

National Curriculum Baseline Test

Key Stage 2

Mathematics

Paper 2: reasoning

First name						
Middle name						
Last name						
Date of Birth	Day		Month		Year	
School name						

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Please do not write on this page.

Instructions

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

Questions and answers

You have 40 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 a question, **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.**

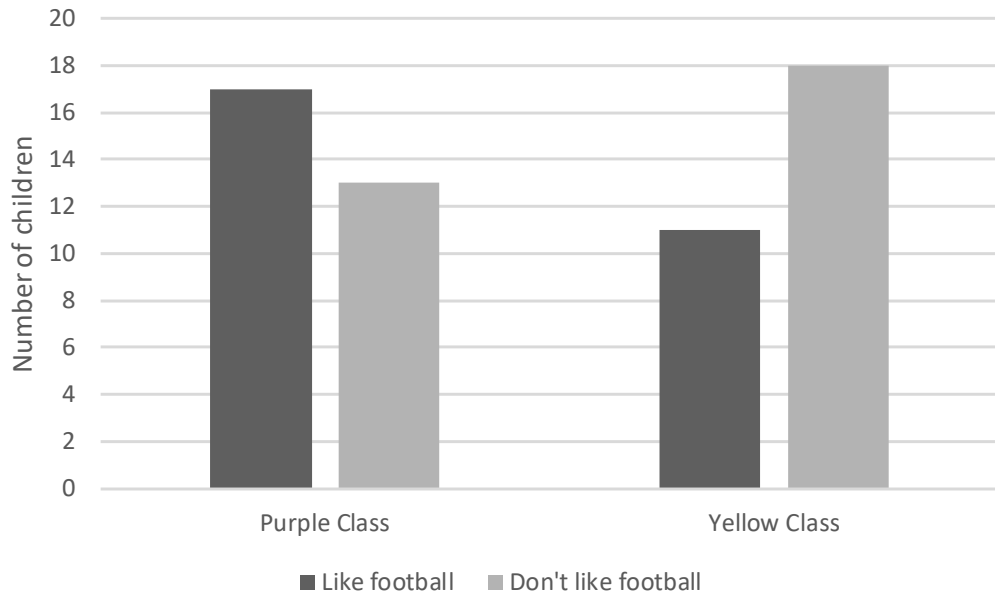
Marks

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

1

Tom asks the children in his year if they like football.

This graph shows the results.



Altogether, how many children **don't** like football?

1 mark

How many **more** children in Purple Class than in Yellow Class like football?

1 mark

2

Circle the number that is **10 times** greater than three hundred and four.

304

3,040

3,400

3,004

340

1 mark**3**

Write the missing numbers to make this **multiplication** grid correct.

	x	<input type="text"/>	<input type="text"/>
<input type="text"/>	8	56	48
<input type="text"/>		49	42

1 mark

4

This table shows the length of three rivers.

River	Length in metres
Amazon River	6,992
Congo River	4,700
River Thames	346

How much longer is the Amazon River than the combined length of the other two rivers?

Show
your
method

A large grid for showing the method. A small box with 'm' is provided for the answer.

2 marks

5

Complete this table with the missing numbers.

One row has been done for you.

Number	1,000 less
1,300	300
4,921	
	472
	29,645

2 marks

6Write these numbers in order of size, starting with the **largest**.

1.782

0.308

1.827

0.649

1 mark

largest

7

Write the missing numbers.

144 hours = days63 days = weeks96 months = years

2 marks

8

At the start of January, there were 451 houses for sale in the estate agents.

During January–March,

- 146 houses were sold
- 329 more houses were put on the market.

How many houses were still for sale at the end of March?

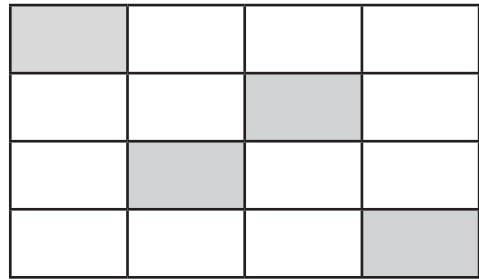
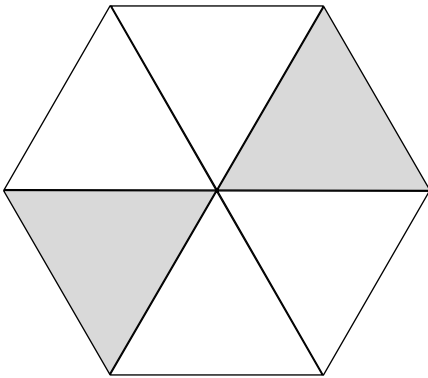
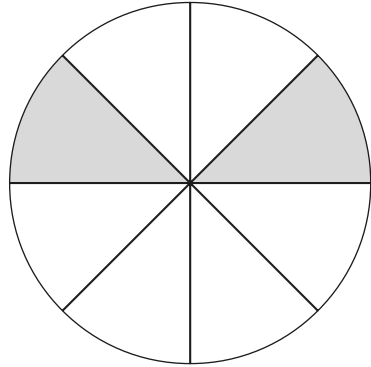
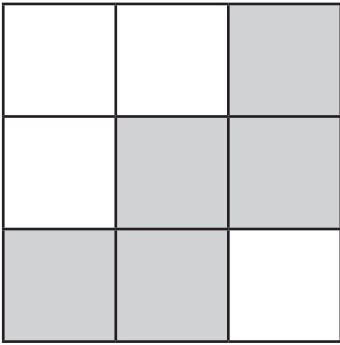
Show
your
method

The grid is 20 columns wide and 10 rows high. A smaller empty box is located in the bottom right corner of the grid, spanning 5 columns and 2 rows.

2 marks

9

Tick two shapes that have $\frac{1}{4}$ shaded.



1 mark

10

Round 37,452

to the nearest 10

to the nearest 100

to the nearest 1,000

2 marks

11

Here is a rule for the time it takes to cook a joint of beef.

**Cooking time = 25 minutes plus an extra
30 minutes for each 500 grams**

How many minutes will it take to cook a 2kg joint of beef?

minutes

1 mark

What is the mass of a joint of beef that takes 85 minutes to cook?

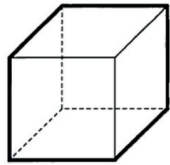
kg

1 mark

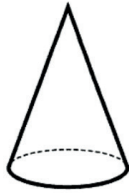
12

Here are diagrams of some 3D shapes.

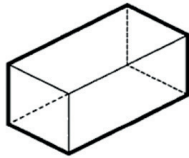
Tick each shape that has double the amount of edges as faces.



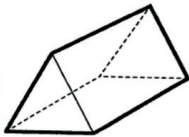
Cube



Cone



Rectangular prism



Triangular prism



2 marks

14

Sacha baked some cakes but didn't have enough icing for all of them.

For every 4 cakes Sacha baked, only 3 were iced.

Altogether, 18 cakes were iced.

How many cakes did Sacha **bake**?

1 mark

15

In a history book, the date of a battle is given in Roman numerals.

MLXVI

Write the year MLXVI in **figures**.

1 mark

16

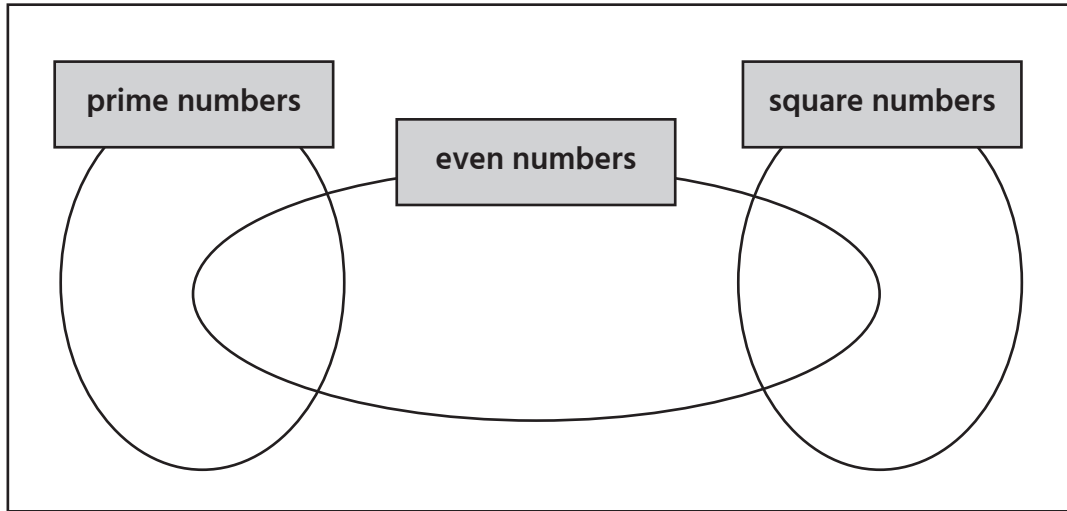
Write each number in its correct place on the diagram.

2

5

9

12



1 mark

17

Write the two missing values to make these equivalent fractions correct.

$$\frac{\square}{4} = \frac{18}{24} = \frac{9}{\square}$$

1 mark

18

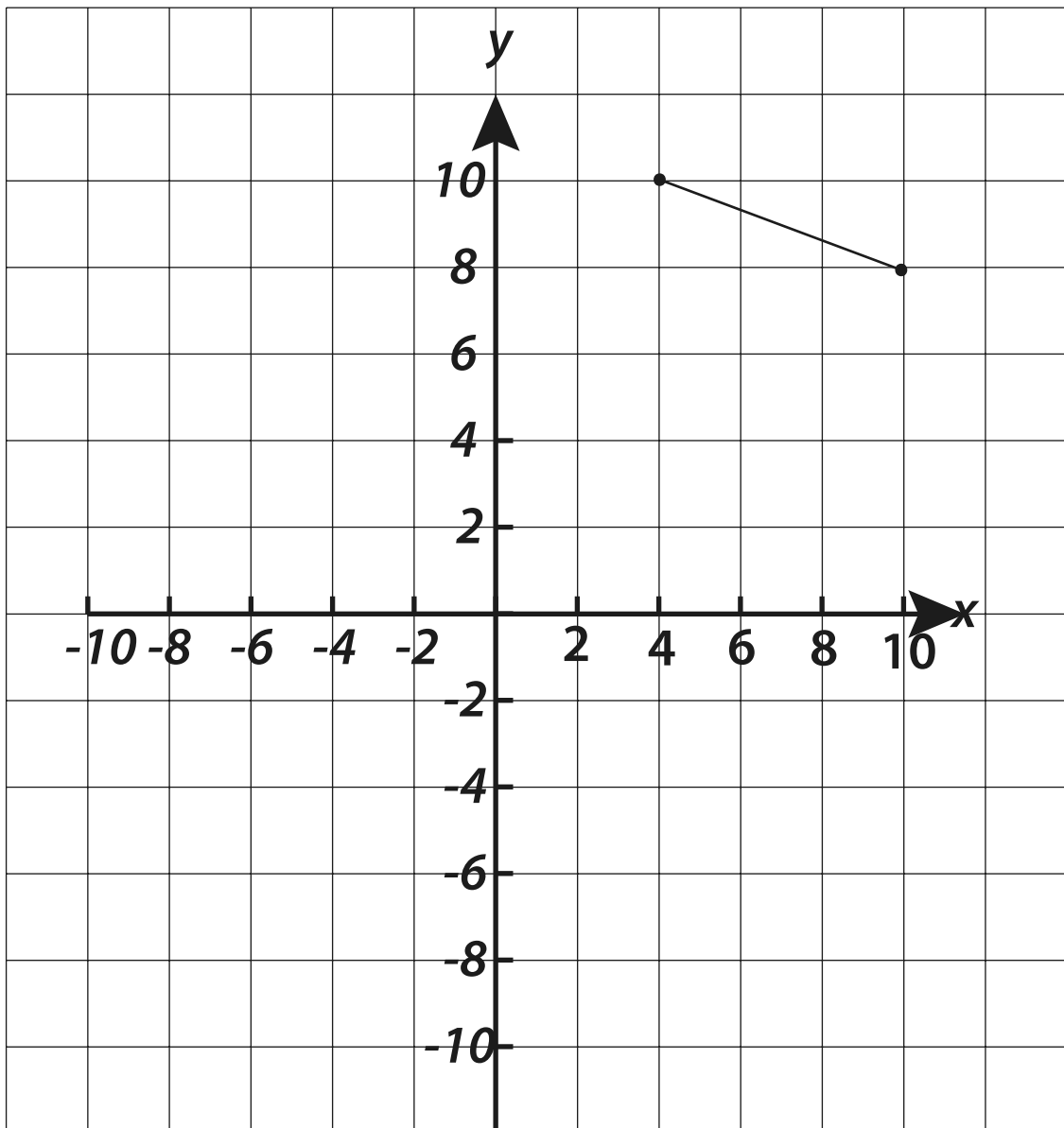
The vertices of a pentagon have these coordinates.

 $(4,10)$ $(10,8)$ $(10,4)$ $(6,0)$ $(-2,6)$

One side of the pentagon has been drawn on the grid.

Complete the pentagon.

Use a ruler.



1 mark

19

Circle two numbers that add together to equal **0.43**.

0.40

0.25

0.03

0.20

1 mark

20

There is a sale on in the furniture store. All sofas have a 20% off their original price. One sofa's original price is £850.

What is the sale price?

1 mark

21

$p = 14$

What is $3p - 4$?

1 mark

$4n - 3 = 93$

Work out the value of n .

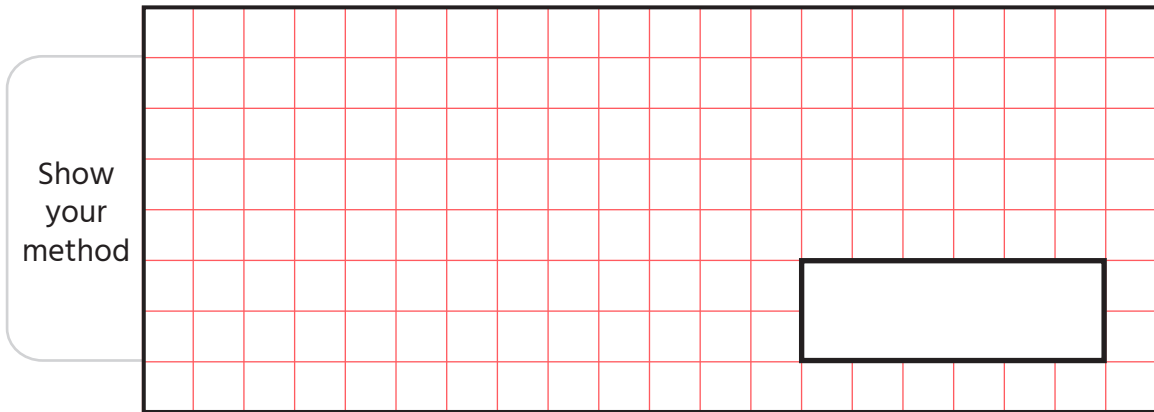
 $n =$

1 mark

23

Sam draws a picture of his house using a scale of 1cm to 5m. On the plan his garden is 7cm long.

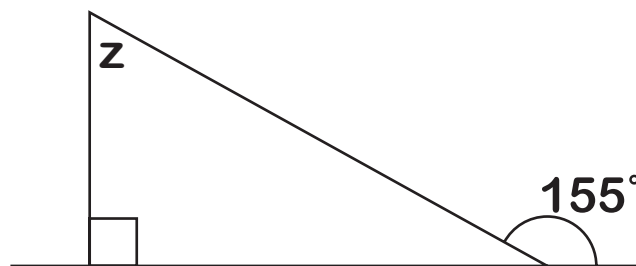
What is the real length of his garden?



2 marks

24

In the right-angled triangle below, what is the size of the angle z ?



$z =$

1 mark



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This test has been designed by our staff to help Explore Learning members prepare for the KS2 SATs, using questions similar to examples provided by the Standards and Testing Agency.