

Ma

KEY STAGE

2

LEVELS

3–5

## Mathematics tests

# Paper 2

Calculator **not** allowed

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

For marker's use only

Page	Marks
5	
7	
9	
11	
13	
15	
17	
19	
21	
23	
<b>Total marks</b>	

2014

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Please do not write on this page.

# Instructions

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

Work as quickly and as carefully as you can.

You have **45 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.

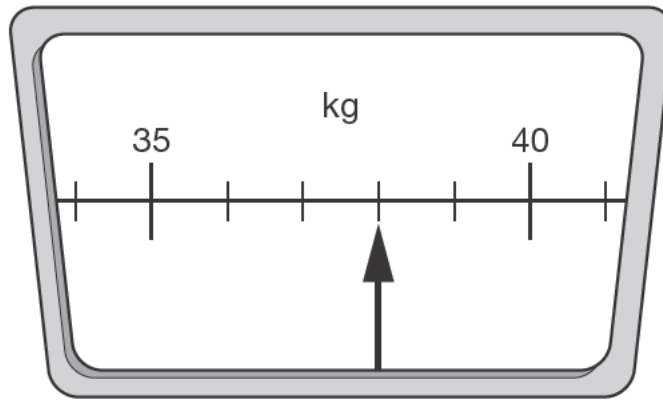
**Some questions have an answer box like this:**



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

1

This scale shows how much Chen weighs.



How much does Chen weigh?



1  
1 mark

2

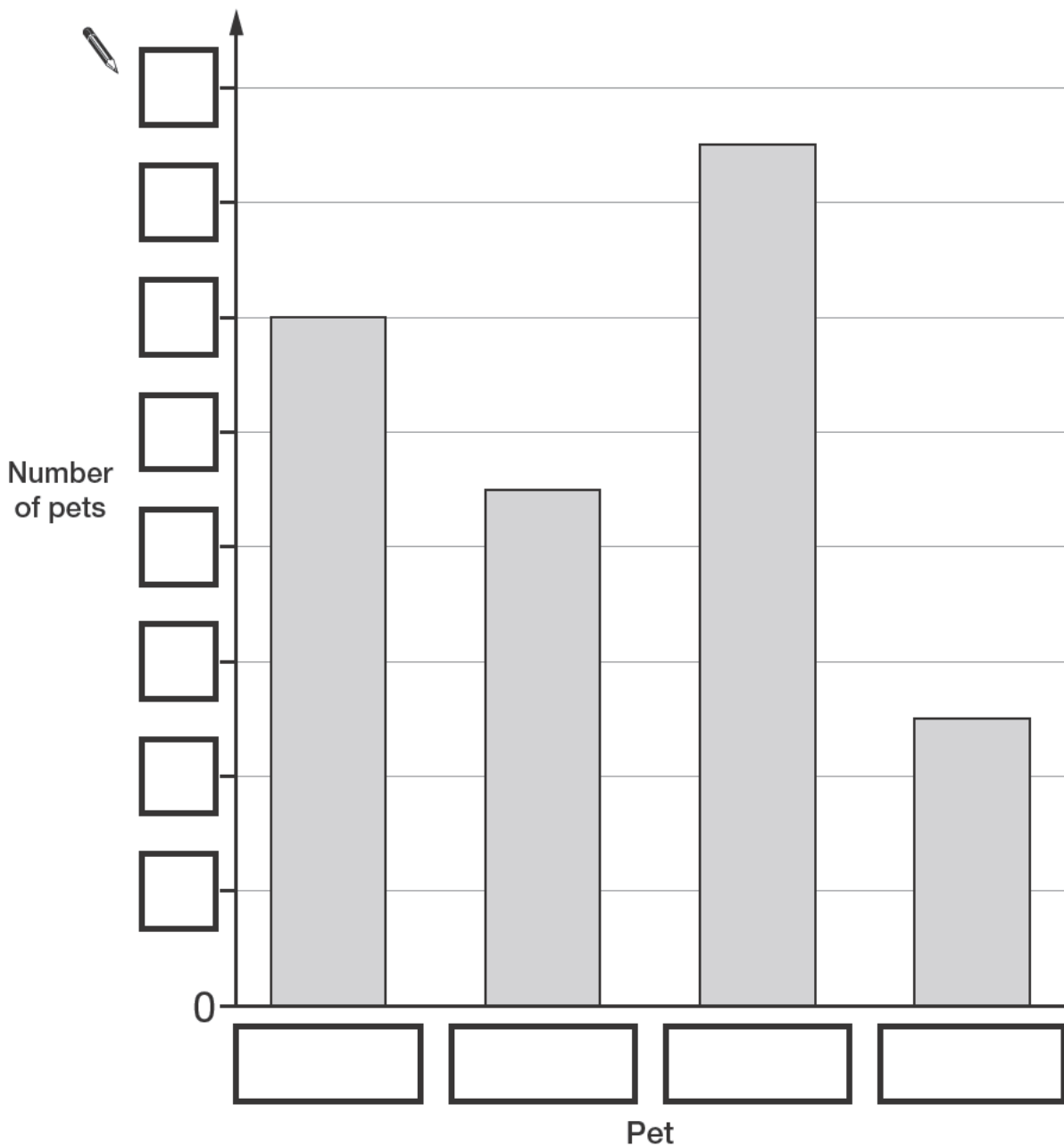
Alfie collected information about the pets owned by children in his class.

Here are his results.

Pet	Number of pets
dog	9
cat	12
rabbit	5
fish	15

This bar chart shows the information from the table.

Fill in **all** the missing labels.



2a

1 mark

2b

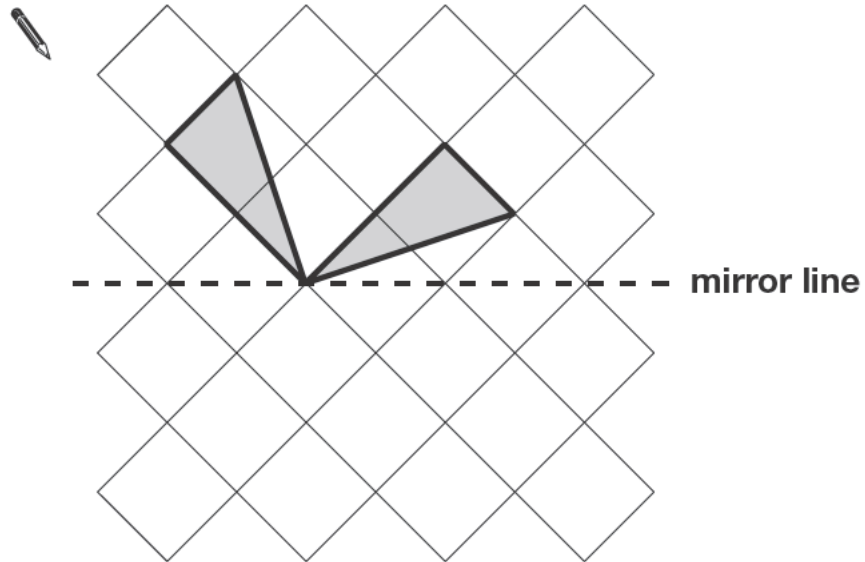
1 mark

Total out of 3 \_\_\_\_\_

3

Complete this shape so that it is symmetrical about the mirror line.

Use a ruler.



3

1 mark

4

Circle **three** numbers that add to make 750



450      350      250      150      50

4

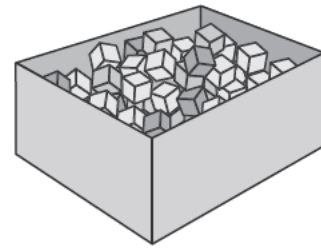
1 mark

5

Seb has a box of **120** cubes.

He uses some of the cubes to build a tower.

**77** cubes are left over.



How many cubes has he used?



5a

1 mark

Seb has 77 cubes left over.

He builds two more towers.

One tower uses 18 cubes and the other uses 35 cubes.

How many of his **77** cubes has he got left now?



Show  
your  
working

5bi

5bii

2 marks

Total out of 5 \_\_\_\_\_

6

In these calculations, each missing sign is a + or a -

Write the missing signs in the circles.



$$8 \bigcirc 7 \bigcirc 6 \bigcirc 5 = 2$$

6a  
1 mark

$$8 \bigcirc 7 \bigcirc 6 \bigcirc 5 = 4$$

6b  
1 mark

7

Megan has 7 coins that make one pound.

The coins are of **only two** different kinds.

What are the 7 coins?



--	--	--	--	--	--	--

7  
1 mark



8

The numbers in this sequence increase by 10 each time.

3    13    23    ...

The sequence continues in the same way.

Write **two** numbers from the sequence that add to make a total of **96**



and

8a

1 mark

Explain why it is **not** possible to find **three** numbers from the sequence that add to make a total of **96**



8b

1 mark

Total out of 5 \_\_\_\_\_

9

Join each fraction to the correct decimal card.

The first one has been done for you.



$$\frac{3}{10}$$

0.03

$$\frac{3}{5}$$

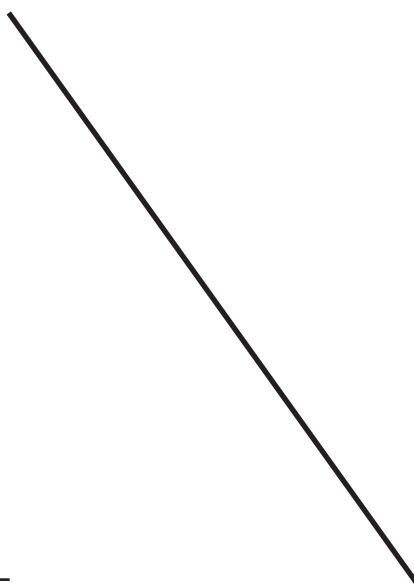
0.06

$$\frac{3}{100}$$

0.3

$$\frac{3}{50}$$

0.6

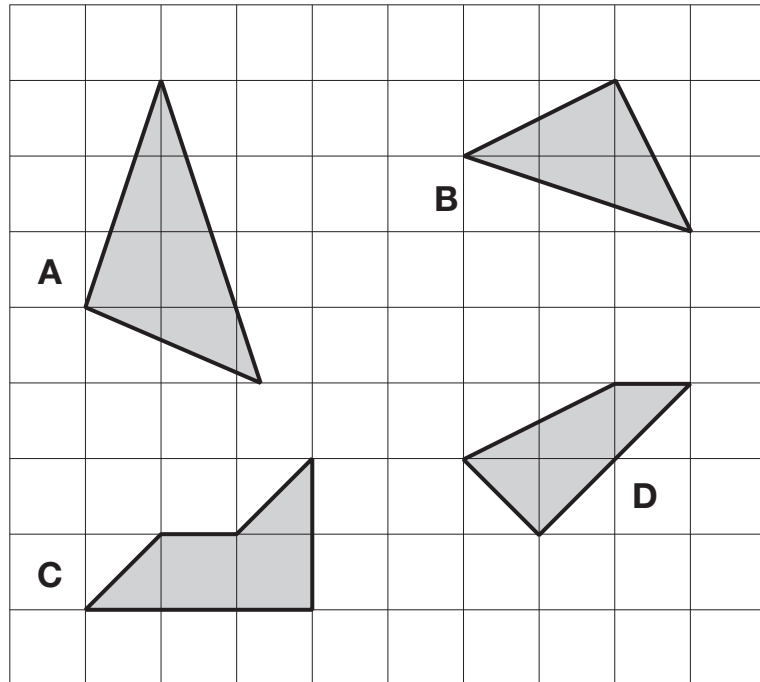


9

1 mark

10

Here are four shapes on a square grid.



Write the letters of **all** the shapes that have **exactly two** sides which are equal in length.



\_\_\_\_\_

10i

10ii

2 marks

Total out of 3 \_\_\_\_\_

11

Calculate  $32.18 - 7.62$



11

1 mark

12

Circle the approximate measurement.

The length of a banana is about...



*2 cm*

*20 cm*

*2 mm*

*2 m*

*20 m*

The mass of an apple is about...



*2 g*

*20 kg*

*200 kg*

*200 g*

*2 kg*

A glass of fruit juice is about...



*2 ml*

*2 l*

*20 ml*

*200 ml*

*20 l*

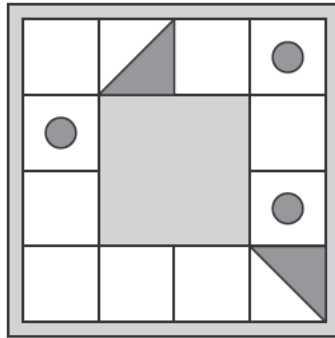
12i

12ii

2 marks

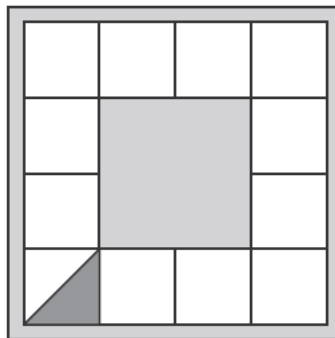
13

Here is a design of dots and triangles on a square tile.



The tile is turned clockwise to the position below.

Shade the missing shapes in their new positions.



13i

\_\_\_\_\_

13ii

\_\_\_\_\_

2 marks

Total out of 5 \_\_\_\_\_

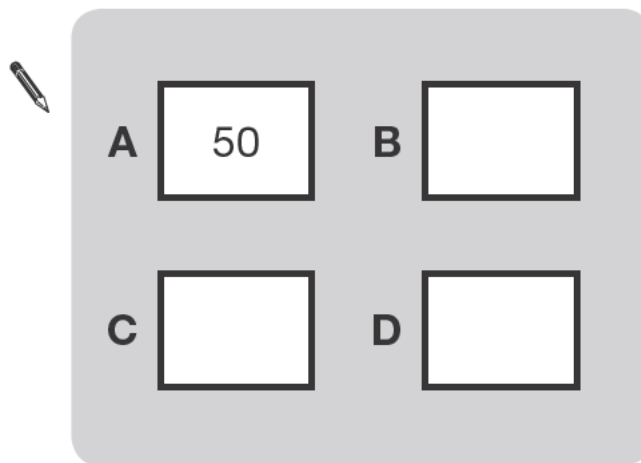
14

The number in **A** is **twice** the number in **D**.

The number in **B** is **5 less** than the number in **C**.

The number in **D** is **10 more** than the number in **B**.

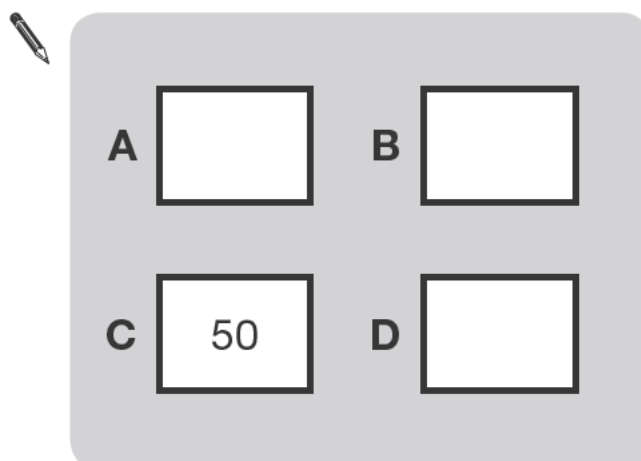
Write the missing numbers in this diagram.



14a

1 mark

Now use the same rule for this diagram.



14b

1 mark

15

200 children went on holiday.

10% of the children went to Wales.

25% of the children went to Scotland.

How many **more** children went to Scotland than went to Wales?



Show  
your  
working

children

15i

15ii

2 marks

Total out of 4 \_\_\_\_\_

16

Amy did a survey of what time people get up on a Sunday morning. This table shows her results for 150 people.

Time	number of people
before 7:00am	13
7:00am to 7:59am	28
8:00am to 8:59am	59
9:00am to 9:59am	36
10am and after	14

Look at the table.

How many people get up at **8am or later**?



16a

1 mark

Amy says,

***'Two-thirds of the 150 people in the survey get up before 9am.'***

Amy is correct.

Explain how you know.



16b

1 mark



**17**

Write numbers in the boxes to make this calculation correct.

  $50 - \square = \square + 10$

17

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1 mark

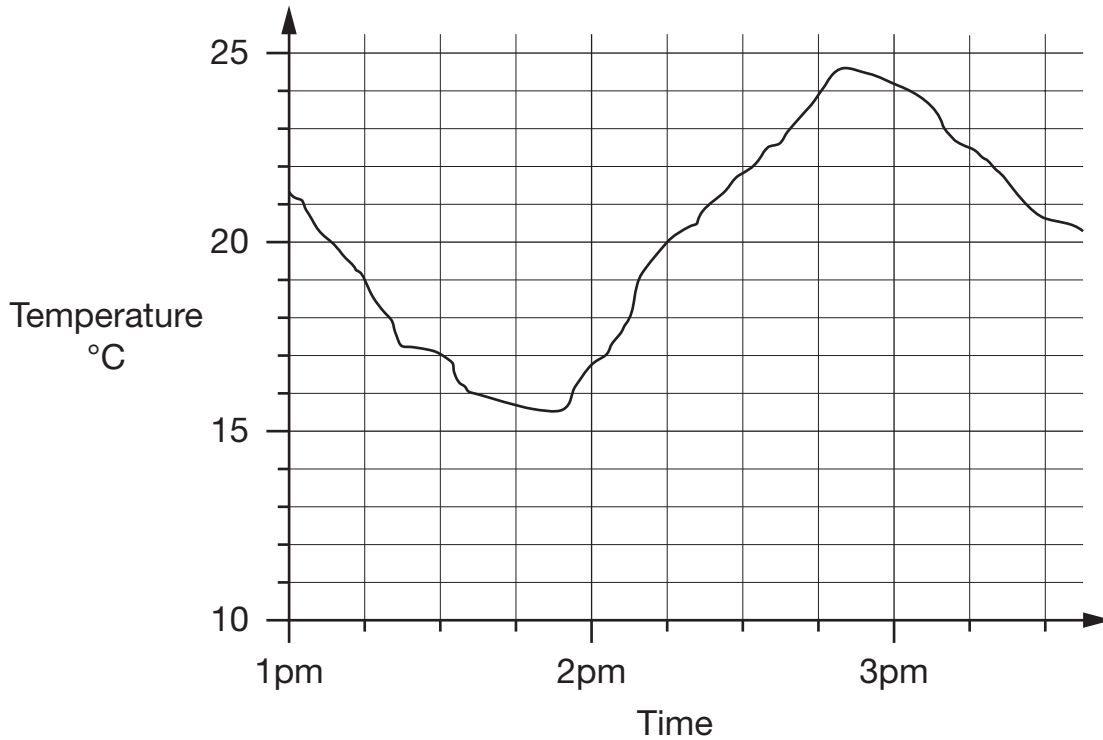
Total out of 3 \_\_\_\_\_

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Sourced from [www.11pluscentre.co.uk](http://www.11pluscentre.co.uk)

18

This graph shows how the temperature changed in Liam's room one afternoon.



Estimate the temperature at 3:15pm.



18a

1 mark

Estimate the time when the temperature was highest.



18b

1 mark

How much did the temperature change from 2pm to 2:30pm?  
Give your answer to the **nearest degree**.



18c

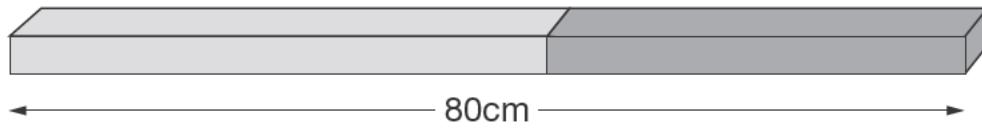
1 mark

19

Alfie has two sticks.

He puts them end to end.

Not  
actual  
size



One stick is **10cm longer** than the other stick.

How long are the two sticks?

Show your working

\_\_\_\_\_ 19i

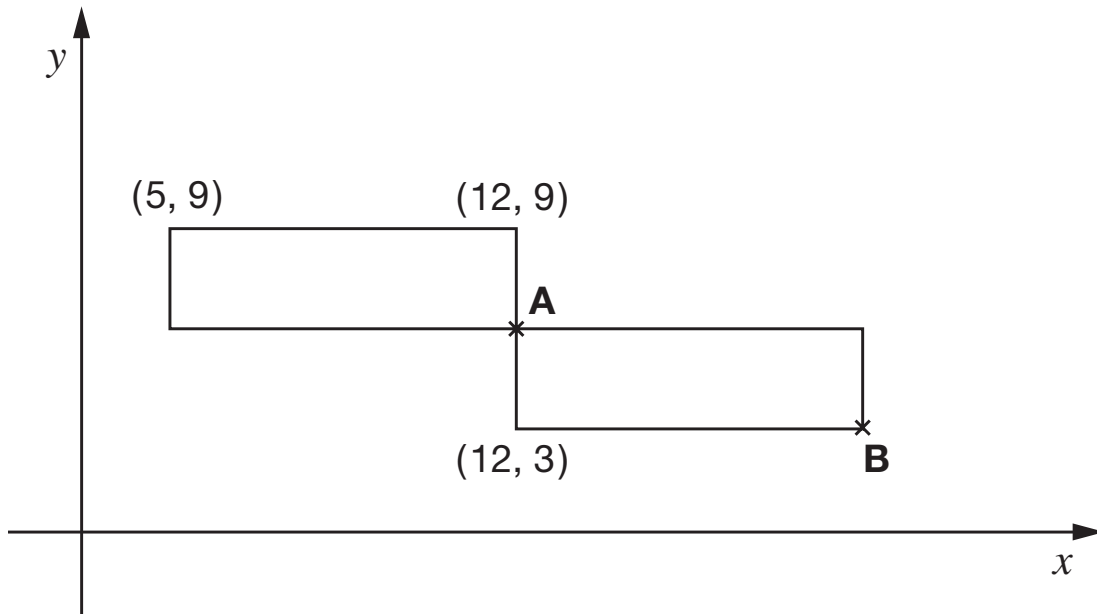
\_\_\_\_\_ 19ii

2 marks

cm and cm

Total out of 5 \_\_\_\_\_

This diagram shows two **identical** rectangles on coordinate axes.



Write the **coordinates** of point **A** and point **B**.



**A** is ( \_\_\_\_\_ , \_\_\_\_\_ )

20a

1 mark

**B** is ( \_\_\_\_\_ , \_\_\_\_\_ )

20b

1 mark

21

Amy thought of a number.

She added 0.5 to her number and then doubled the result.

Then she subtracted 0.5 and doubled the new result.

Her final answer was 61

What number did Amy start with?

Show your working

21i

21ii

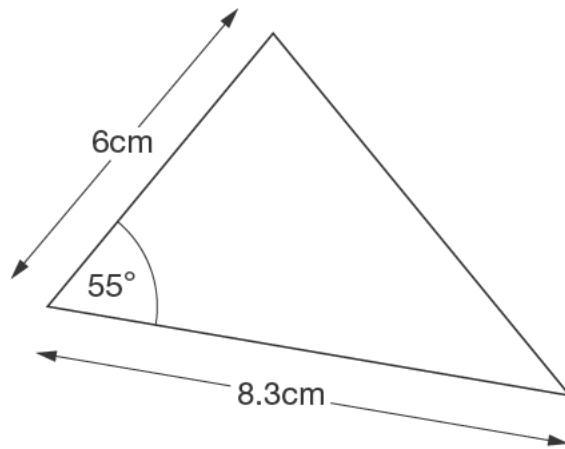
2 marks

Total out of 4 \_\_\_\_\_

22

Here is a sketch of a triangle.

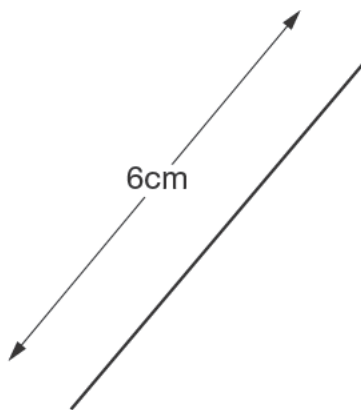
It is not drawn to scale.



Draw the full-size triangle accurately below.

Use a protractor (angle measurer) and a ruler.

One line has been drawn for you.



22i

22ii

2 marks

Fill in the three missing whole numbers in this calculation.

Each number is less than 10

  ×  ×  = 105

23

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1 mark

Total out of 3 \_\_\_\_\_



Standards  
& Testing  
Agency

2014 key stage 2 levels 3–5 mathematics: paper 2 – calculator not allowed  
Print version product code: STA/14/7038/p ISBN: 978-1-78315-159-2  
Electronic PDF version product code: STA/14/7038/e ISBN: 978-1-78315-186-8

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