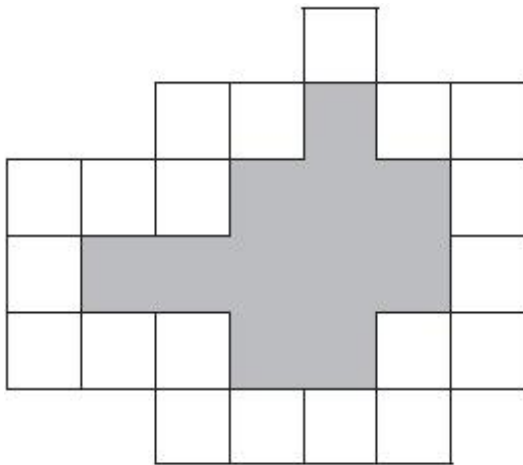


Q1.

Here is a set of 20 squares around a shaded space.



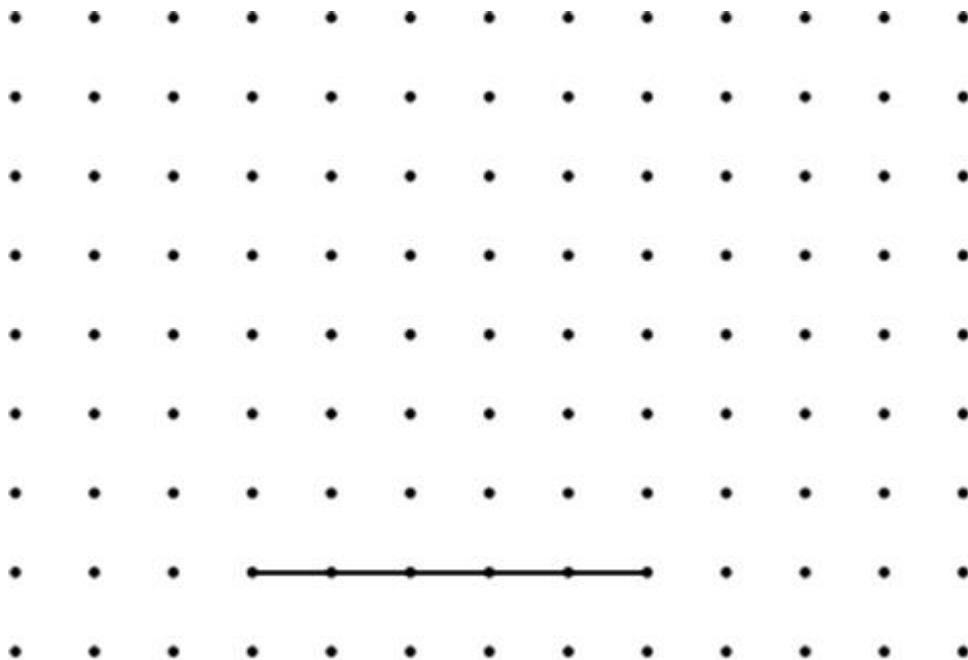
What is the area of the shaded space?

squares

1 mark

Q2.

Draw two more lines to complete the triangle with an area of 10 cm^2

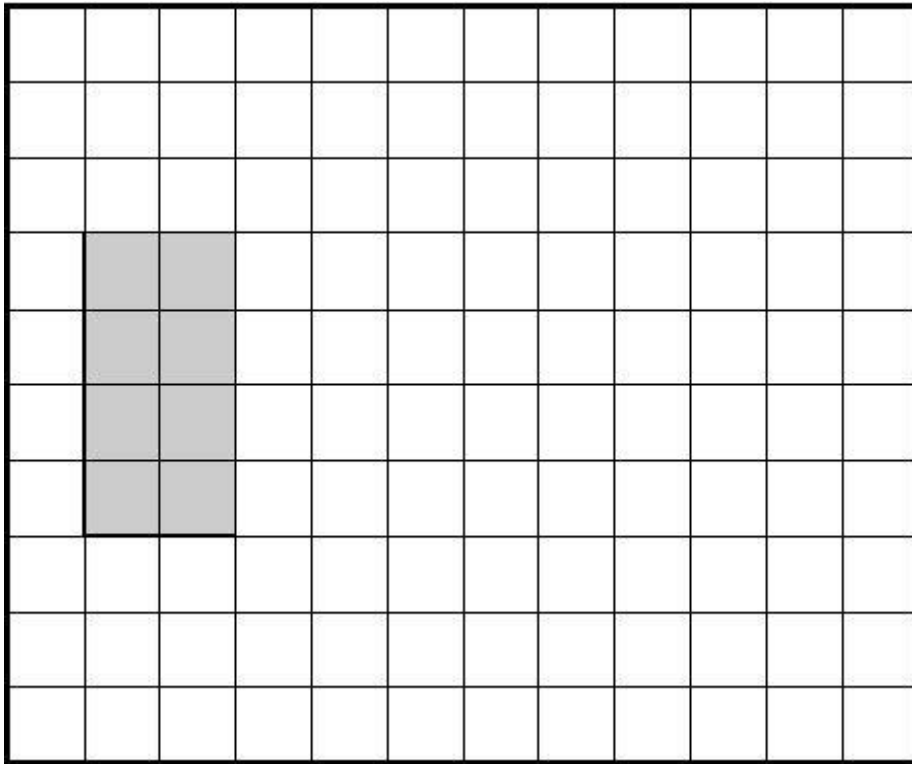


1 mark

Q3.

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

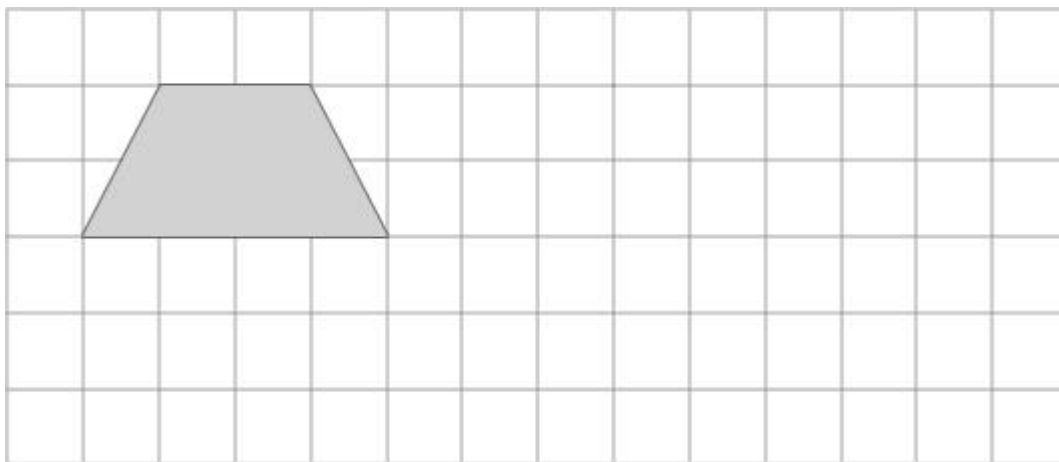
Use a ruler.



1 mark

Q4.

Here is a quadrilateral drawn on a square grid.



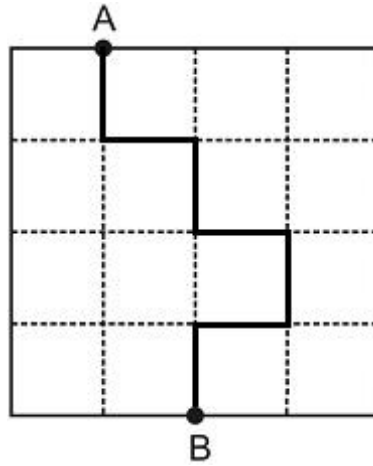
On the same grid, draw a **different** quadrilateral that has the **same area**.

1 mark

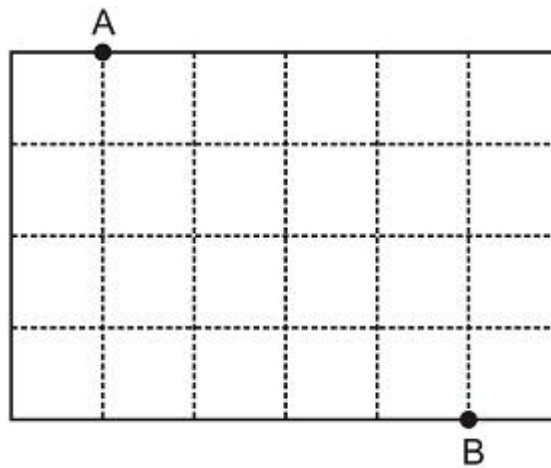
Q5.

A line starts at **A** and goes along the dotted lines to **B**.

It divides the area of the grid into **halves**.



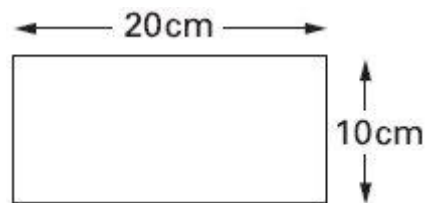
Divide the area of the grid below into **halves**. Start at **A** and go along the dotted lines to **B**.



1 mark

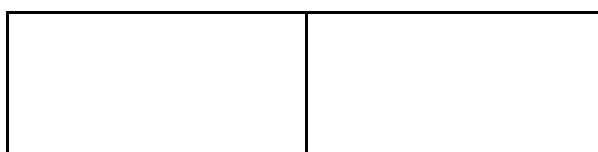
Q6.

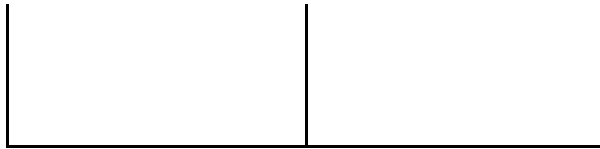
Rebecca has rectangular tiles like this.



Not to scale

She makes a larger rectangle using 4 of the tiles.





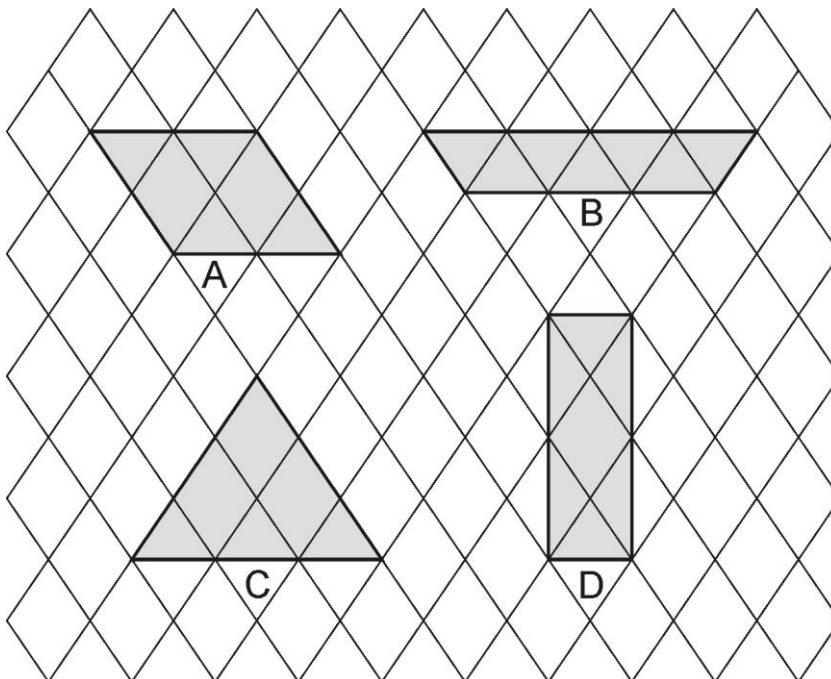
What is the **area** of the larger rectangle?



1 mark

Q7.

Here are some shapes drawn on a grid.

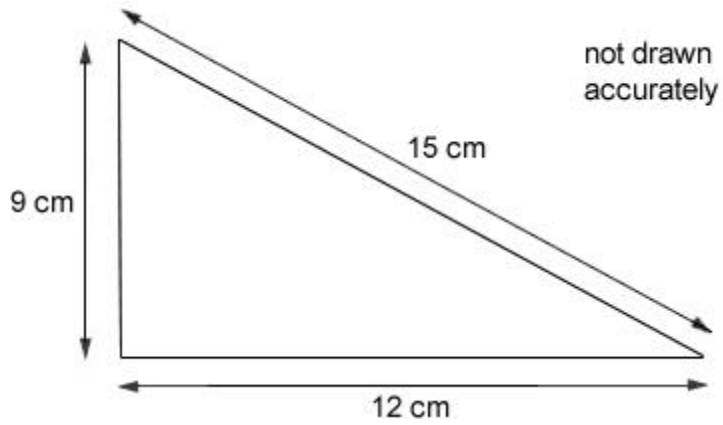


Write the letters of the **two** shapes that are equal in area.

_____ and _____ 1 mark

Q8.

Calculate the area of this triangle.

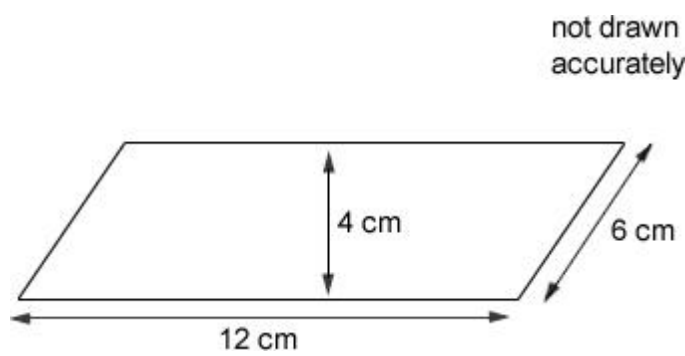


cm²

1 mark

Q9.

Calculate the area of this parallelogram.



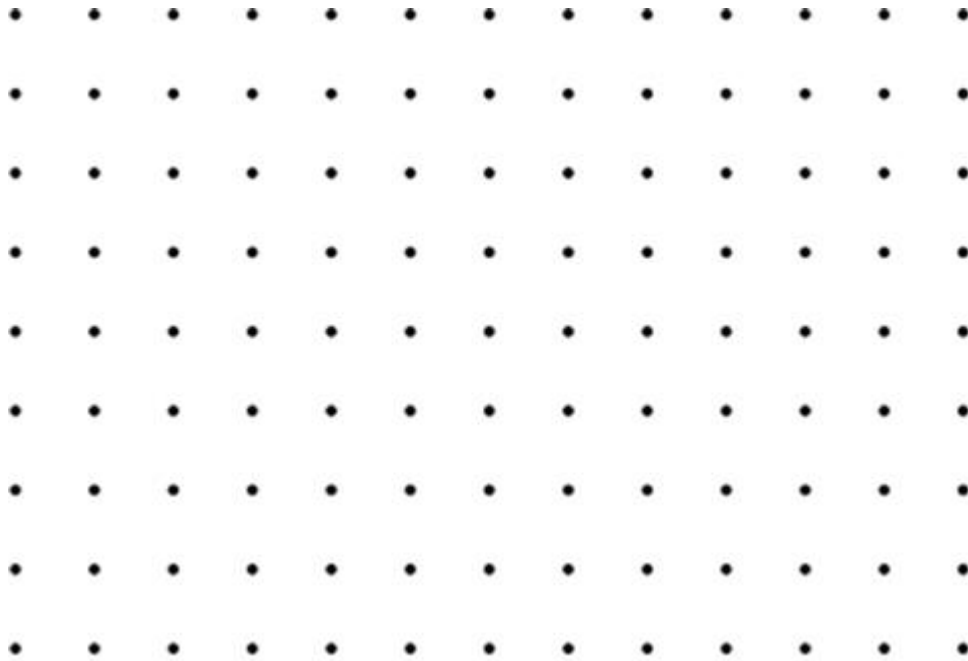
cm²

1 mark

Q10.

Grace has a rectangle that has sides of 4 cm and 5 cm.

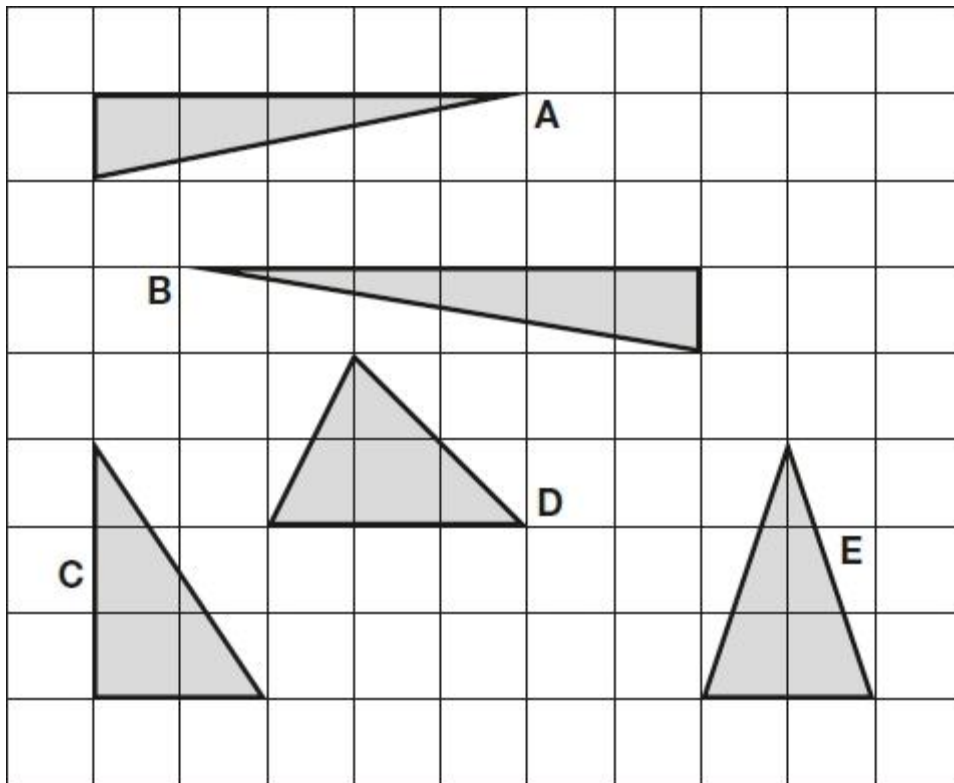
Draw a different rectangle that has the same area.



1 mark

Q11.

Here are five triangles on a square grid.



Four of the triangles have the same area.

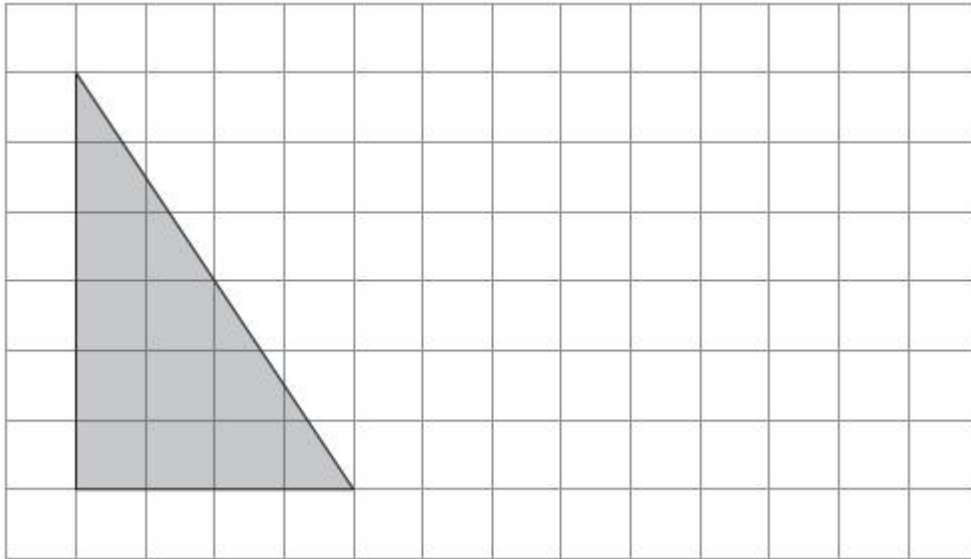
Which triangle has a **different** area?

_____ 1 mark

Q12.

Draw a rectangle on the grid that has **half** the area of the shaded triangle.

Use a ruler.



1 mark

Q13.

A rectangle has an area of 36 cm^2

How long could the sides of the rectangle be?

Give three different examples, using whole numbers.

..... cm and cm

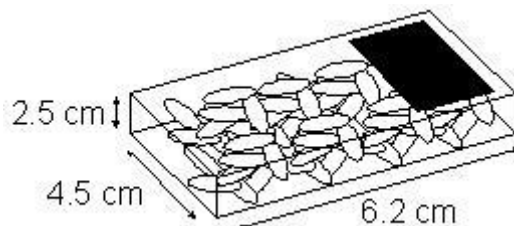
..... cm and cm

..... cm and cm

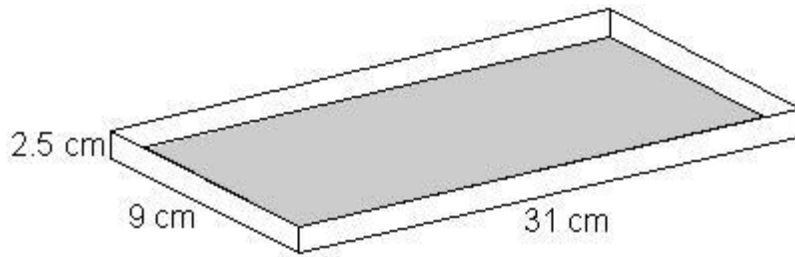
2 marks

Q14.

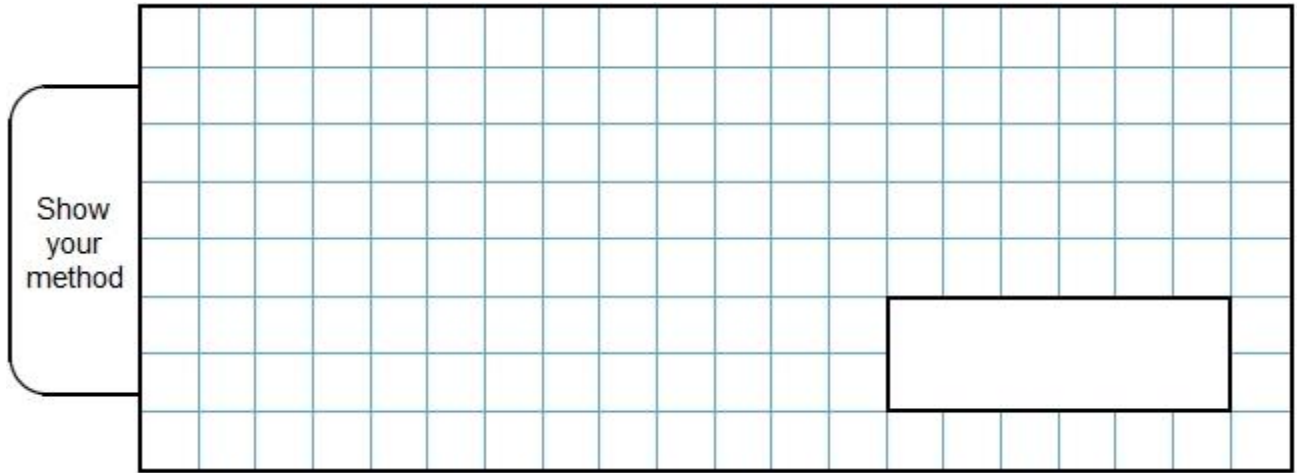
Boxes measure 2.5 cm by 4.5 cm by 6.2 cm.



The shopkeeper puts them in a tray.

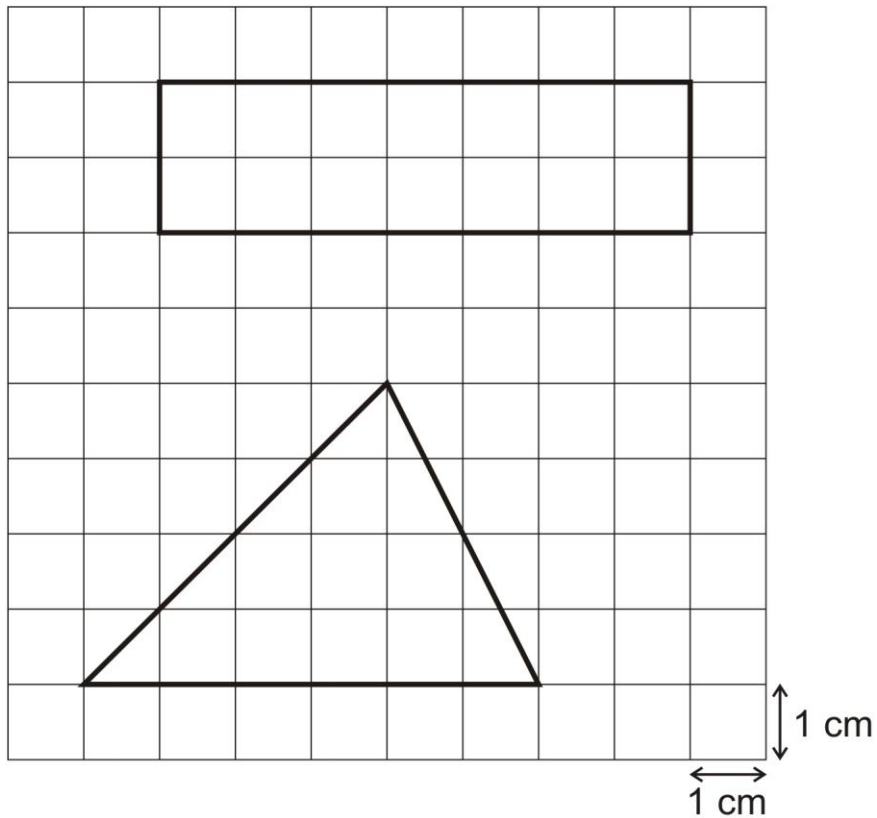


Work out the **largest** number of boxes which can lie flat in the tray.



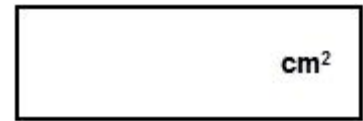
2 marks

Q15.



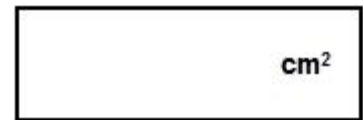
Work out the area of each shape.

(a) Rectangle



1 mark

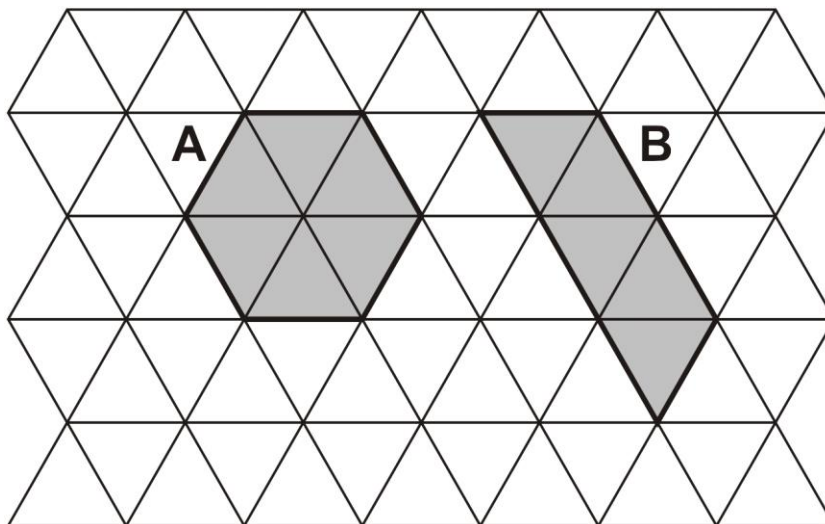
(b) Triangle



1 mark

Q16.

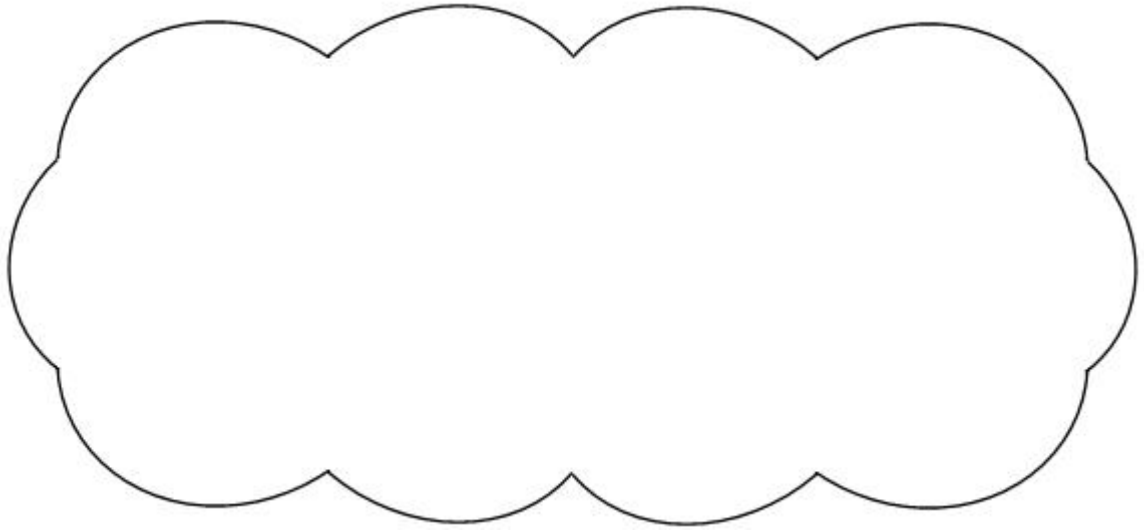
Leon's grid has two shaded shapes.



Leon says,

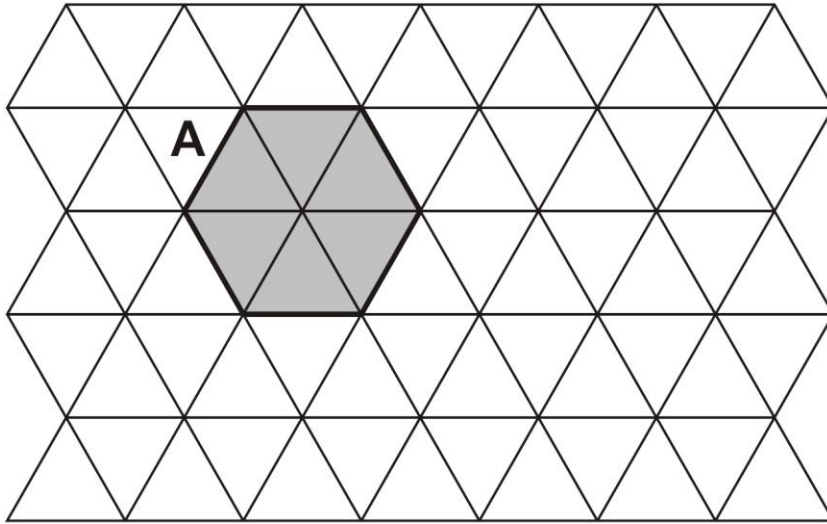
“Shape A has a larger area than shape B.”

Explain how he could have worked this out.



1 mark

On this grid draw a **different** shape. It **must** have the **same area** as shape **A**.



1 mark

Mark schemes

Q1.

11

Accept 11 cm²

[1]

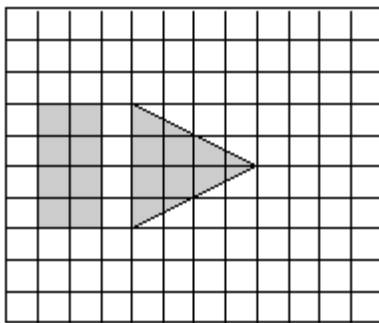
Q2.

Any triangle with a perpendicular height of 4 cm.

[1]

Q3.

Any triangle with an area of 8 cm², eg

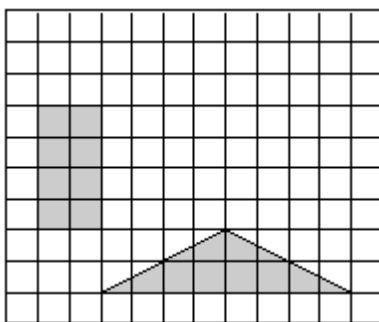


Drawings must be accurate to within 2 mm of appropriate grid intersections.

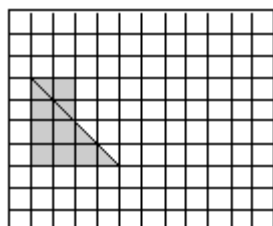
The triangle need not be shaded and need not have vertices at grid junctions.

Do not penalise drawings done without a ruler, provided the intention is clear.

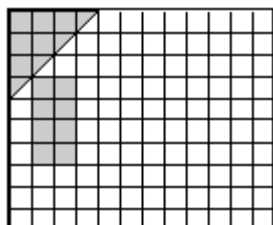
OR



Accept drawings that overlap the given rectangle or use the edge of the grid, eg



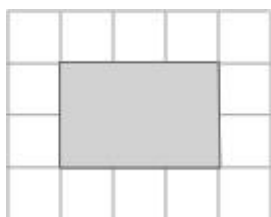
OR



[1]

Q4.

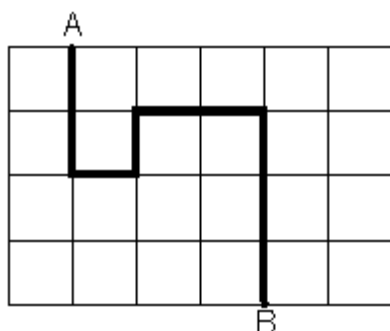
Any different quadrilateral with an area of 6 cm^2 , e.g.



[1]

Q5.

Any line that partitions the grid into two blocks of 12 squares, eg:



Line must run from A to B. Line must be on dotted grid lines only.

***Do not** accept. lines along the edge of the grid.*

[1]

Q6.

800

[1]

Q7.

A and D

***Both** letters must be correct for the award of the mark.*

Accept either order.

Accept any other clear way of indicating the two correct shapes, such as circling.

[1]

Q8.

54 cm²

[1]

Q9.

48 cm²

[1]

Q10.

A different rectangle with area 20 cm² , e.g. 2 cm × 10 cm rectangle

[1]

Q11.

A

Accept alternative unambiguous positive indications of the correct triangle, e.g. $2\frac{1}{2}$ or 2.5.

[1]

Q12.

A rectangle with area 6 cm²

A rectangle must be drawn but need not be shaded.

[1]

Q13.

Award **TWO** marks for three different factor pairs of 36, i.e. any three of the following:

1 and 36

2 and 18

3 and 12

4 and 9

6 and 6

Award **ONE** mark for two different correct factor pairs of 36

[2]

Q14.

Award **TWO** marks for the correct answer of 10, even if there are errors in the working.

If the answer is incorrect, award **ONE** mark for evidence of any attempt at solution, by any method, eg:

- 31 ÷ 6.2 and 9 ÷ 4.5 are attempted calculations;

- $31 \div 6.2$ and $9 \div 4.5$ are estimated;
- “You can get two boxes widthways and 5 lengthways”.

Up to 2

[2]

Q15.

(a) Rectangle – 14

1

(b) Triangle – 12

1

[2]

Q16.

(a) Any statement which indicates an understanding of area, eg:

- By counting the shaded triangles
- A's got more triangles than B
- The amount of triangles is more.
- A has more shapes than B.
- B has got less shade.

***Do not** accept statements which imply linear measurement, eg:*

- **Shape B is longer.**
- **B has a longer area.**
- **He used perimeter.**
- **A has more edges.**

1

(b) Any shape which covers 6 triangles, different from the given shape of A.

The shape may be composed of part triangles provided the area is equivalent to 6 triangles.

Accept shapes such as 6 triangles joined only by vertices, eg:



***Do not** accept same shape as A drawn elsewhere on grid.*

1

[2]