

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

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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:




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.

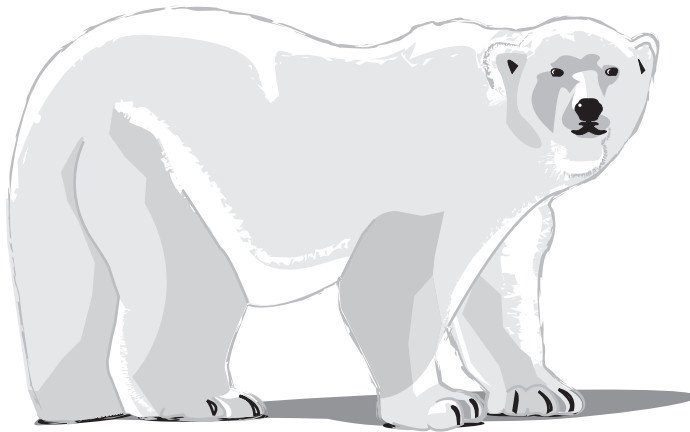
The first one is done for you.

	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"/>

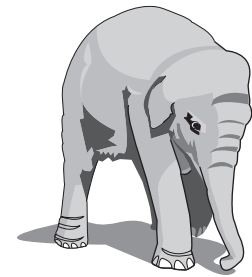
2 marks

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?



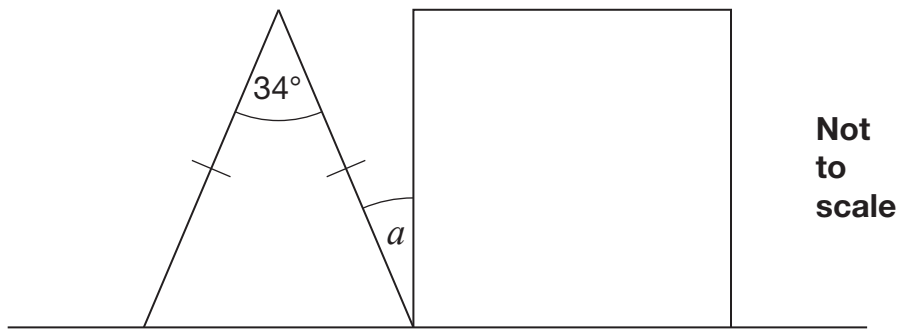
Show
your
method

A large rectangular box for writing the solution. In the bottom right corner of this box, there is a smaller rectangular box containing the text "kg".

2 marks

3

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



Not
to
scale

Calculate angle a .



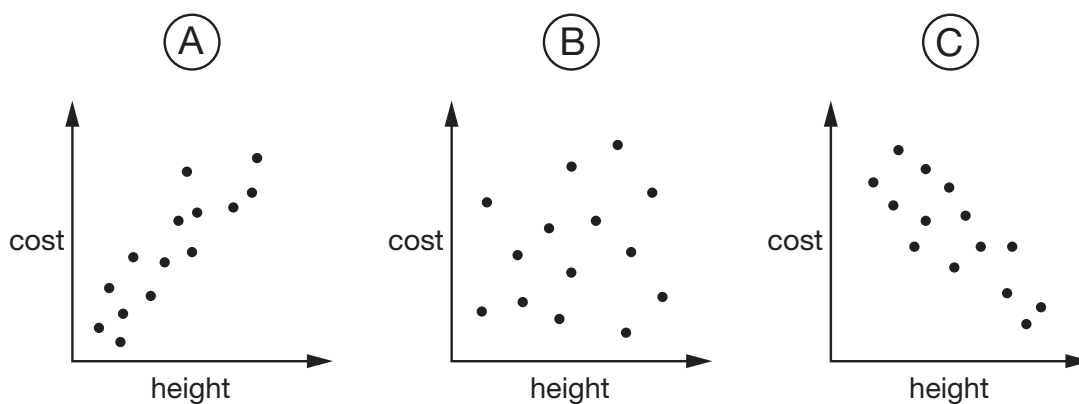
Show
your
method



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.

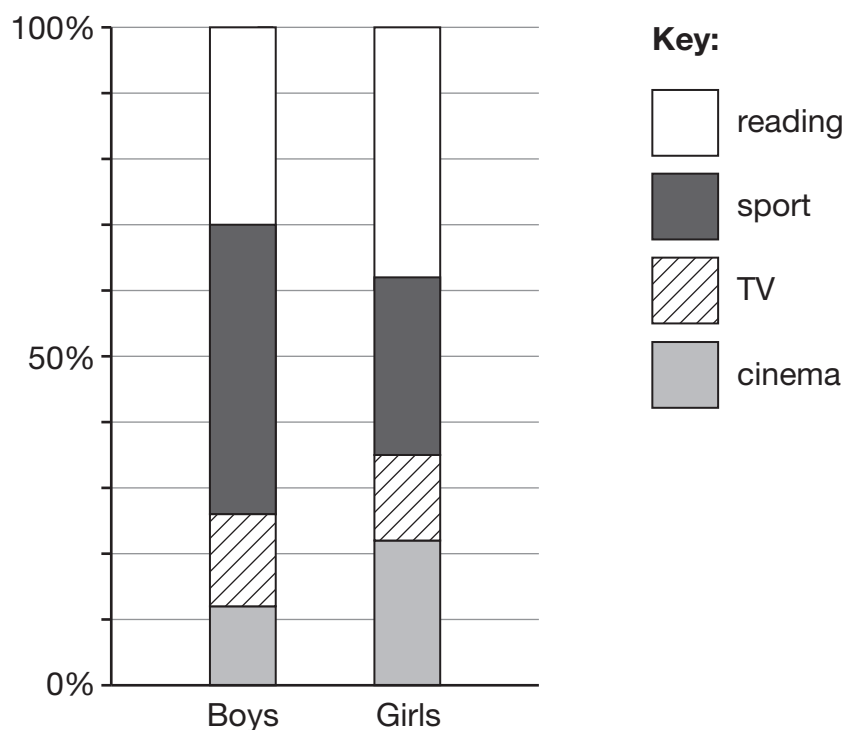


2 marks

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?

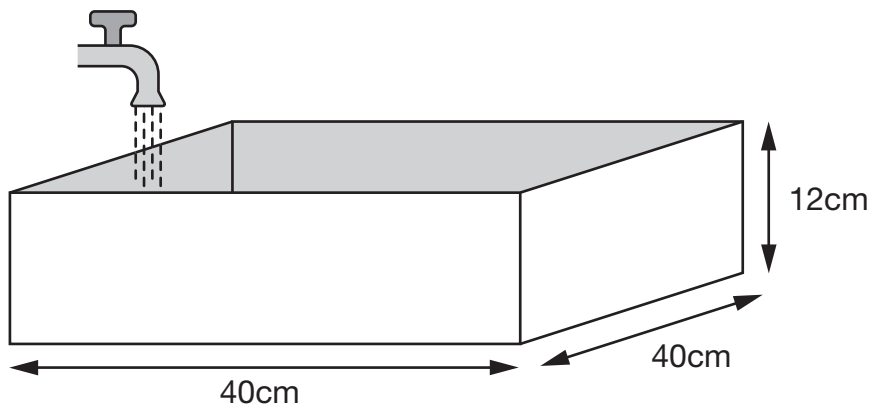


Show
your
method

2 marks

8

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



**Not
actual
size**

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

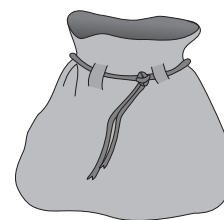
2 marks

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?

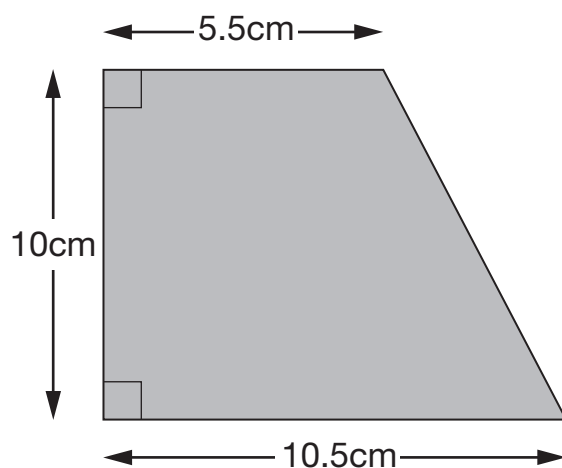


Show
your
method

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

2 marks

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