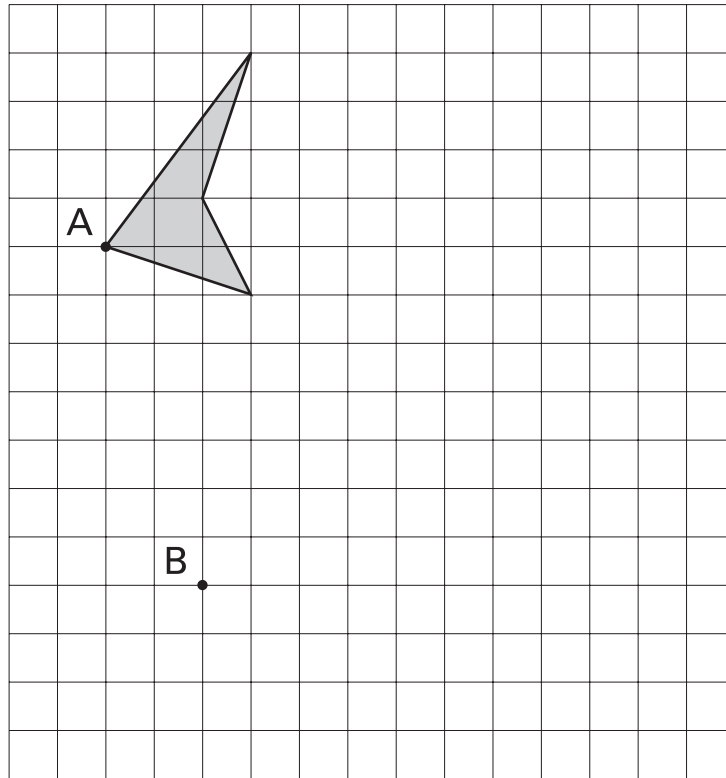


3

The shaded shape is translated from **A** to **B** and **enlarged** by a **scale factor of 2**

Draw the **enlarged shape** on the grid.

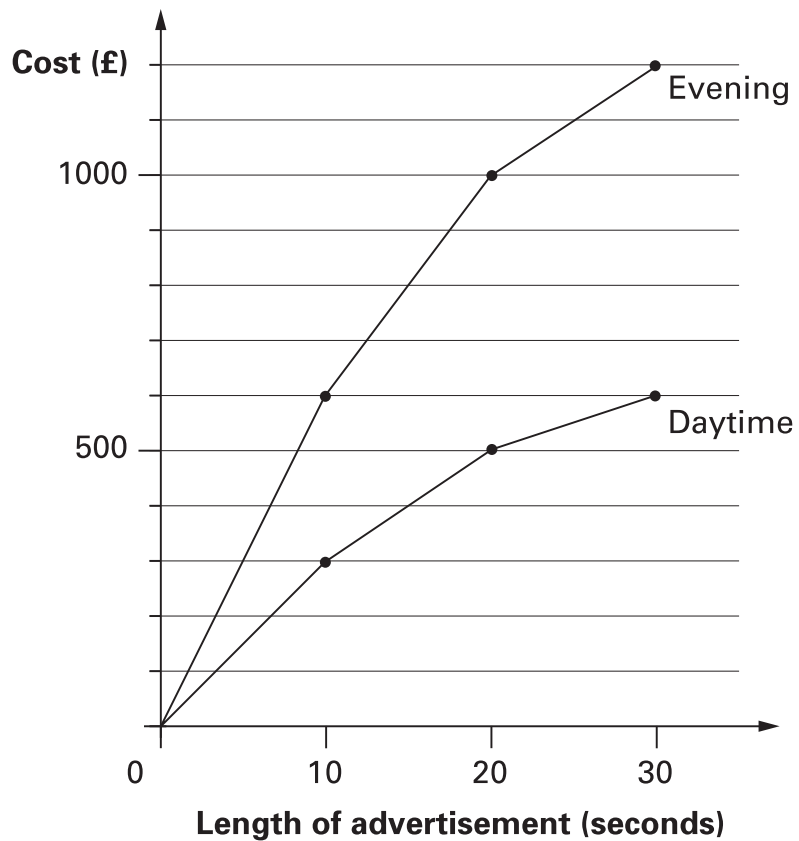
Use a ruler.



3
2 marks

4

This chart gives the cost of showing advertisements on television at different times.



An advertisement lasts **25 seconds**. Use the graph to estimate how much **cheaper** it is to show it in the **daytime** compared with the **evening**.



4a

1 mark

An advertisement was shown in the **daytime** and again in the **evening**.

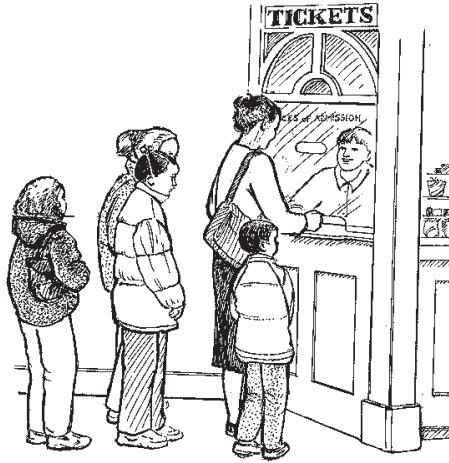
The total cost was **£1200**

How long was the advertisement in seconds?



4b

1 mark



Two families go to the cinema.

The Smith family buy tickets for **one adult** and **four children** and pay **£19**

The Jones family buy tickets for **two adults** and **two children** and pay **£17**

What is the cost of **one child's ticket**?



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

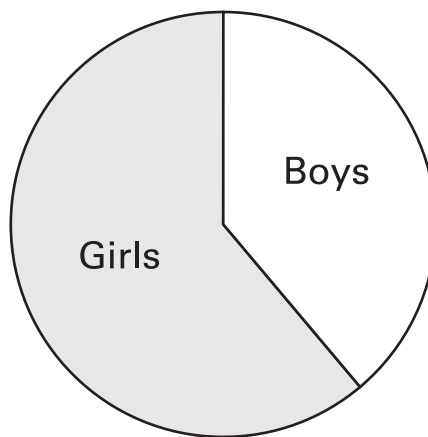
£

5
2 marks

6

Sarah makes a pie chart to show the proportion of boys and girls in her class.

	Number in class	Size of angle on pie chart
Boys	14	144°
Girls	21	216°



The next day another **boy** joins Sarah's class.

She makes a new pie chart.

Calculate the angle for **boys** on the new pie chart.



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

6
2 marks

7What is the value of u in this equation?

$$5u - 10 = u + 46$$



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

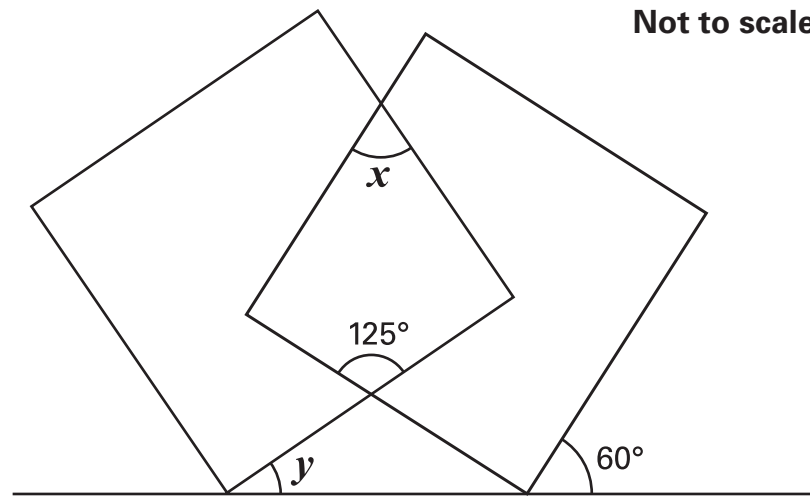
7
2 marks

8What fraction is **exactly** half-way between $\frac{3}{5}$ and $\frac{5}{7}$?

8
1 mark

9

The diagram shows two overlapping squares and a straight line.



Calculate the value of **angle x** and the value of **angle y** .

Do **not** use a protractor (angle measurer).

 $x =$

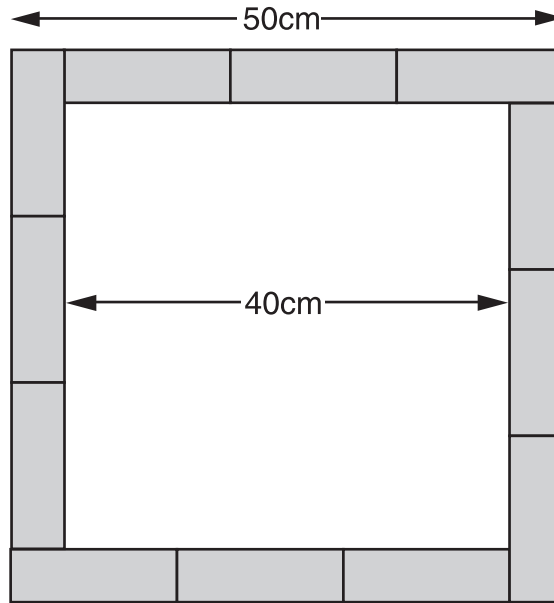
9a
1 mark

 $y =$

9b
1 mark

10

Twelve rectangles, all the same size, are arranged to make a square, as shown in the diagram.



Calculate the **area** of **one** of the rectangles.



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

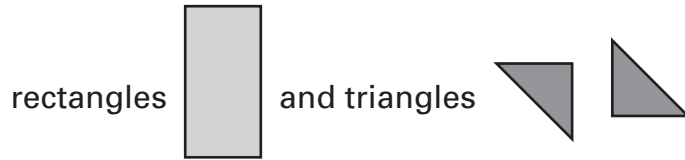
Blank area for showing the method to calculate the area of one rectangle.

cm^2

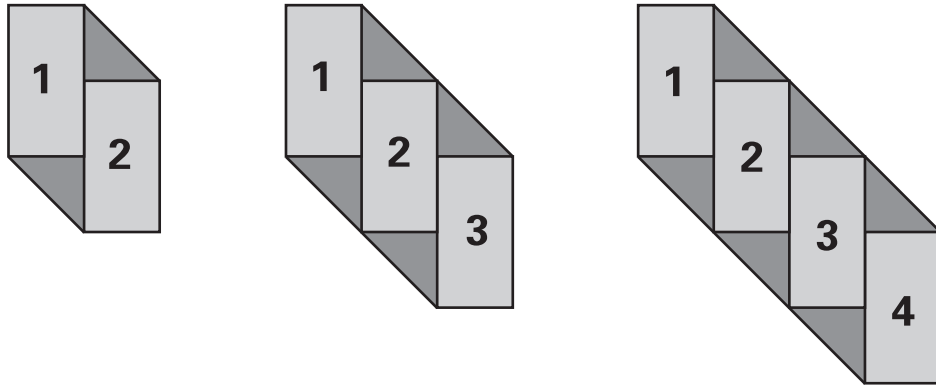
10
2 marks

11

Here is the start of a sequence of shapes using



Each rectangle has been numbered.



The pattern continues to grow in this way.

How many triangles will there be in the shape that has **50 rectangles** in it?



11a
1 mark

T stands for the number of triangles in each shape.

R stands for the number of rectangles in each shape.

What is the rule connecting **T and R** ?



.....

.....

.....

11b
1 mark



There are **six balls** in a bag.

The probability of taking a **red ball** out of the bag is **0.5**

A **red ball** is taken out of the bag, and put to one side.

What is the probability of taking another **red ball** out of the bag?

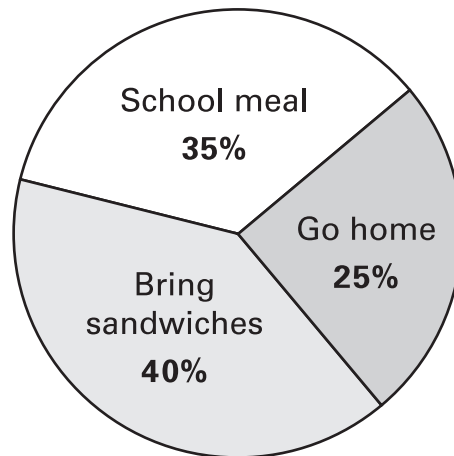


Show
your **method**.
You may get
a mark.

12
2 marks



This pie chart shows the lunch choices of year 6 children at a school.



28 children in year 6 have a **school meal**.

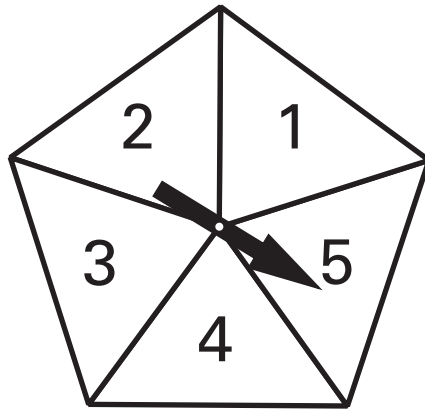
How many **go home** for lunch?

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

13
2 marks

14

Here is a spinner with five equal sections.



Jane and Sam play a game.

They spin the pointer many times.

If it stops on an **odd number**, Jane gets **2 points**.

If it stops on an **even number**, Sam gets **3 points**.

Is this a fair game? Circle Yes or No.



Yes / No

Explain your answer.



.....

.....

.....

14

1 mark

.....

15

The **product** of two numbers is **999**

The **difference** between them is **10**

What are the two numbers?



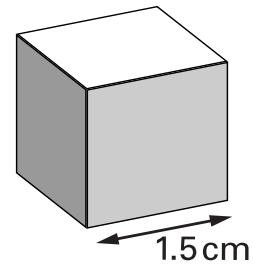
Show your **method**.
You may get a mark.

Blank area for showing the method to solve the problem, with two empty rectangular boxes at the bottom right.

15
2 marks

16

Amit has some small cubes.



The edge of each cube is **1.5 centimetres**.

He makes a larger cube out of the small cubes.

The **volume** of this larger cube is **216 cm³**.

How many small cubes does he use?



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

Blank area for showing the method to solve the problem, with one empty rectangular box at the bottom right.

16
2 marks

Blank box for the total score.

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QCA Key Stage 2 Team, 29 Bolton Street, London W1Y 7PD

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