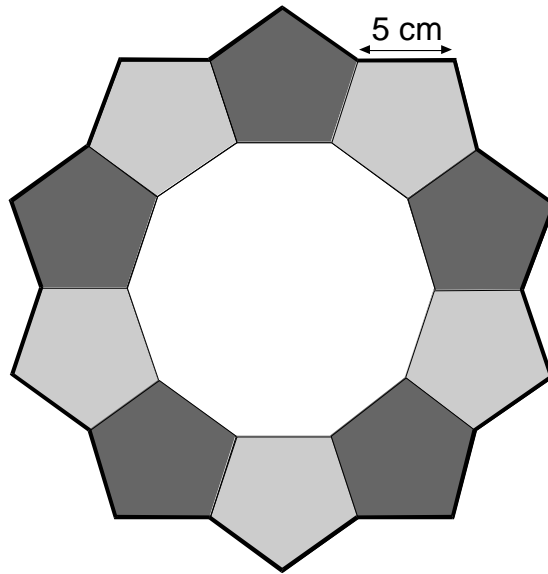


Show your **method**.
You may get a mark.


cm^3

1 mark

34. This ring is made of **regular pentagons**, with sides of **5 centimetres**.



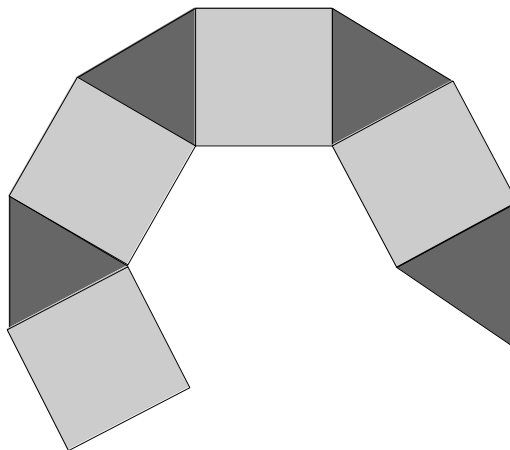
What is the **length** of the **outer edge** of the ring?

 cm

1 mark

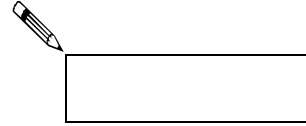
Here is part of a new ring.

It is made of **squares** and **triangles**.



The pattern is continued to complete the ring.

What is the **total** number of **squares** used in the complete ring?

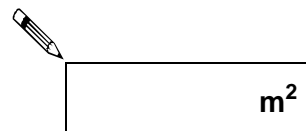
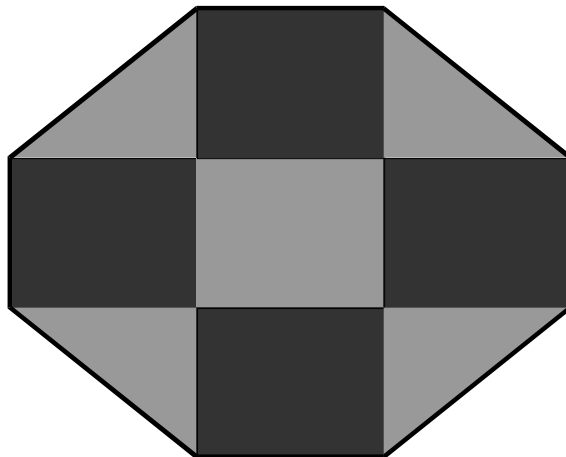


1 mark

35. This plan of a garden is made of rectangles and triangles.

The area of each **rectangle** is **12 square metres**.

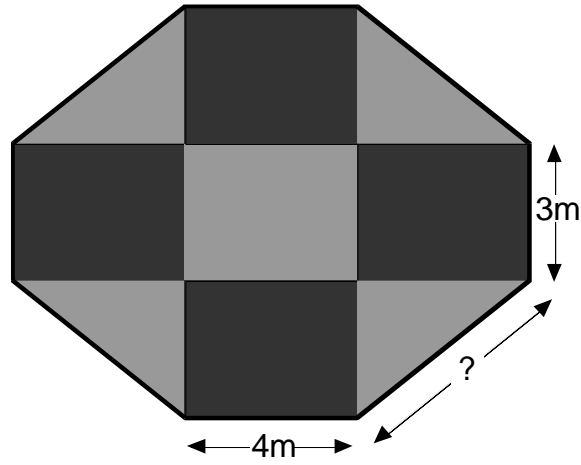
What is the **area** of the **whole garden**?



1 mark

The **perimeter** of the garden is **34 metres**.

What is the length of the **longest side** of each triangle?

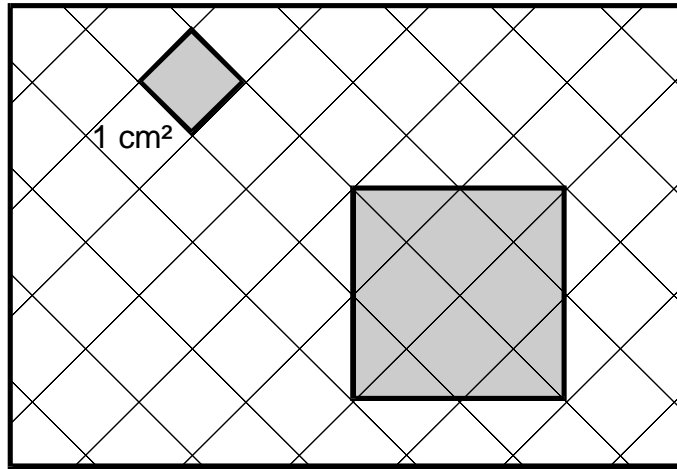



Show
your **working**.
You may get
a mark

2 marks

36. The **area** of the **small** shaded square is **1 square centimetre**.

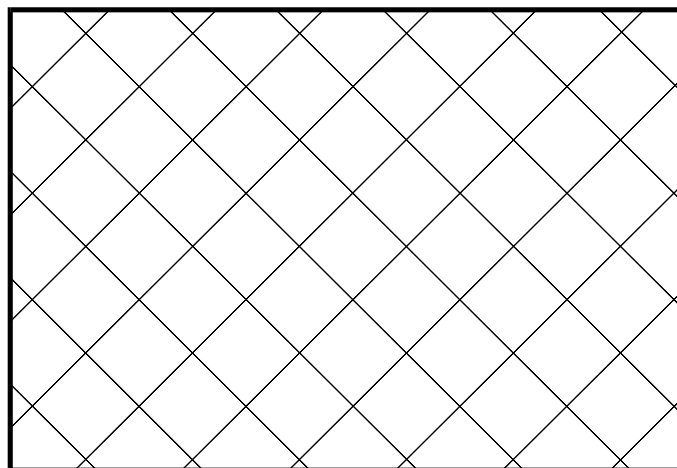
What is the **area** of the **larger** shaded square?





1 mark

On the grid below, draw a **square** with an **area** of **2 cm²**.



1 mark