

Ma

KEY STAGE

2

LEVEL

6

Mathematics tests

Paper 2

Calculator allowed

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

2013

[BLANK PAGE]

Please do not write on this page.

Instructions

You **may** use a calculator to answer any questions in this test.

Work as quickly and as carefully as you can.

You have **30 minutes** for this test.

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**.

Follow the instructions for each question carefully.



This shows where you need to put the answer.

If you need to do working out, you can use any space on a page.

Some questions have an answer box like this:

A diagram showing a large rectangular box for an answer. To the left of the box is a smaller, rounded rectangular box containing the text "Show your method". A pencil icon is positioned above the "Show your method" box. In the bottom right corner of the large rectangular box, there is a smaller, empty rectangular box for the final answer.


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

1 x stands for an **odd** number. y stands for an **even** number.

Look at the expressions below.

For each expression, tick to show if it is odd or even.

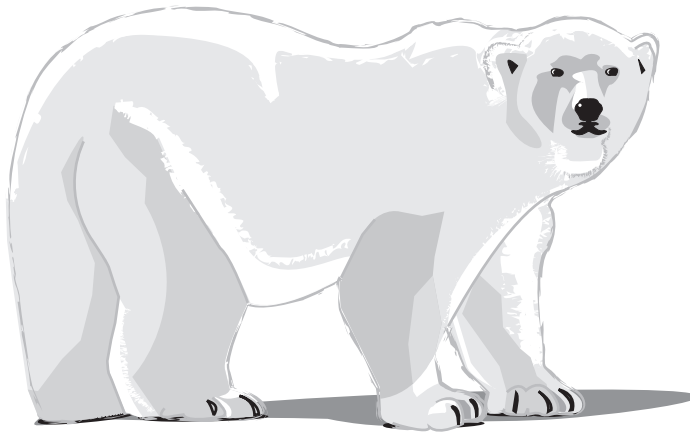
The first one is done for you.

	odd	even
 $x + y$	<input checked="" type="checkbox"/>	<input type="checkbox"/>
$x + 2y$	<input type="checkbox"/>	<input type="checkbox"/>
$2(x + y)$	<input type="checkbox"/>	<input type="checkbox"/>
xy	<input type="checkbox"/>	<input type="checkbox"/>
$x^2 + y$	<input type="checkbox"/>	<input type="checkbox"/>

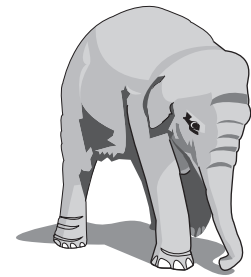
2 marks

2

In a zoo, the adult polar bear weighs three times more than the baby elephant.



polar bear



elephant

Together they weigh **700** kilograms.

How much does the polar bear weigh?



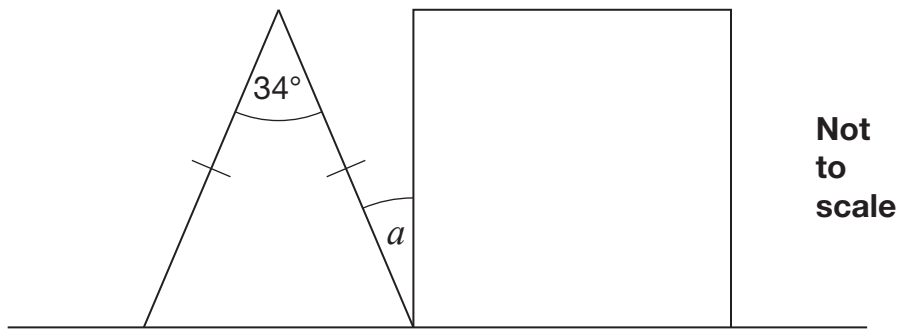
Show
your
method

kg

2 marks

3

The diagram shows an isosceles triangle and a square on a straight line.



Calculate angle a .



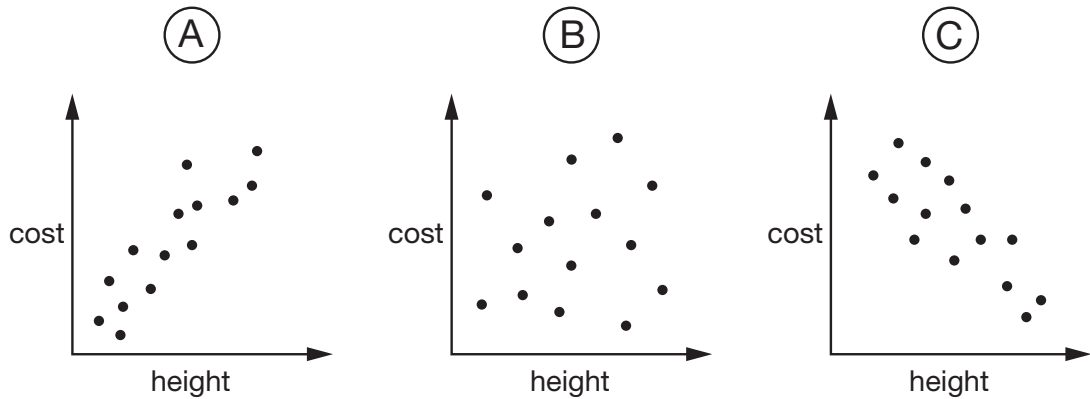
Show
your
method



2 marks

4

Here are three scatter graphs showing the heights of people and the cost of clothes.



Chen says,

'The taller you are, the more your clothes cost.'

Megan says,

'The shorter you are, the more your clothes cost.'

Alfie says,

'There is no relationship between your height and what your clothes cost.'

Write the letter of each scatter graph that shows what each person says.



Chen _____ Megan _____ Alfie _____

1 mark

5

Chen chooses a **prime** number.

He multiplies it by 10 and then rounds it to the nearest hundred.

His answer is **400**

Write **all** the possible prime numbers Chen could have chosen.

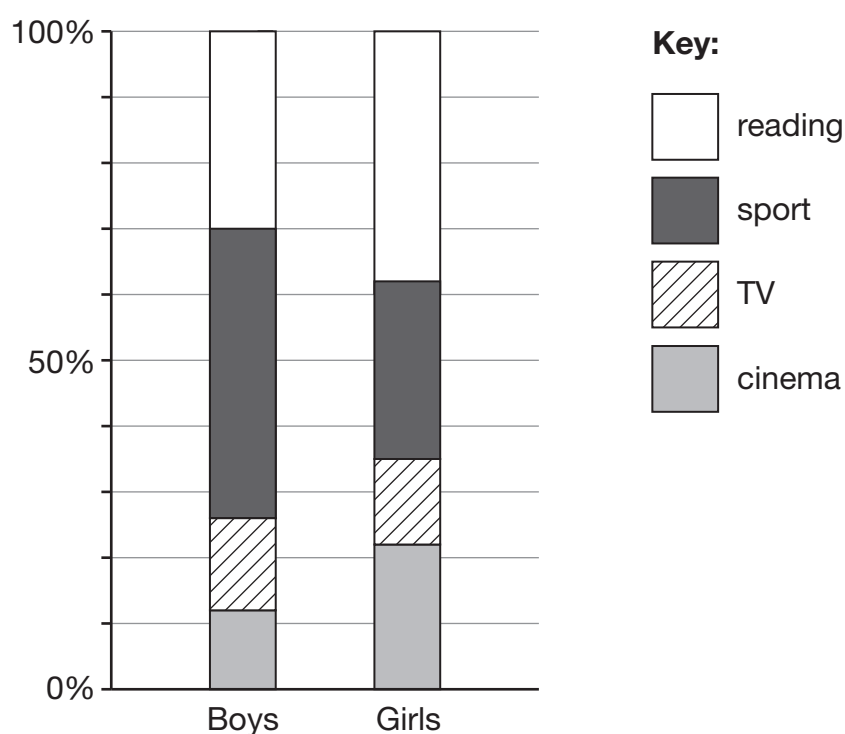


2 marks

6

Alfie asks some boys and girls about their favourite hobby.

He shows the results on a graph.



The graph shows that **44%** of boys chose sport.

Estimate the percentage of **girls** who chose sport.



%

1 mark

120 boys chose reading.

Estimate the **number** of boys who chose **cinema**.



boys

1 mark

7

Megan goes on a walking holiday for five days.

The table shows how far she walked on the first four days.

Monday	Tuesday	Wednesday	Thursday
14km	23km	13km	13km

Megan says,

'My average for the first four days is more than 15km.'

Explain why Megan is **correct**.



1 mark

Friday is her last day.

She wants to increase her average to **17km**

How many kilometres must she walk on Friday?



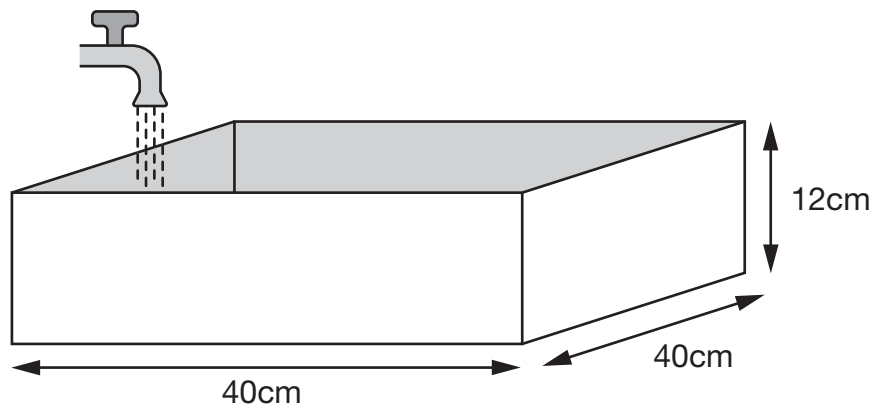
Show
your
method

km

2 marks

8

Every second, 300cm^3 of water comes out of a tap into a cuboid tank.



The base of the tank is **40cm** by **40cm**

The height is **12cm**

How many seconds does it take to fill the tank?



Show
your
method

seconds

2 marks

9

y stands for a number.

$$y \times y \times y = 5$$

The most accurate value for y to **one decimal place** is 1.7 because

$$1.7 \times 1.7 \times 1.7 = 4.913$$

k stands for a number.

$$k \times k \times k = 10$$

Find the most accurate value for k correct to **one decimal place**.



Show
your
method

$k =$

2 marks

10

A box of sticky labels costs £33.50

There are 150 sheets of labels in the box.

There are 14 labels on each sheet.



What is the cost of one label **to the nearest penny**?



Show
your
method

p

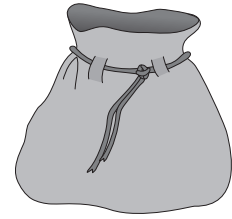
2 marks

11

A bag contains 35 red counters only.

Chen adds green counters to the bag.

The probability of picking a **green** counter is now **0.3**



How many green counters did Chen add?



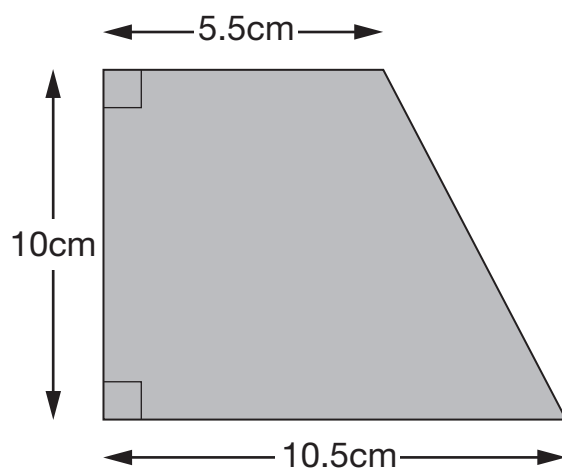
Show your method

A diagram of a rectangular box with a jagged, sawtooth-like shape on its left side and a smaller rectangular box inside the bottom right corner. The jagged shape is composed of several connected line segments, creating a series of peaks and valleys. The smaller rectangular box is positioned in the bottom right corner of the main box.

2 marks

12

Here is a trapezium with a height of 10 centimetres.



Not
actual
size

The parallel sides are 5.5cm long and 10.5cm long.

Find the **area** of the trapezium.



Show
your
method

cm²

2 marks

2013 Key Stage 2 level 6 mathematics: Paper 2

Print version product code: STA/13/6037/p ISBN: 978-1-4459-5759-3

Electronic PDF version product code: STA/13/6037/e ISBN: 978-1-4459-5760-9

© Queen's Printer and Controller of HMSO 2013

Material contained in these booklets may be reproduced for educational and training purposes within a school setting, provided you acknowledge the copyright ownership of the material and you give the title of the source document. Reproduction or re-use of the material is not permitted for any commercial purpose.

For more copies

Additional printed copies of this booklet are not available. It can be downloaded from STA's orderline at <http://orderline.education.gov.uk>.