2016 national curriculum tests

Key stage 2

Mathematics

Paper 2: reasoning

First name				
Middle name		;		
Last name				
Date of birth	Day	Month	Year	
School name				
DfE number				

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Instructions

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

Questions and answers

You have 40 minutes to complete this test.

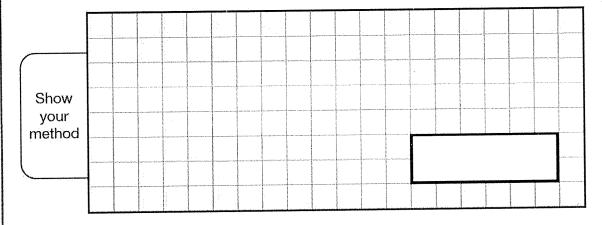
Follow the instructions for each question.

Work as quickly and as carefully as you can.

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

Do not write over any barcodes.

Some questions have a method box like this:



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.



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1

Ali puts these five numbers in their correct places on a number line.

511

499

502

555

455

Write the number closest to 500

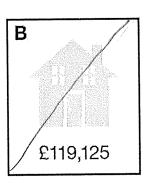
499

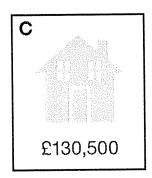
1 mark

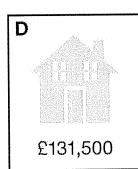
Write the number furthest from 500

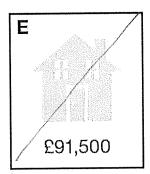
555











Put these houses in order of price starting with the lowest price.

One has been done for you.

E

lowest

В

 \subset

A

This table shows the number of people living in various towns in England.

Town	Population
Bedford ∦	82,448
Carlton	48,493
Dover 🚜	34,087
Formby	24,478
Telford	166,640

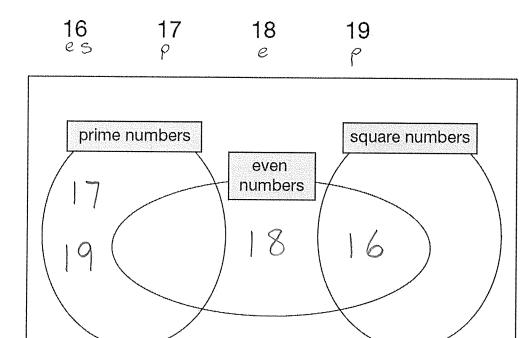
What is the **total** of the numbers of people living in Formby and in Telford?

1 mark

What is the **difference** between the numbers of people living in <u>Bedford</u> and in <u>Dover?</u>

48361





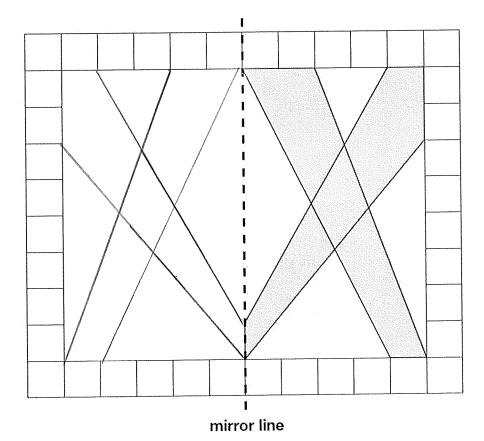
2 marks

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This diagram shows a shaded shape inside a border of squares.

Draw the reflection of the shape in the mirror line.

Use a ruler.



1 mark

1 mark

Circle two numbers that add together to equal 0.25

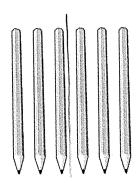


0.23

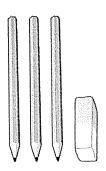


0.5

6 pencils cost £1.68



3 pencils and 1 rubber cost £1.09



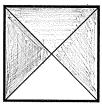
What is the cost of 1 rubber?

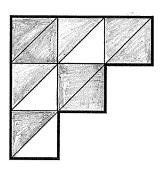
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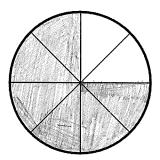


Each diagram below is divided into equal sections.

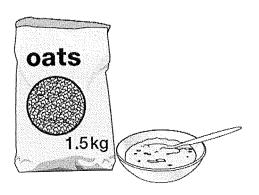
Shade three-quarters of each diagram.





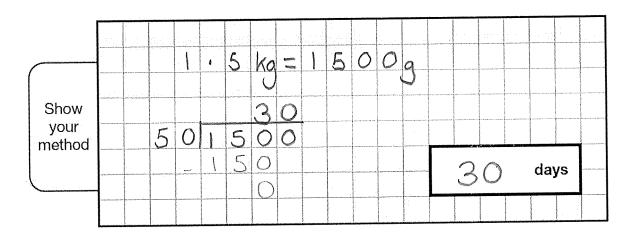


A packet contains 1.5 kg of oats.



Every day Maria uses 50 g of oats to make porridge.

How many days does the packet of oats last?



n = 22

What is 2n + 9?

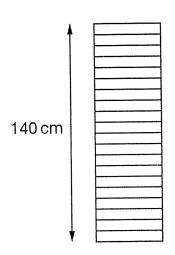
53

1 mark

$$2q + 4 = 100$$

Work out the value of q.

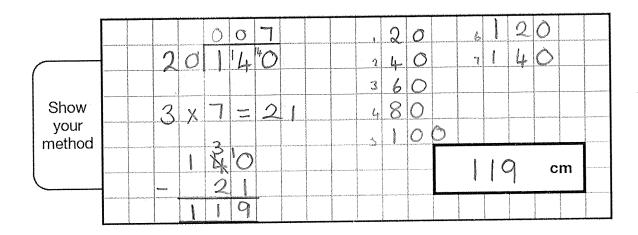
$$100 - 4 = 96$$
 296



Not actual size

Stefan takes three boxes off the top.

How tall is the stack now?



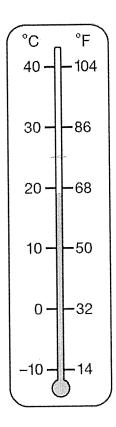
24 48

1 mark

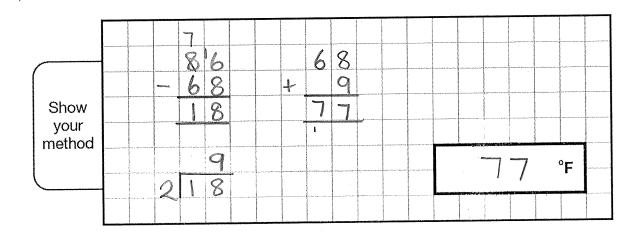
3	30	8
6	33	16
9	36	60
12 15	39	20
15	42	32
18	45	40
21	(48)	(48)
(24)		**************************************

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15

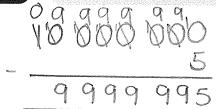


Work out what 25°C is in °F.





16 Write the number that is five less than ten million.



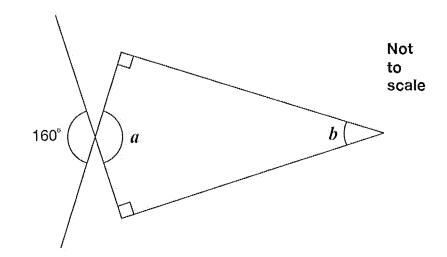
1 mark

Write the number that is one hundred thousand less than six million.

1 mark

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Calculate the size of angles a and b in this diagram.



1 mark

$$b = 20^{\circ}$$

1 mark

Write the missing number.

$$7 - 2 = 35$$

so $70 - 20 = 35$

Miss Mills is making jam to sell at the school fair.

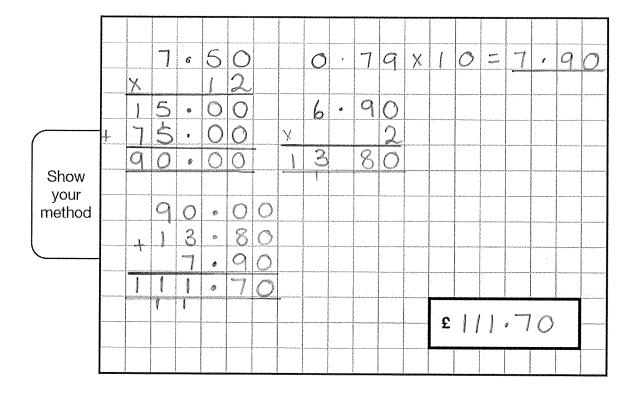
Strawberries cost £7.50 per kg.

Sugar costs 79p per kg.

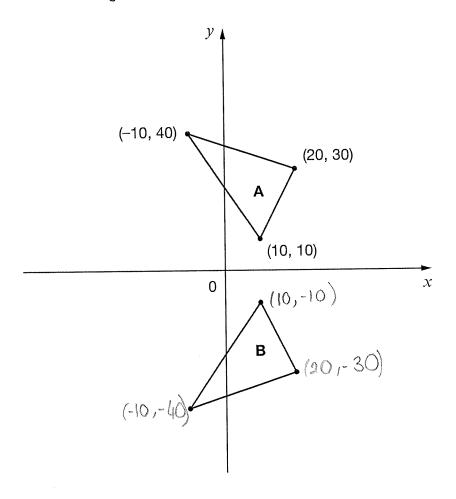
10 glass jars cost £6.90

She uses 12 kg of strawberries and 10 kg of sugar to make 20 jars full of jam.

Calculate the total cost to make 20 jars full of jam.



Here are two triangles drawn on coordinate axes.



Triangle B is a reflection of triangle A in the x-axis.

Two of the new vertices of triangle B are (10, -10) and (20, -30).

What are the coordinates of the third vertex of triangle B?

(-10, -40)

[END OF TEST]

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2016 key stage 2 mathematics

Paper 2: reasoning

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