

Measurement 2

Reasoning

Name: _____

Class: _____

Date: _____

Time:

Marks: **63 marks**

Comments:

Q1.

Liam hires a bike.

He has to return it by 3 pm.

The time is 2:25 pm.

How many minutes has he got left?



1 mark

Amy hires a bike for 45 minutes.

She takes the bike out at 3:30 pm.

At what time must she return the bike?

1 mark

Q2.

Seb has to see the doctor at 10:05 am.

He gets to the doctor's surgery at 9:52 am.

How many minutes **early** is he?

1 mark

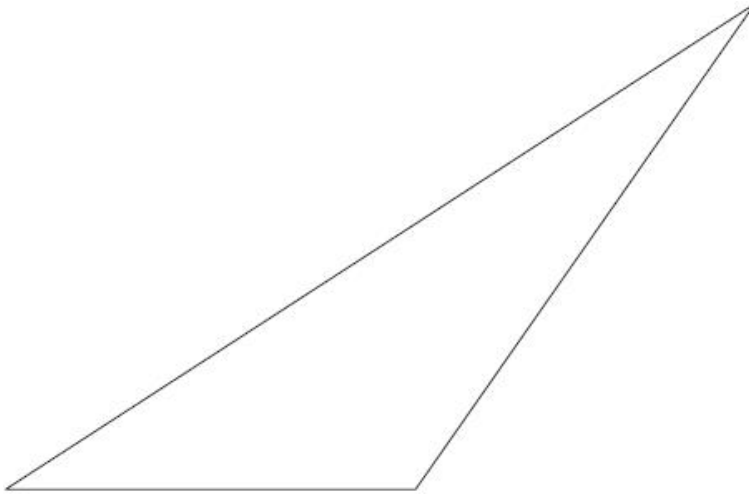
He leaves the doctor's surgery at 10:25 am.

He gets to school 45 minutes later.

What time does he arrive at school?

1 mark

Q3.



Measure the length of the shortest side of this triangle in millimetres.

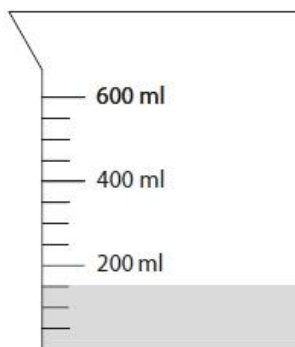
1 mark

Measure the size of the largest angle in this triangle.

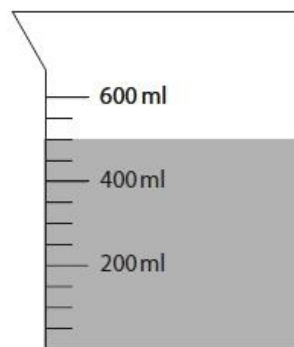
1 mark

Q4.

One jug contains water and the other jug contains oil.



Water



Oil

How much **more** oil is there than water?

1 mark

Q5.

Circle the approximate measurement.

The length of a banana is about ...

2 cm 20 cm 2 mm 2 m 20 m

The mass of an apple is about ...

2 g 20 kg 200 kg 200 g 2 kg

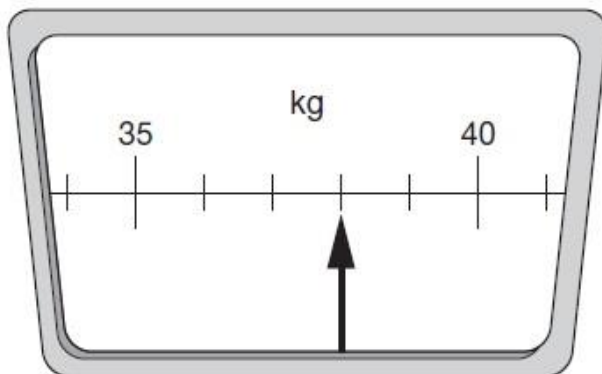
A glass of fruit juice is about ...

2 ml 2 l 20 ml 200 ml 20 l

2 marks

Q6.

This scale shows how much Chen weighs.



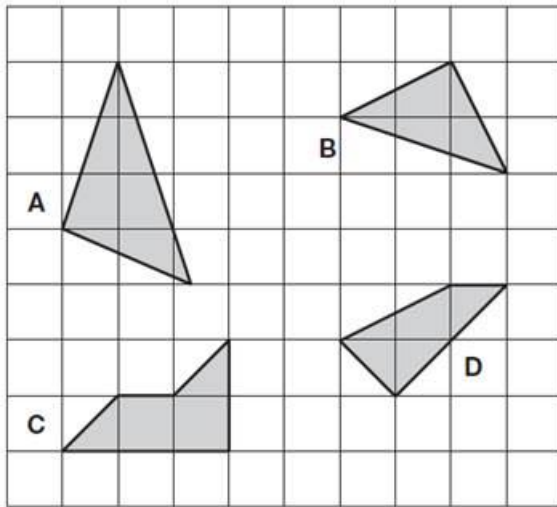
How much does Chen weigh?

kg

1 mark

Q7.

Here are four shapes on a square grid.



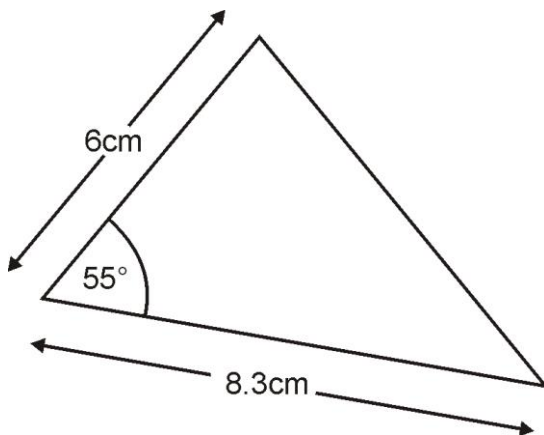
Write the letters of **all** the shapes that have **exactly two** sides which are equal in length.

2 marks

Q8.

Here is a sketch of a triangle.

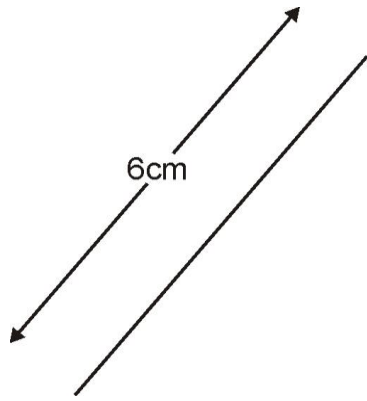
It is not drawn to scale.



Draw the full-size triangle accurately below.

Use a protractor (angle measurer) and a ruler.

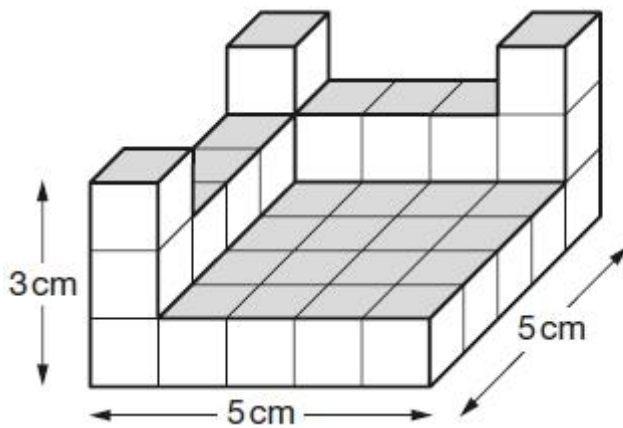
One line has been drawn for you.



2 marks

Q9.

This shape is made of wooden centimetre cubes.



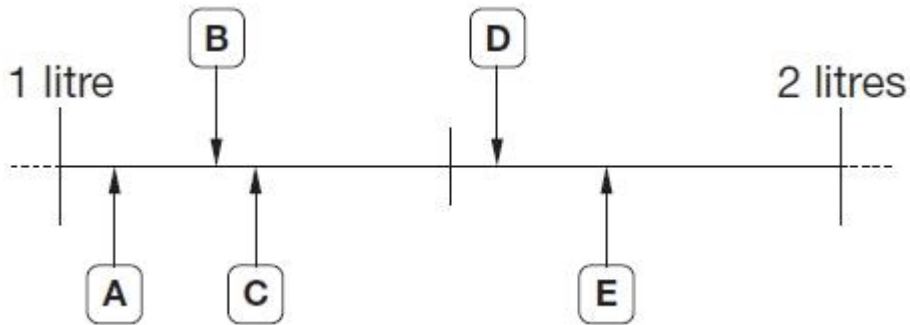
Not
actual
size

How many **more** centimetre cubes are needed to make it into a solid cuboid 3 cm tall, 5 cm long and 5 cm wide?

1 mark

Q10.

Here are five letters on a scale.



Match each letter to one of the capacities in the list below.

- 1200 ml
- 1.7 l
- $1\frac{1}{4}$ l
- 1560 ml
- 1.07 l

2 marks

Q11.

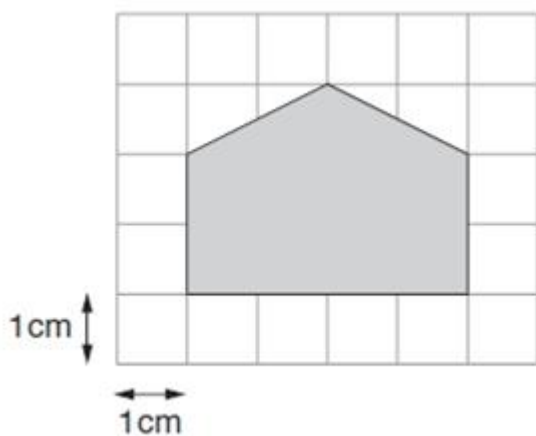
These are all times on the same morning.

- A 7:56 am
- B quarter to eight
- C six minutes to eight
- D half past seven

Write the letters for the times in order, starting with the earliest.

Q12.

Here is a shaded shape on a 1 cm square grid.



What is the **area** of the shaded shape?

cm²

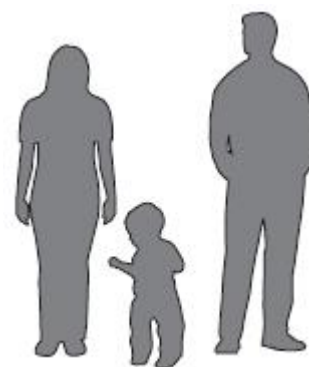
1 mark

Q13.

Freddie is half as tall as his mother.

Freddie is one metre shorter than his father.

Freddie's father is 180 centimetres tall.



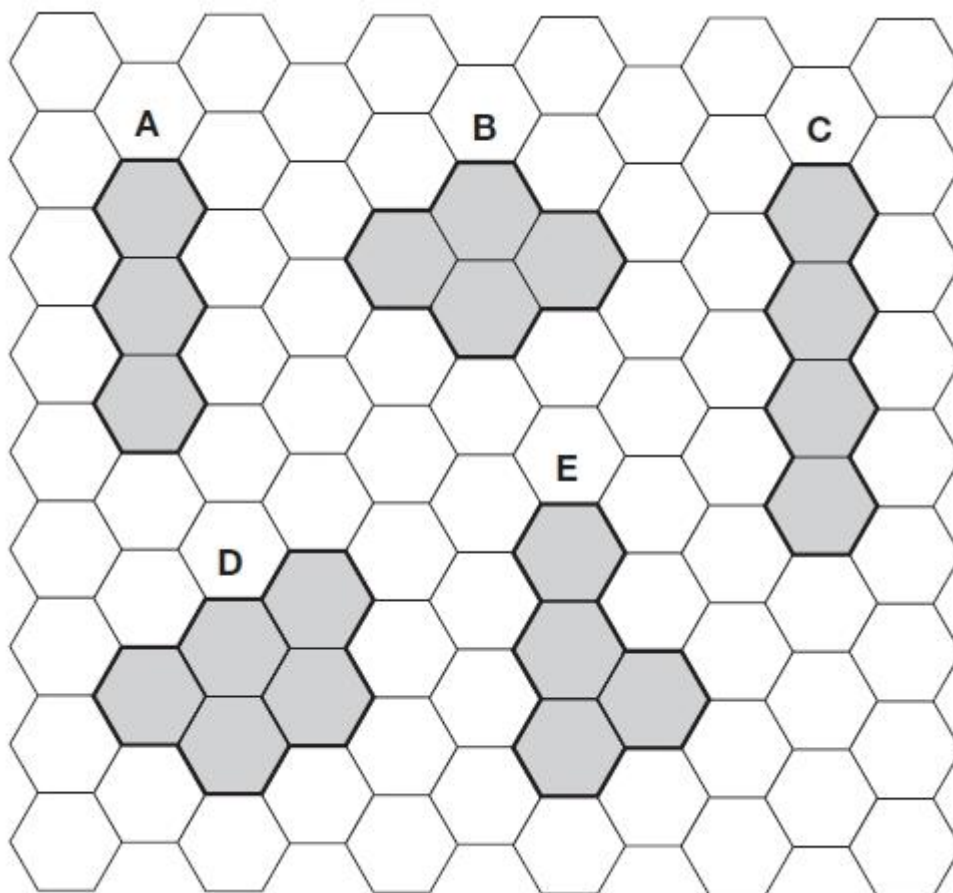
How many centimetres tall is Freddie's mother?

cm

1 mark

Q14.

Here are five shapes on a regular grid.



Which shape has the longest **perimeter**?

1 mark

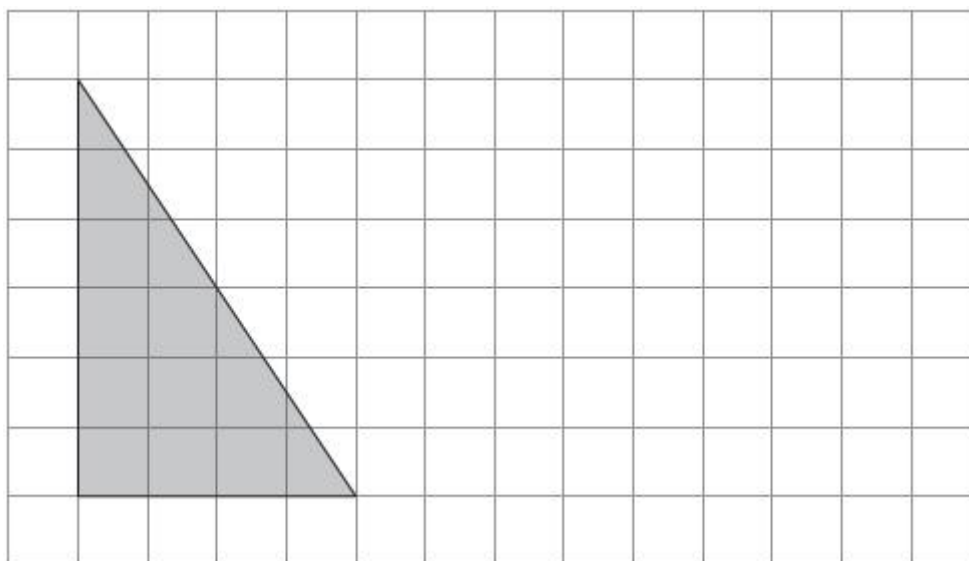
Which shape has only one **line of symmetry**?

1 mark

Q15.

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

Use a ruler.



1 mark

Q16.

The following quadrilaterals all have a **perimeter of 36 cm**.

Here is a table to show the length of each side.

Complete the table.

One quadrilateral is done for you.

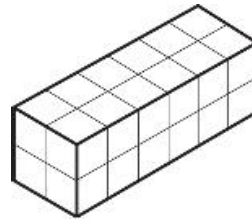
	Side lengths			
square	9 cm	9 cm	9 cm	9 cm
rectangle	3 cm			
rhombus	9 cm			
kite	10 cm			

2 marks

Q17.

Cleo has **24** centimetre cubes.

She uses all 24 cubes to make a cuboid with dimensions **6 cm, 2 cm and 2 cm**.

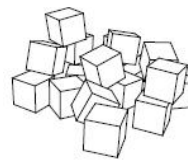


Write the dimensions of a **different** cuboid she can make using all 24 cubes.

_____ cm, _____ cm and _____ cm

1 mark

Jon has **20** centimetre cubes.



He wants to make a cube with edges that are **3 cm** long.

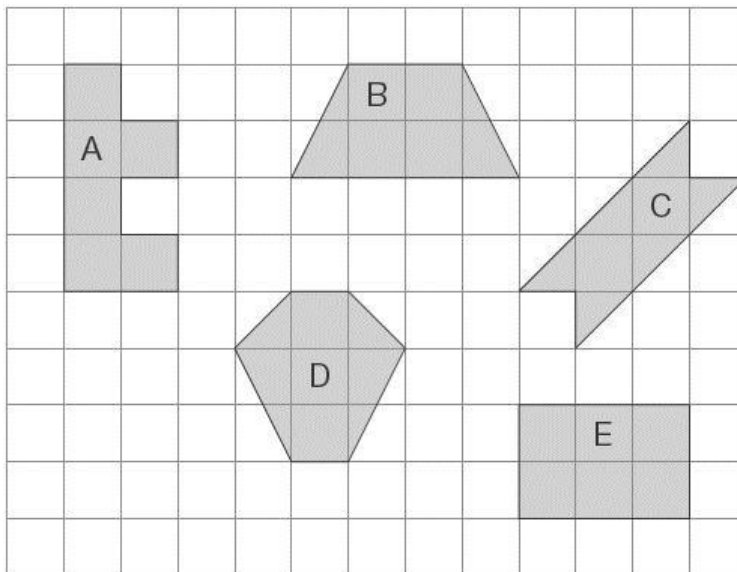
How many **more** centimetre cubes does he need?

more

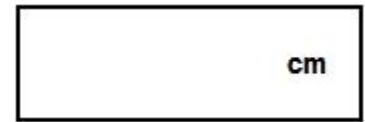
1 mark

Q18.

Here are some shapes on a 1cm square grid.

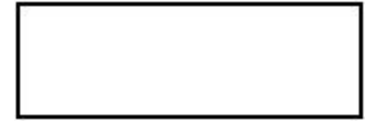


What is the **perimeter** of shape A?



1 mark

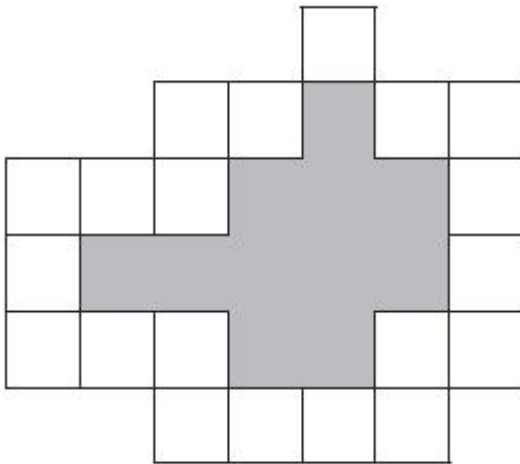
Write the letter of the shape that has the **smallest area**.



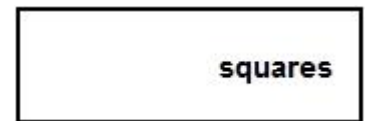
1 mark

Q19.

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



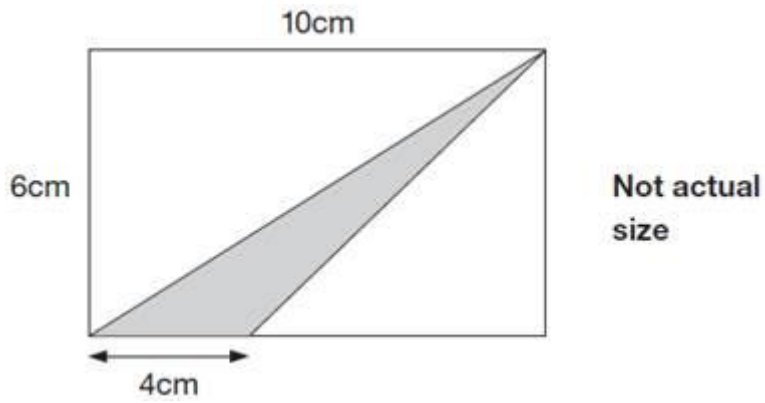
What is the area of the shaded space?



1 mark

Q20.

The diagram shows a shaded triangle inside a rectangle.



What is the area of the shaded triangle?

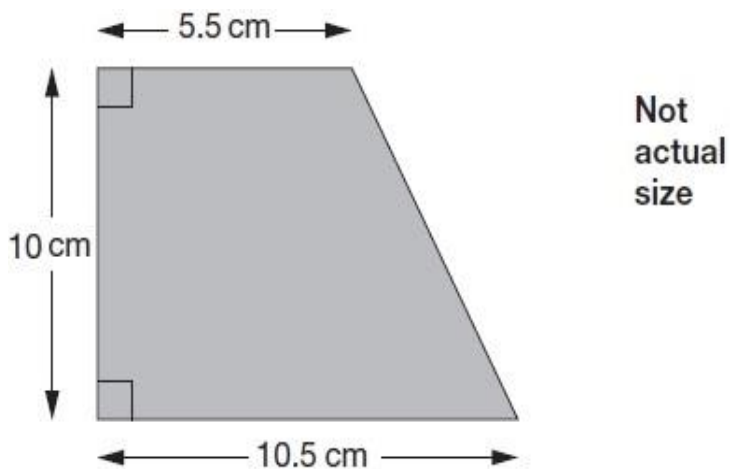
Show your method

cm²

2 marks

Q21.

Here is a trapezium with a height of 10 centimetres.



The parallel sides are 5.5 cm long and 10.5 cm long.

Find the **area** of the trapezium.

Show your method

cm²

2 marks

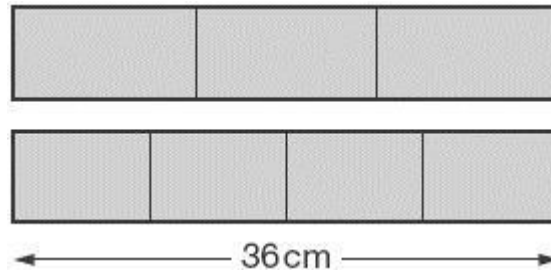
Q22.

Joe has two strips of card.

Each strip is 36 centimetres long.

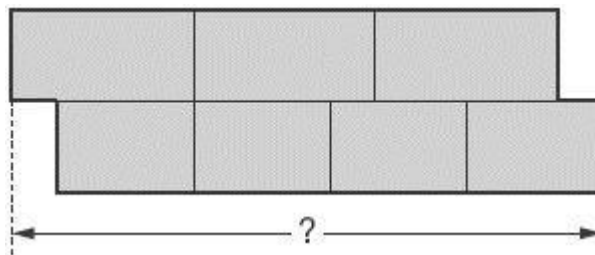
One strip is divided into three equal parts.

The other strip is divided into four equal parts.



Not actual size

Joe uses the two strips to make this shape.



What is the total length of Joe's shape?

Show your method

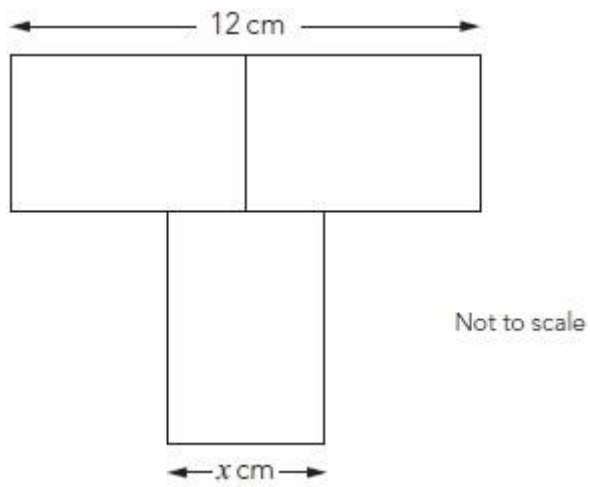
The diagram shows a large grid for showing the method. On the left side of the grid, there is a rounded rectangular box containing the text "Show your method". On the right side of the grid, there is a smaller rectangular box containing the text "cm".

2 marks

Q23.

Here is a T-shape made from 3 identical rectangles.

The area of the T-shape is **90 cm²**



Work out the value of x

Show your method

A large grid for showing the method. A small rectangle is drawn in the bottom right corner of the grid, labeled "cm".

2 marks

Q24.

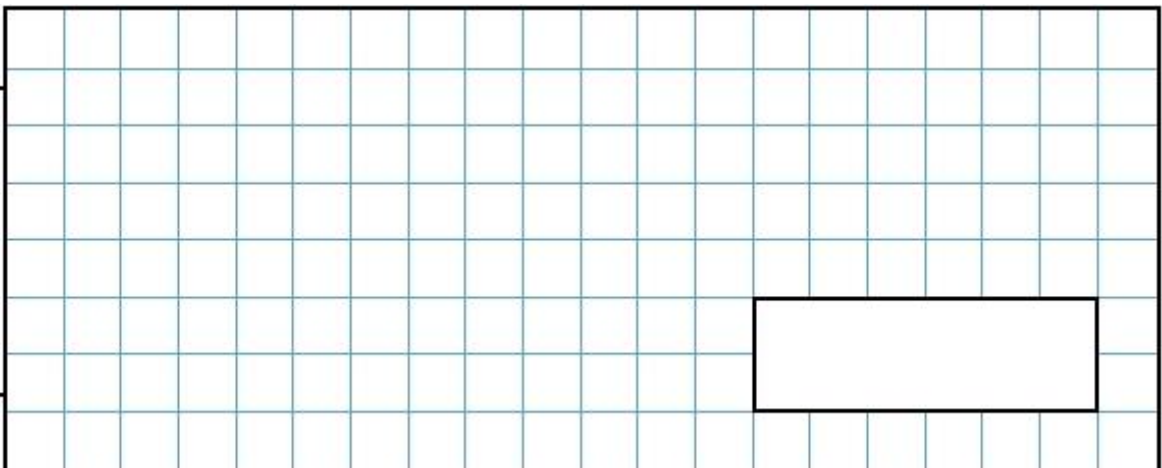
Megan wants to fill a bucket with water.

A bucket holds 6 litres.

A jug holds 500 millilitres.

How many jugs of water does Megan need to fill an empty bucket?


Show your method



2 marks

Q25.

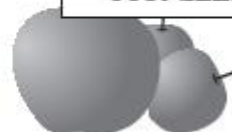
One toffee apple needs:
1 stick,
100 g of sugar,
1 apple.



50 sticks
cost £6.25



1 kg of sugar
costs £0.99



100 apples
cost £22.50

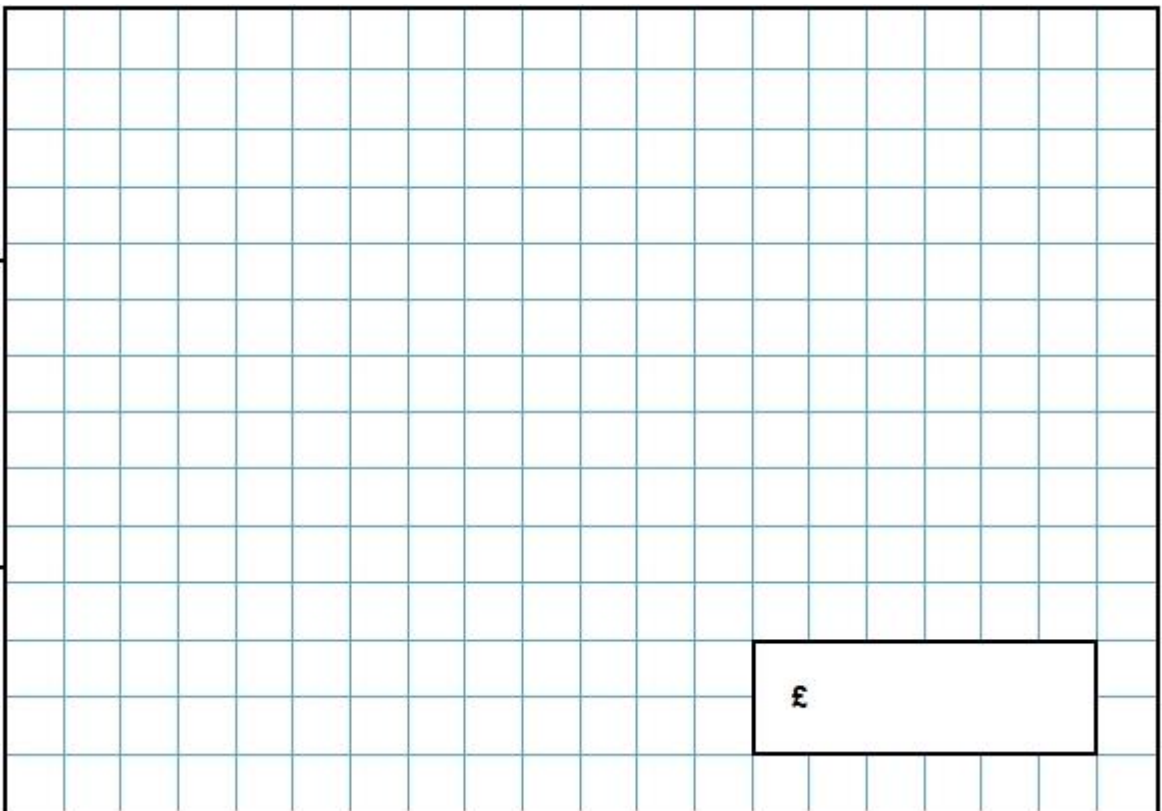
Children buy just enough sticks, sugar and apples to make **100** toffee apples.

They sell all 100 toffee apples for **£1 each**.

The profit goes to charity.

Work out how much money goes to charity.

Show your method

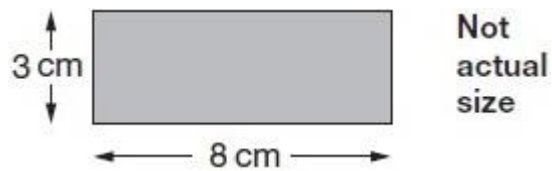


£

3 marks

Q26.

Alfie has some rectangles.



He makes this shape using three of the rectangles.



What is the **perimeter** of Alfie's shape?

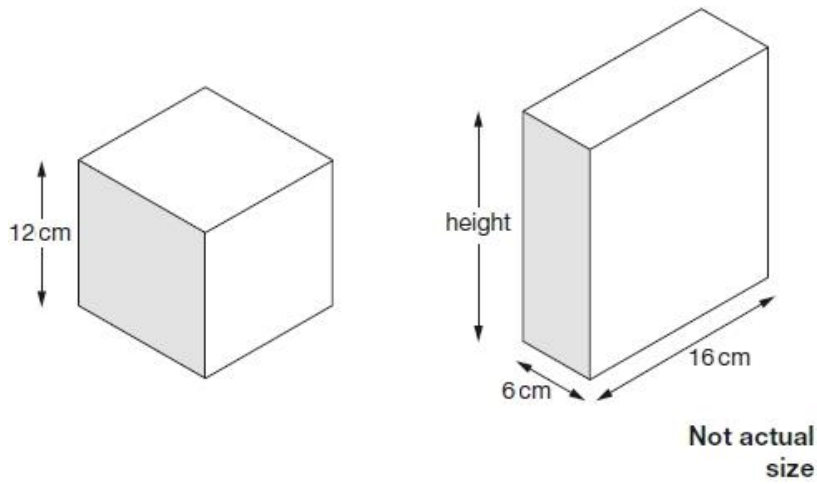
Show your method

cm

2 marks

Q27.

The cube and cuboid have **equal volumes**.



Calculate the height of the cuboid.

Show your method

cm

2 marks

Q28.

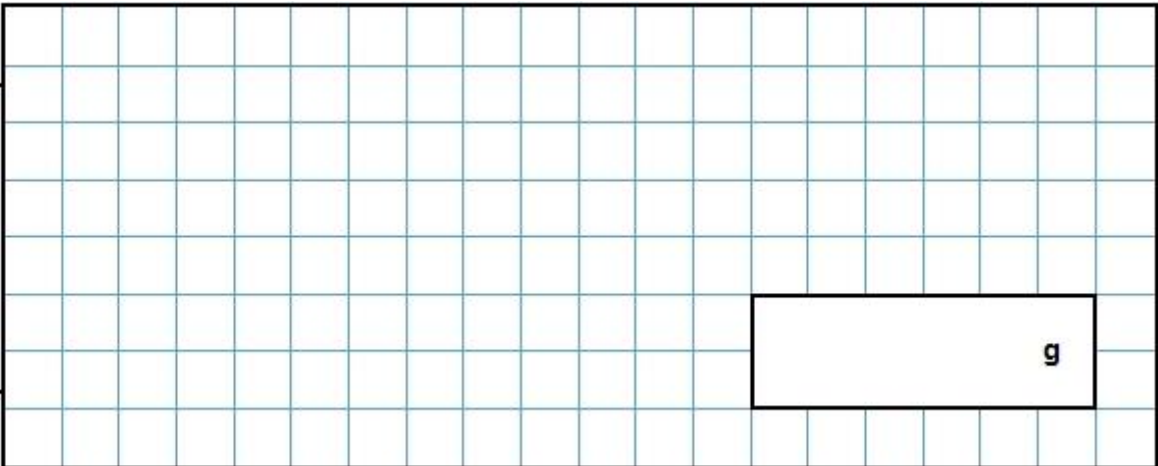
Chen and Megan each have a parcel.

Chen's parcel weighs $1\frac{1}{2}$ kg.

Megan's parcel weighs 1.2 kg

How many more **grams** does Chen's parcel weigh than Megan's parcel?

Show your method



2 marks

Q29.

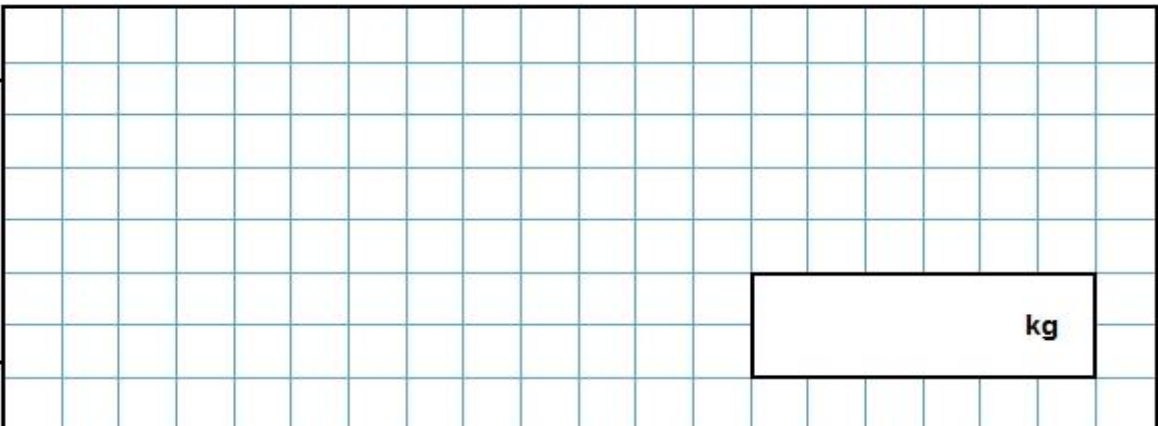
Chen is cooking some pasta.

The recipe says he needs 350 grams of pasta for 4 people.



How many **kilograms** of pasta does he need for **12 people**?

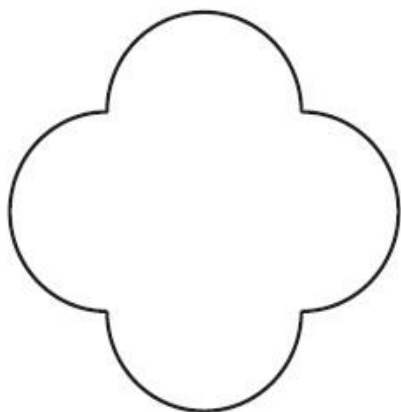
Show your method



2 marks

Q32.

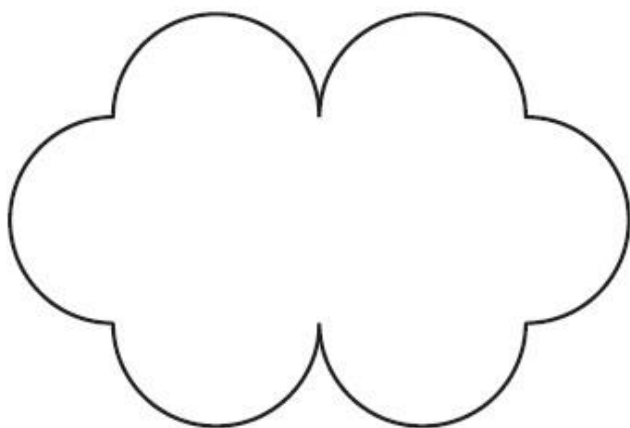
This shape is made out of four identical curves.



**Not
actual
size**

The perimeter of the shape is 28 centimetres.

A new shape is made out of curves of the same size.



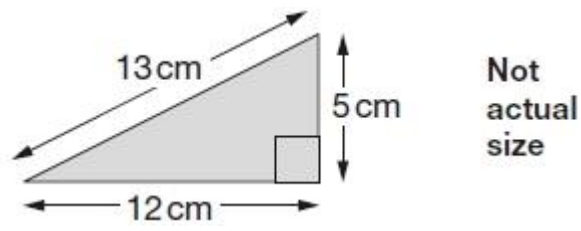
What is the perimeter of the new shape?

<p>Show your method</p>	[A large grid area for showing the method]																			
	[A box for the final answer]																		cm	

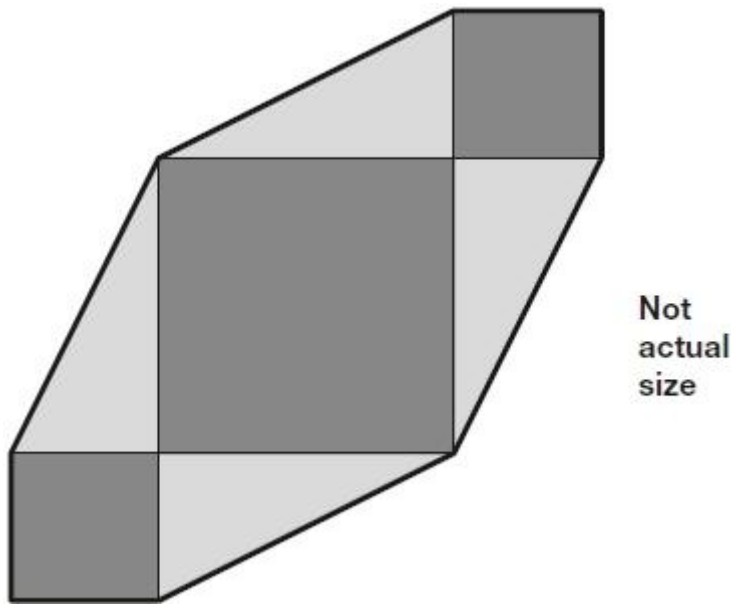
2 marks

Q33.

Chen has some right-angled triangular tiles.



He makes this shape with four of his triangular tiles and three square tiles.



What is the **perimeter** of Chen's shape?

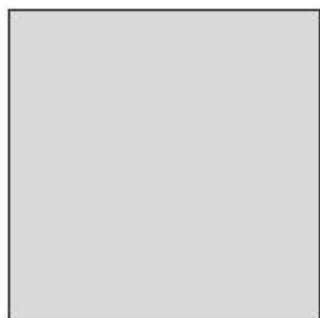
Show your method

cm

2 marks

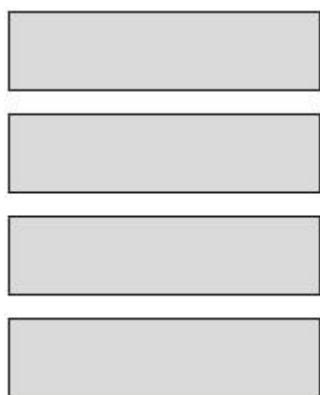
Q34.

The **area** of this square is 36 cm^2 .



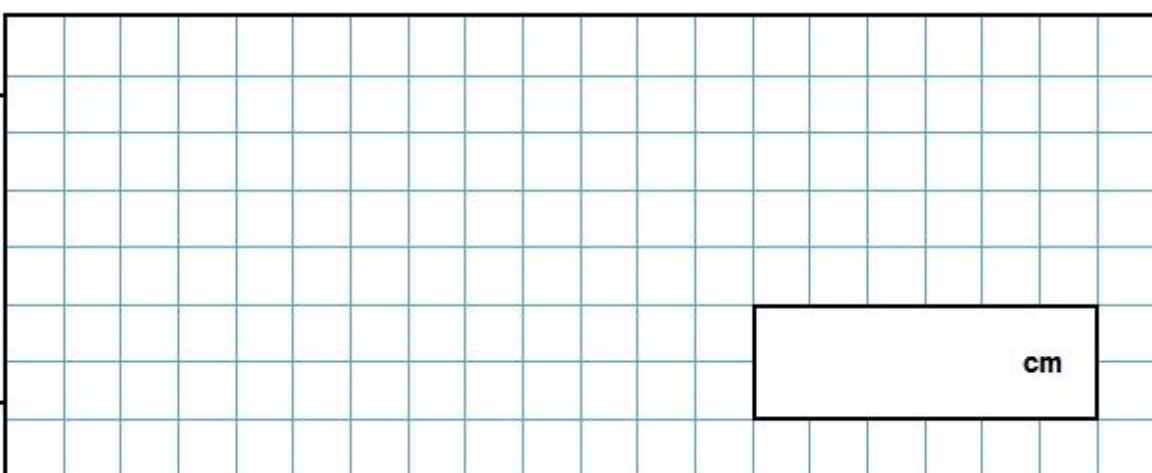
Not actual size

The square is cut into quarters to create 4 identical rectangles.



What is the **perimeter** of **one** of the small rectangles?

Show your method



cm

2 marks

Q35.

Megan says,

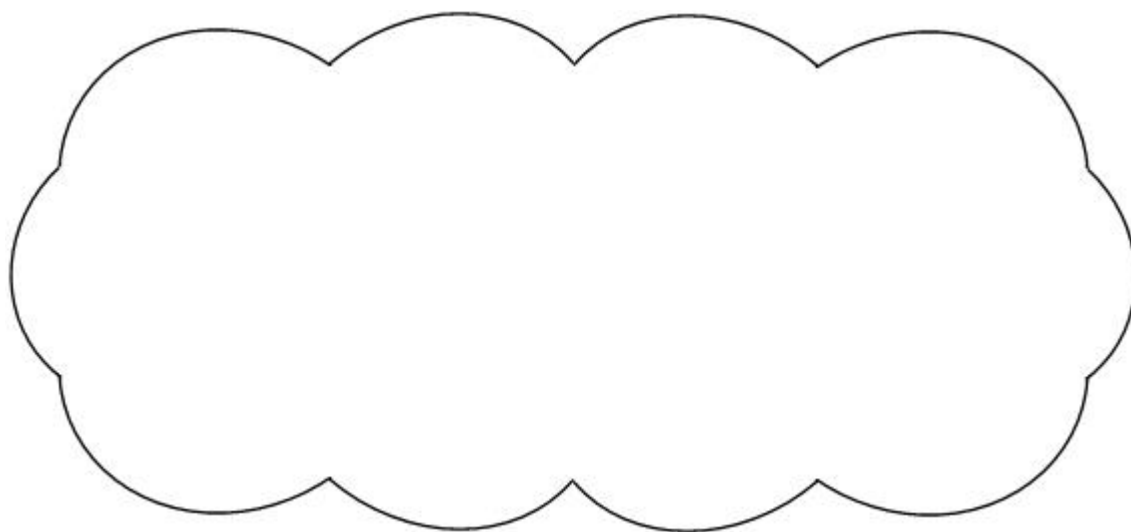
***'If two rectangles have the same perimeter,
they must have the same area.'***

Is she correct?

Circle **Yes** or **No**.

Yes / No

Explain how you know.



1 mark