2016 national curriculum tests

Key stage 2

Mathematics

Paper 3: 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

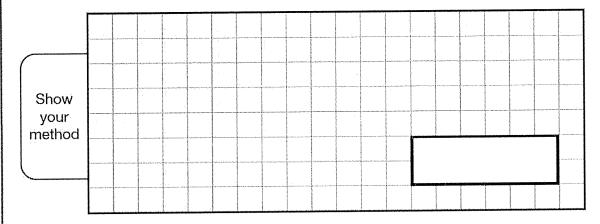
You have 40 minutes to complete this test.

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.

F O D O S O A O 3 2 4

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1

The numbers in this sequence increase by 14 each time.

Write the missing numbers.









2 marke

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This table shows the temperature at 9am on three days in January.

1st January	8th January	15th January
+ 5°C	– 4°C	+ 1°C

What is the difference between the temperature on 1st January and the temperature on 8th January?

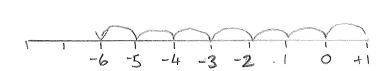


9 °c

1 mark

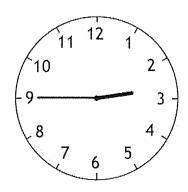
On 22nd January the temperature was 7 degrees lower than on 15th January.

What was the temperature on 22nd January?



-6 °c

A clock shows this time twice a day.



Tick the two digital clocks that show this time.

03:45

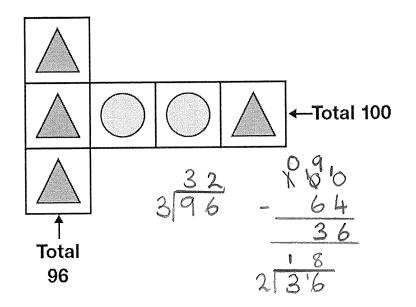
02:45

09:45

21:45

14:45

Each shape stands for a number.



Work out the value of each shape.

1 mark

Write these numbers in order, starting with the smallest.

0.78

0.607

5.6

0.098

4.003

0.607 0.78

4.003

smallest

Jacob cuts 4 metres of ribbon into three pieces.

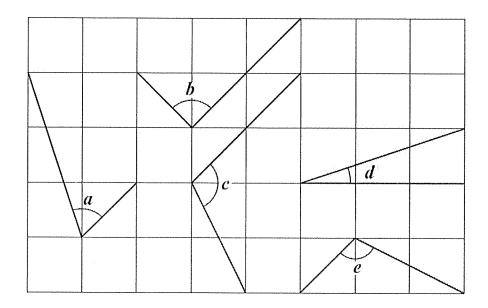
The length of the first piece is 1.28 metres.

The length of the second piece is 1.65 metres.

Work out the length of the third piece.

Show your method		+	1 1 2	ø	2 6 9	8 5 3		3/42	6	999	'0 3 7					
metriod					-							and the second second	.0	m	etres	

Here are five angles marked on a grid of squares.



Write the letters of the angles that are obtuse.

Cand e

1 mark

Write the letters of the angles that are acute.

a and d









She pays with a £2 coin.

This is her change.











What is the cost of one packet of nuts?

		Cl	na	no	le		9	5	P			3	0 1.	3	5 '5			
Show your method		tanija	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		000	0	-				72.2.		de la constantina del constantina de la constantina de la constantina del constantina de la constantin			. 9.200.000		
Method	20. 100 page		1	•	0	5									35	Óρ)	ac 22/2/41



Here is part of the bus timetable from Riverdale to Mott Haven.

Riverdale	10:02	10:12	<u>¥</u> 10:31	10:48
Kingsbridge	10:11	10:21	10:38	10:55
Fordham	10:28	⅓ 10:38	10:54	11:11
Tremont	10:36	ب 10:44	11:00	11:17
Mott Haven	10:53	11:01	11:17	11:34

How many minutes does it take the 10:31 bus from Riverdale to reach Mott Haven?

$$10.31 - > 1100 = 29 \text{ min}$$

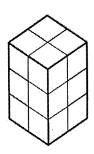
 $11.00 - > 11.17 = 17 \text{ min}$ 46 minutes
 $10.31 - > 1100 = 29 \text{ min}$

1 mark

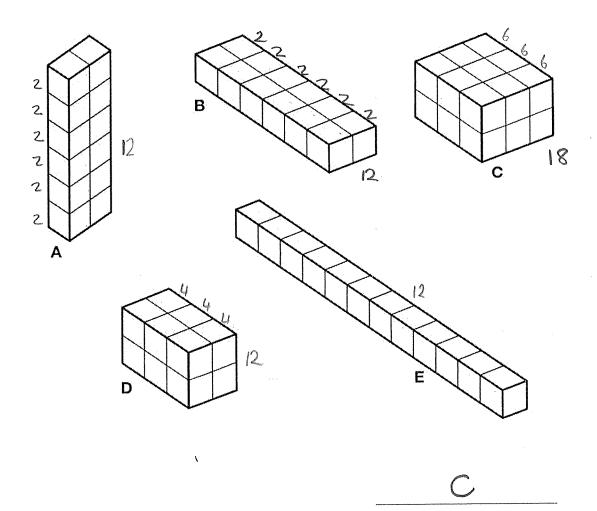
Mr Evans is at Fordham at 10:30

What is the earliest time he can reach Tremont on the bus?

10:44



Write the letter of the cuboid that has a different volume from Emma's cuboid.



11

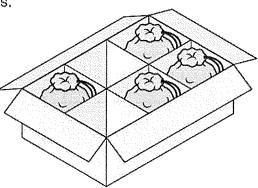
A toy shop orders 11 boxes of marbles.

Each box contains 6 bags of marbles.

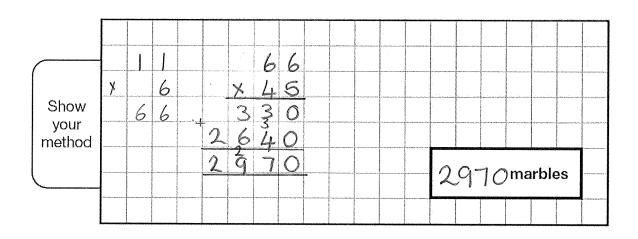
Each bag contains 45 marbles.

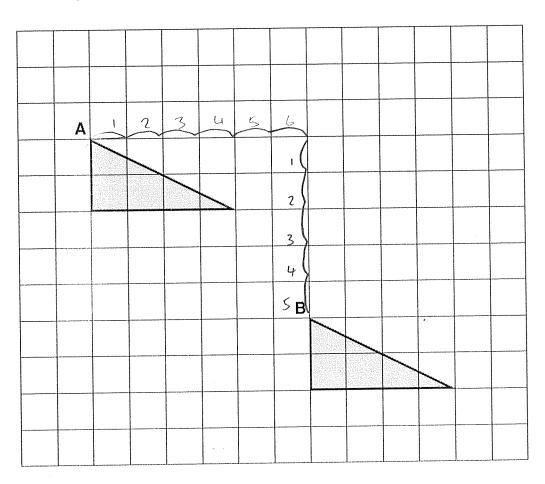






How many marbles does the shop order in total?





Complete the sentence.

The triangle has moved

6

squares to the right

and

5

squares down.

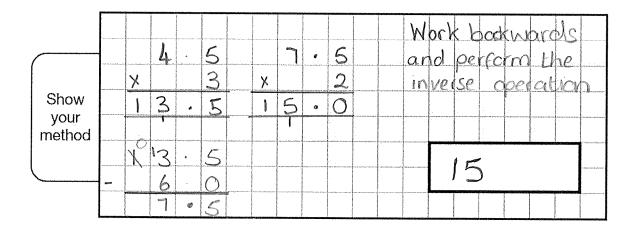
Lara chooses a number less than 20

She divides it by 2 and then adds 6

She then divides this result by 3

Her answer is 4.5

What was the number she started with?



14

Complete each sentence using a number from the list below.

120

240

600

1,440 3,600

6,000

There are

seconds in an hour.

1 mark

There are

minutes in a day.

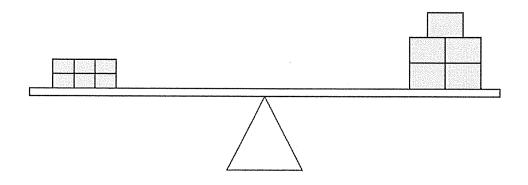
1 mark

15

Complete this table by rounding the numbers to the nearest hundred.

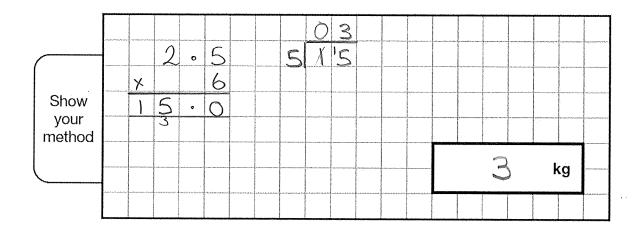
	Rounded to the nearest hundred
20,906	20 900
2,090.6	2100
<u>2</u> 09.06	200

6 small bricks have the same mass as 5 large bricks.



The mass of one small brick is 2.5 kg.

What is the mass of one large brick?

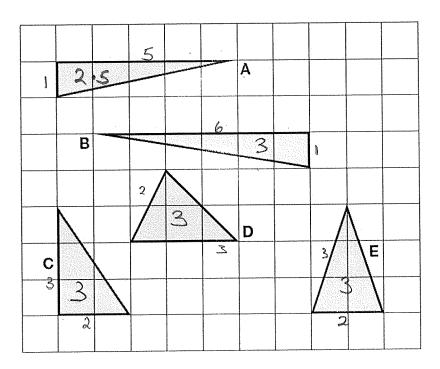


2 marks

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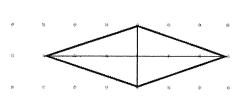


Four of the triangles have the same area.

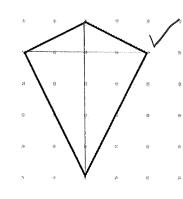
Which triangle has a different area?

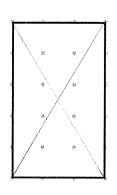
A

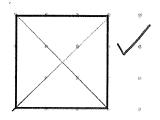
The diagonals of this quadrilateral cross at right angles.

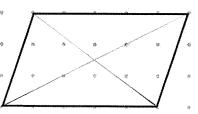


Tick **all** the quadrilaterals that have diagonals which cross at right angles.









2 marks

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Circle two numbers that multiply together to equal 1 million.

,	7
	200
	200/
/	

2,000



50,000

1 mark

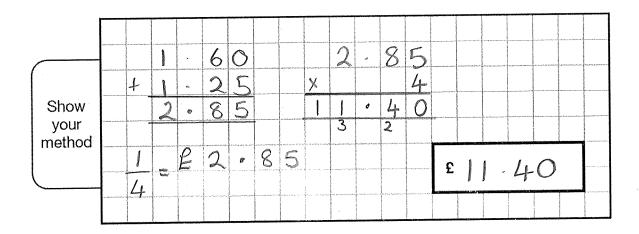
Lara had some money.

She spent £1.25 on a drink.

She spent £1.60 on a sandwich.

She has three-quarters of her money left.

How much money did Lara have to start with?





$$5,542 \div 17 = 326$$

Explain how you can use this fact to find the answer to 18×326

If
$$5.542 \div 17 = 326$$

Then $17 \times 326 = 5542$
So $18 \times 326 = 5542 + 326$
 $18 \times 326 = 5868$

[END OF TEST]

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2016 key stage 2 mathematics

Paper 3: reasoning

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