

Progress check

Year 6

Mathematics

Paper 2: reasoning and problem solving

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
Teacher						

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Instructions

You **may not** use a calculator to answer any questions in this test.

Questions and answers

You have **50 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do working out, you can use the space around the question.

Some questions have a method box like this:

Show your method

For these questions you may get a mark for showing your method.

If you cannot do one of the questions, **go on to the next one.**

You can come back to it later, if you have time.

If you finish before the end, **go back and check your work.**

Marks

The number under each line at the side of the page tells you the maximum number of marks for each question.

1

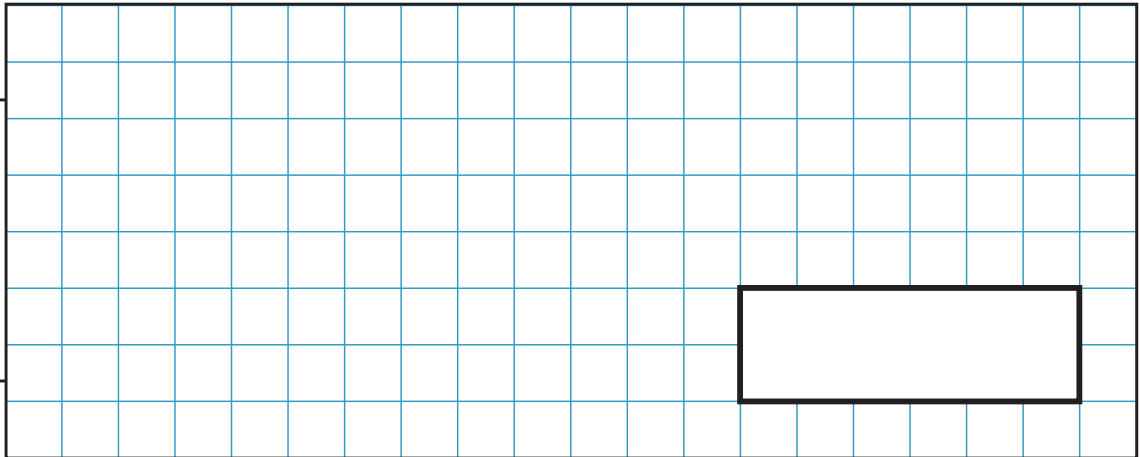
67 children attend chess club.

26 different children attend maths club.

There are 600 children in the school.

How many children do not attend either club?

Show
your
method



2 marks

2

Match the numbers to their word form.

One has been done for you.

19,300

One thousand, nine hundred and thirty

1,930

One hundred and nine

1,090

Nineteen thousand, three hundred

190

One hundred and ninety

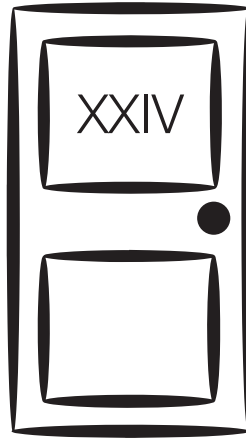
109

One thousand and ninety

2 marks

3

Max lives at this house.

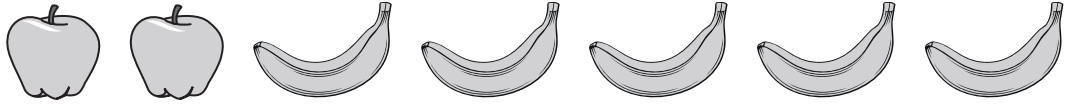


What number house does Max live at?

1 mark

4

In a fruit bowl, there are 2 apples for every 5 bananas.



There are 8 apples in the fruit bowl.

How many pieces of fruit are there in the fruit bowl in total?

Show
your
method

A large grid for showing the method to solve the problem. The grid is 20 units wide and 15 units high. A smaller, empty rectangular box is drawn within the grid, starting from the 15th vertical line and the 10th horizontal line from the top-left corner, extending to the 18th vertical line and the 12th horizontal line.

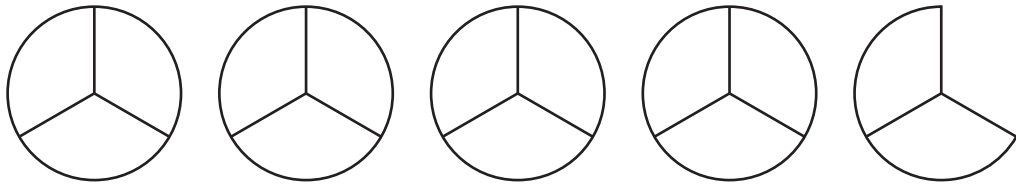
2 marks

6

What is 10 more than $4\frac{2}{3}$?

1 mark

How many thirds are there in $4\frac{2}{3}$?



1 mark

Filip says there are double the amount of sixths than thirds in $4\frac{2}{3}$.

Is Filip correct?

Explain your answer.

1 mark

7

A soft toy costs £4.50

A suitcase costs ten times as much.

How much does the soft toy and suitcase cost in total?

Show
your
method

A large grid for showing the method to solve the problem. A box on the right side of the grid contains the symbol '£' followed by a blank space for the answer.

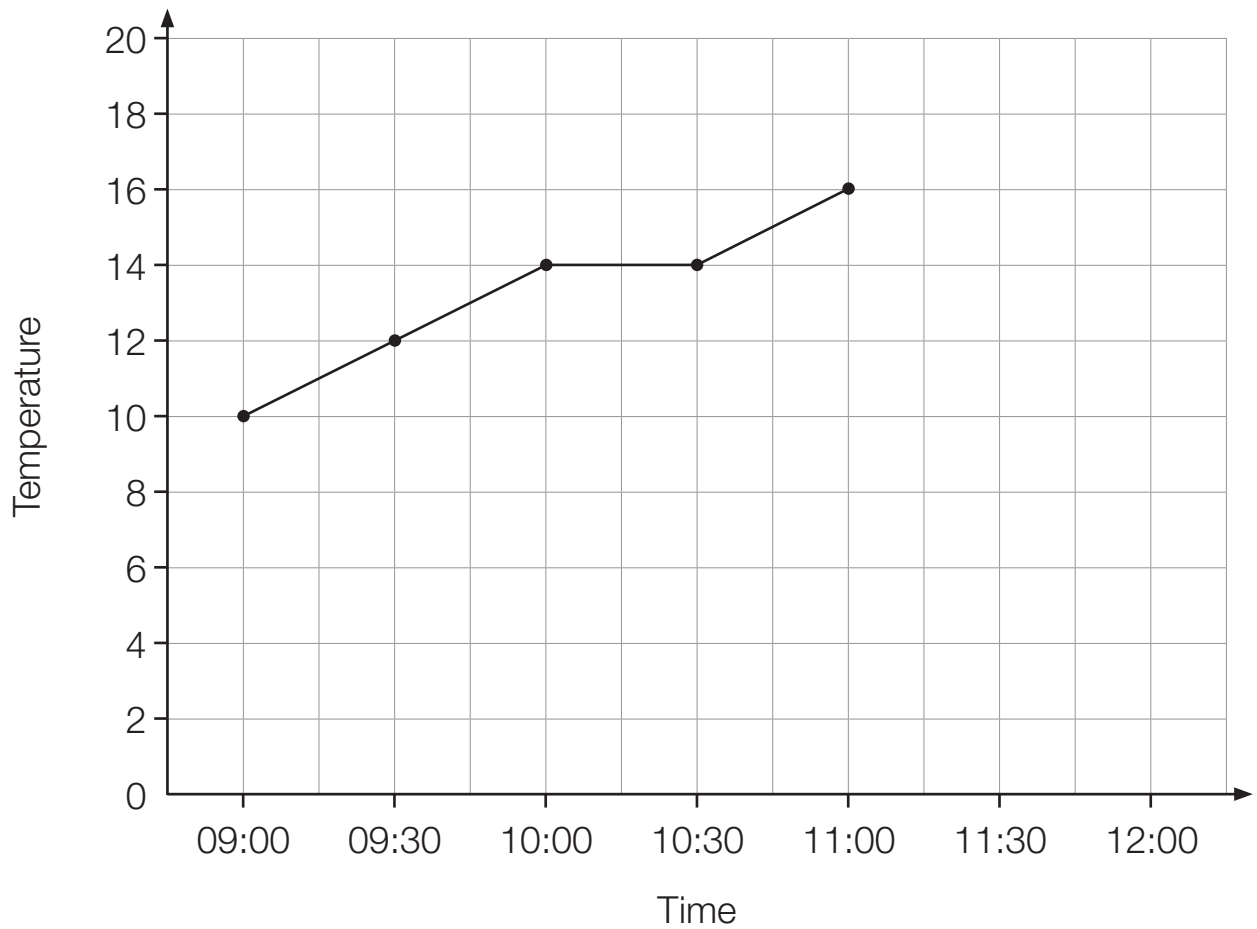
2 marks

8

Complete the line graph.

Use a ruler.

Time	Temperature (°C)
09:00	10
09:30	12
10:00	14
10:30	14
11:00	16
11:30	17
12:00	18



1 mark

9

Morgan is running a 10 kilometre race.

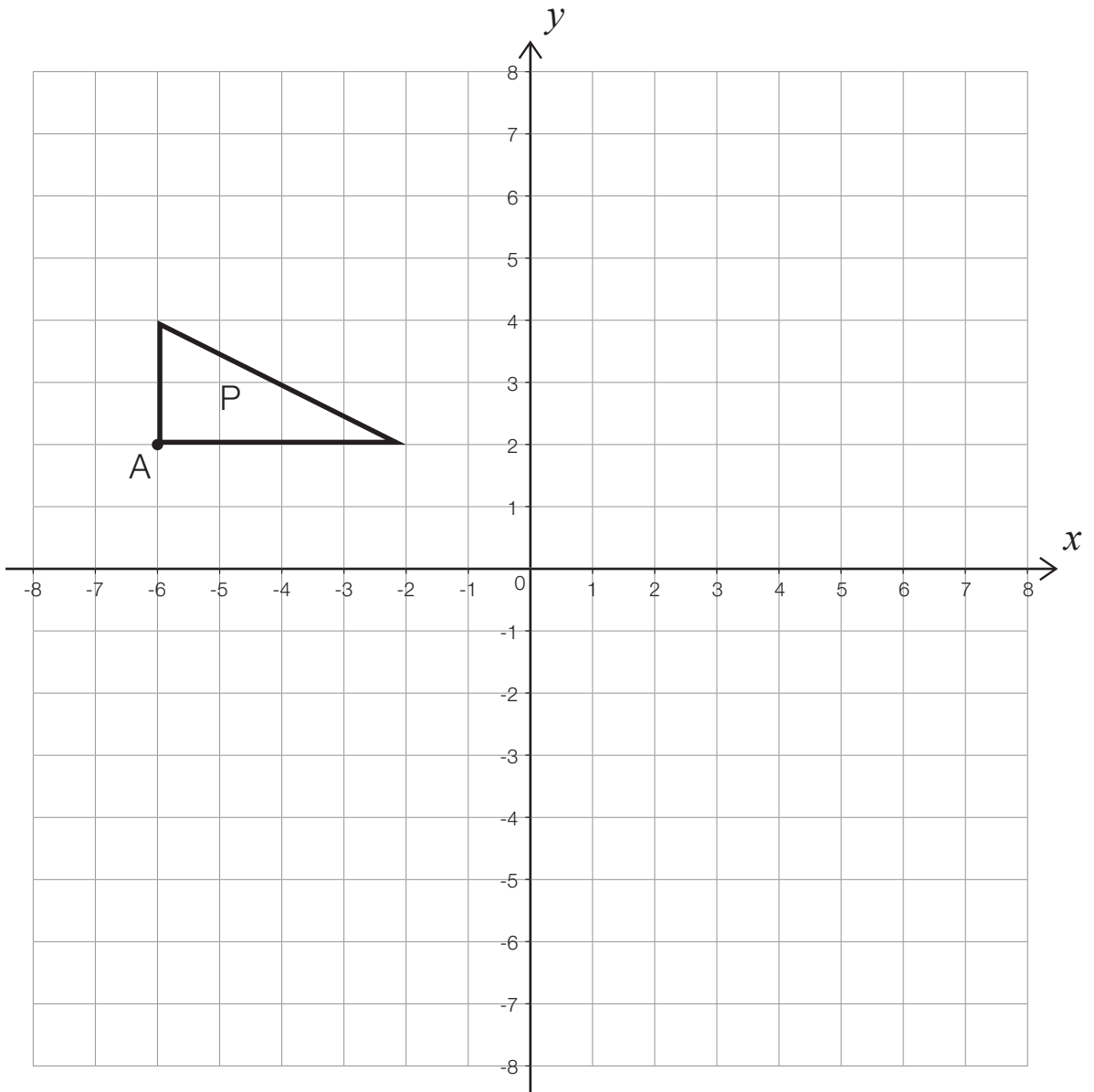
So far, she has run 1,340 metres.

How far does she have left to run?

Show
your
method

A large grid for showing the method. A box on the right side of the grid contains the letter 'm'.

1 mark



1 mark

Triangle P is reflected in the x -axis

Draw the reflection on the grid.

Label your shape Q.

Triangle P is now translated 7 units right and 4 units up.

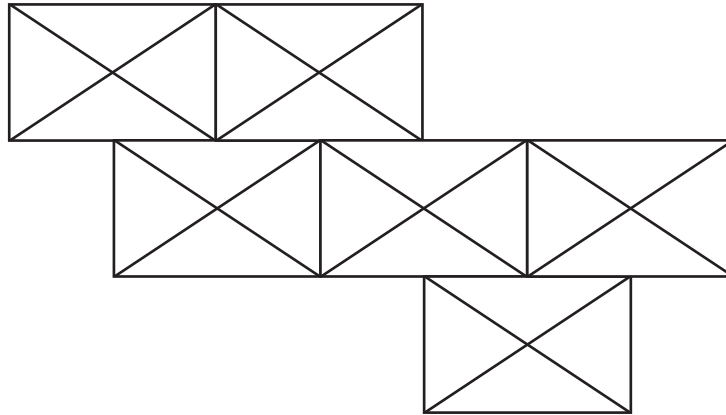
What are the co-ordinates of the vertex labelled A after the translation?

(,)

1 mark

11

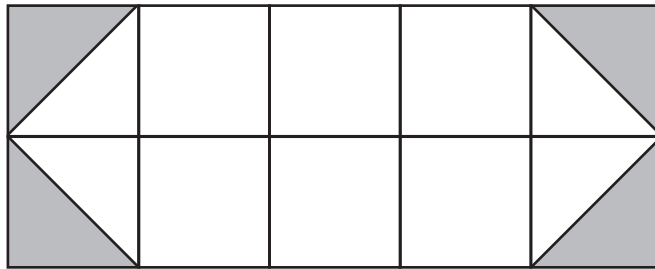
Shade $\frac{2}{3}$ of the shape below.



1 mark

Sam says,

“20% of the shape is shaded.”



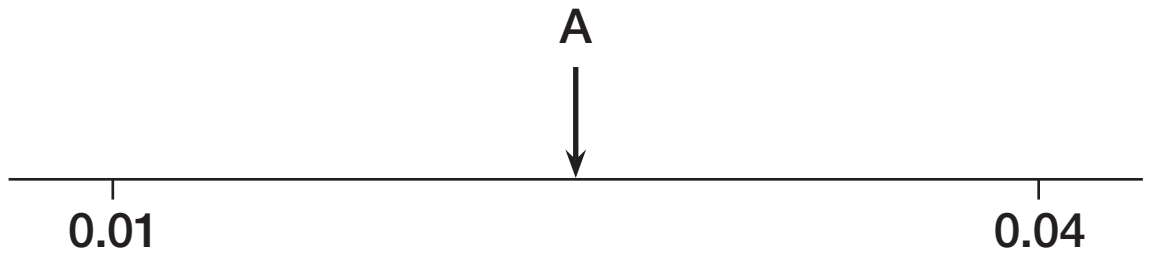
Do you agree with Sam?

Explain your answer.

1 mark

12

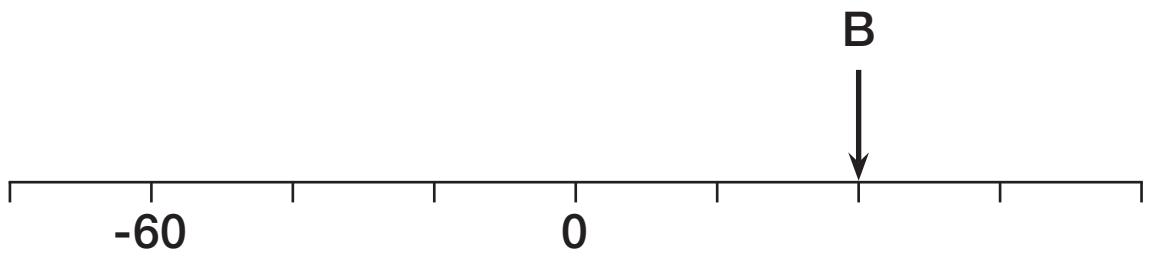
A is half way between 0.01 and 0.04



What is the value of A?

1 mark

What is the value of B?



1 mark

13

Complete the missing number.

$$\frac{\square}{6} \text{ of } 132 = 88$$

1 mark

Explain all the steps in your working.

1 mark



A bottled drink is made up of 120 ml of juice and the rest is water.

Water makes up $\frac{3}{5}$ of the drink.

How much water would be needed for 5 bottles of drink?

Show
your
method

A large grid of 20 columns and 15 rows. A small box is drawn at the bottom right of the grid, containing the text "ml".

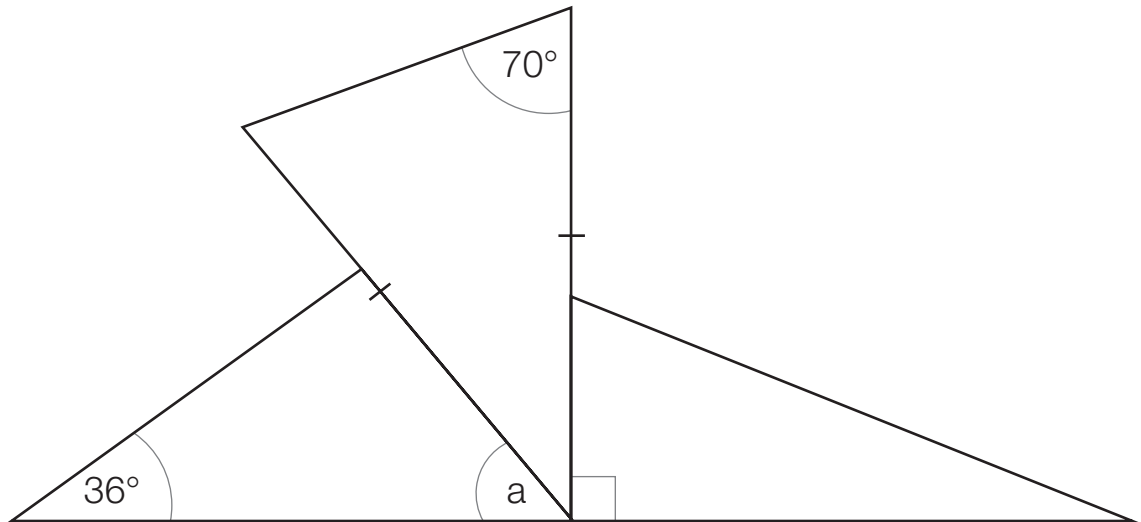
ml

2 marks

15

The shape below is made of an isosceles triangle, a scalene triangle and a right-angled triangle.

Calculate the size of angle a



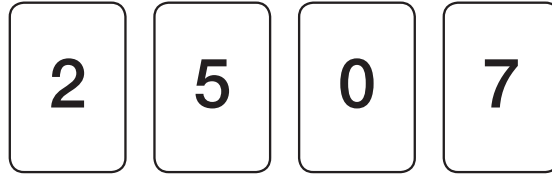
Show
your
method

○

2 marks

16

Ajay has these four digit cards.



What is the **mean** of Ajay's cards?

1 mark

Ajay removes one of the cards.

The mean of the new cards is 4

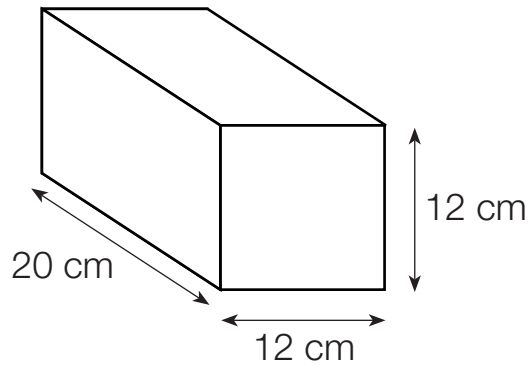
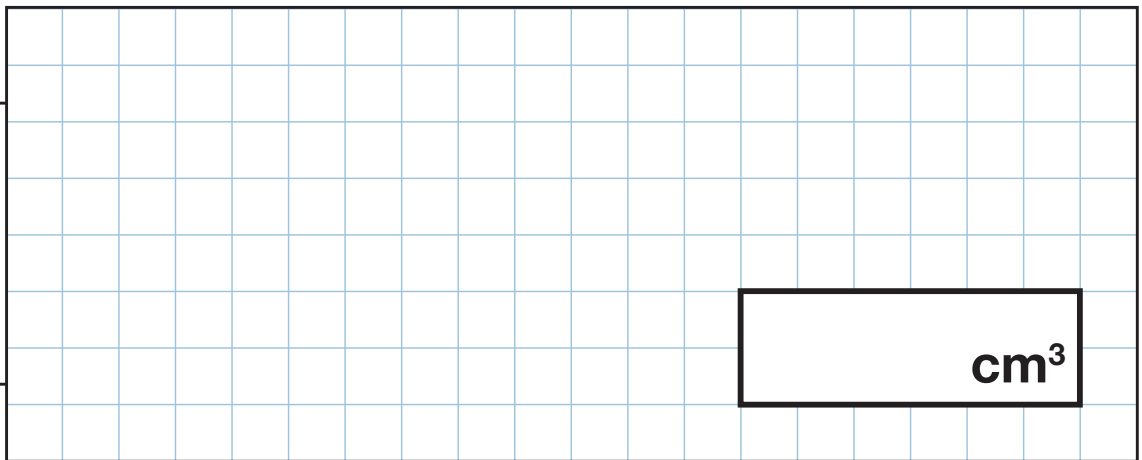
Which card did he remove?

Explain your answer.

1 mark

17

Calculate the volume of the cuboid.

Show
your
method

2 marks

18

$$2y + 3x = 12$$

If $x = 2$, find the value of y $y =$

2 marks

19

Draw a pair of brackets to make the number sentence true.

$$8 + 4 \times 3 - 2 + 1 = 13$$

1 mark

20

2 books and 3 magazines cost £17

2 books and 5 magazines cost £21

How much does a magazine cost?

Show
your
method

A large grid for showing the method. On the right side of the grid, there is a rectangular box containing the symbol £.

1 mark

How much does a book cost?

Show
your
method

A large grid for showing the method. On the right side of the grid, there is a rectangular box containing the symbol £.

1 mark

21

Sam buys 20 metres of fabric.

He uses $\frac{3}{10}$ of it to make a dress.

He uses $2\frac{1}{3}$ metres to make some trousers.

How many metres does he have left?

Show
your
method

A large grid for showing the method to solve the problem. A small box at the bottom right of the grid contains the letter 'm'.

3 marks

END OF TEST

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