Ma

KEY STAGE 2

LEVEL 6

2015

Mathematics

Paper 2

Calculator allowed

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

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

[BLANK PAGE]

Please do not write on this page.

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

Instructions

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

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.

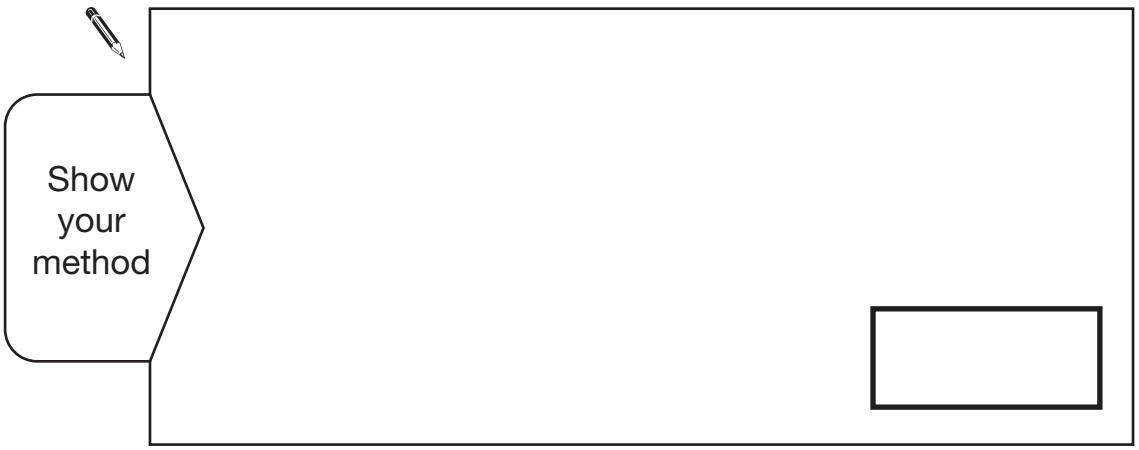
If you finish before the end, **go back and check your work**.

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 white space on a page.
Do not write over any barcode.

Some questions have an answer box like this:



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

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

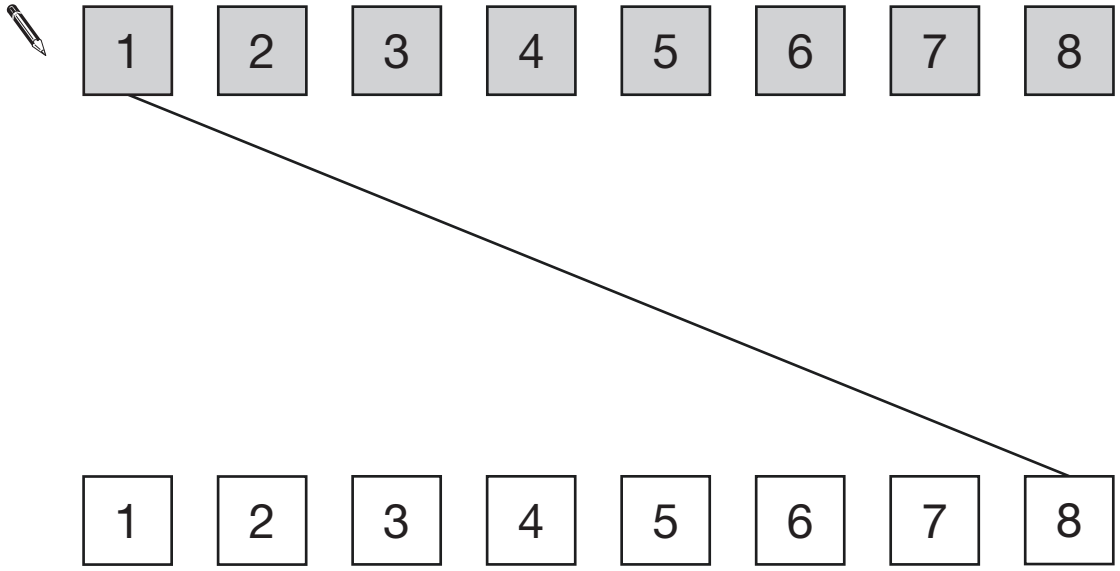
1 g stands for a number on a grey card.

w stands for a number on a white card.

Join all pairs of numbers that match this rule:

$$2g + w = 10$$

One is done for you.



2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

2 (a) 1 kilogram of grapes costs £5.80

Megan buys 700 grams of grapes.

How much does she pay?

£

1 mark

(b) 1 kilogram of cheese costs £13.50

Megan buys a piece of cheese costing £2.49

What is the mass of the cheese to the **nearest 100 grams**?

Show your method

g

2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

3 There are 90 children in Year 6 at Woodland Junior School.

They are split into three classes.

Class	Number in class
6M	27
6P	33
6T	30

Each child chose football **or** netball **or** hockey.

In **6M**, 13 children chose hockey.
The rest of the class were split equally between football and netball.

In **6P**, 9 children chose netball.
Twice as many children chose football as chose hockey.

In **6T**, the ratio of children who chose
football to netball to hockey was 1:2:3

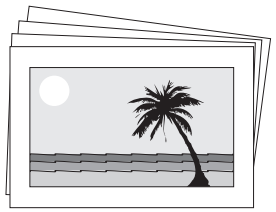
Complete this table.

Class	Number in class	Football	Netball	Hockey
6M	27			13
6P	33		9	
6T	30			

2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

4 Alfie has some photographs printed.



The cost is £2.50 for postage and
12 pence for each print.

Alfie uses this formula for the total cost (**C**) in pence.

$$\mathbf{C} = 250 + 12n$$

n stands for the number of photographs.

The total cost for Alfie is **£6.70**

How many photographs does he have printed?

Show your method

2 marks

5 A bag contains coloured counters.

20 red counters numbered 1 to 20

50 blue counters numbered 1 to 50

100 green counters numbered 1 to 100

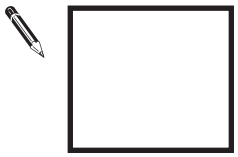
Chen is going to pick one counter without looking.

(a) What is the probability of picking a counter with the number 40 on it?

1 mark

(b) The counter Chen picks is **red**.

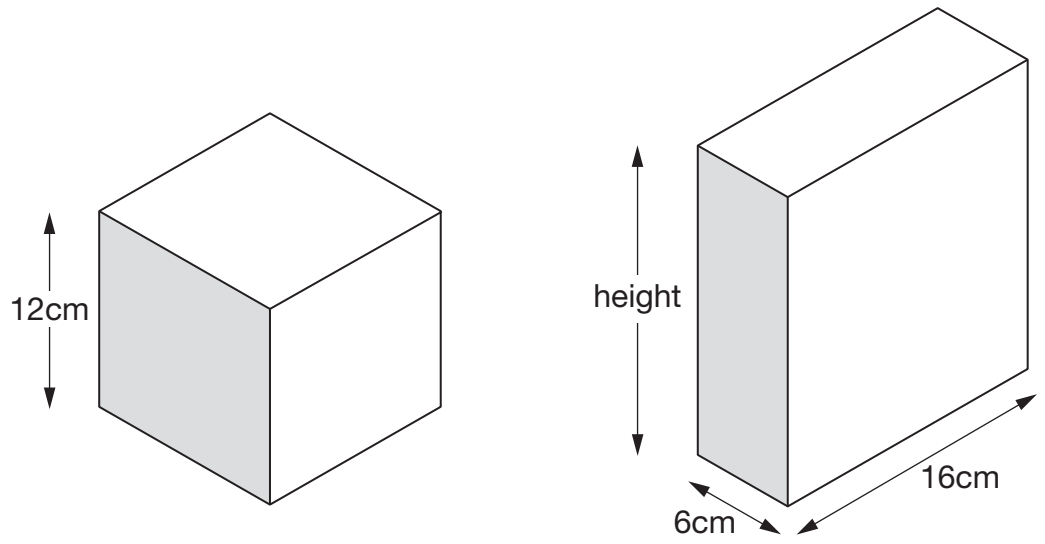
What is the probability that it has the number 15 on it?



1 mark

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

6 The cube and cuboid have **equal volumes**.



Not actual size

Calculate the height of the cuboid.

Show your method

cm

2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

7 n and p stand for two numbers.

n is a multiple of 5
p is a multiple of 6

$$\frac{n}{p} = \frac{2}{3}$$

Find numbers that n and p stand for.

Show your method

$n =$

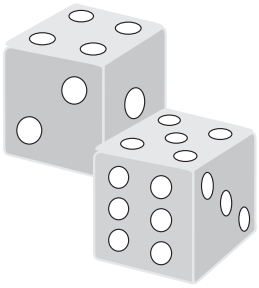
$p =$

2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

8 Two fair dice are each numbered from 1 to 6

The dice are rolled. The numbers are added together to make a total.



Total 9

Jack says,

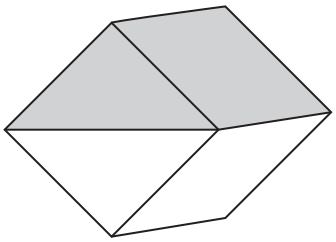
'The totals 3 and 9 are equally likely.'

Explain why Jack is **not** correct.

1 mark

9 Here is a cube.

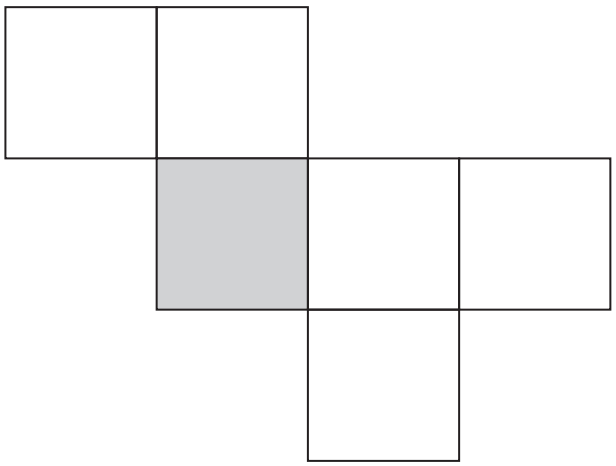
The top half of the cube has been shaded all the way round.



Here is a net for the cube.

One square has been shaded for you.

Shade more of the net so that it could fold to make the cube above.



2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

10 In a survey of children's favourite fruit juices, these were the results.

Juice	Apple	Orange	Grape	Mango
Percentage of children	25%	14%	30%	31%

(a) **20 more** children chose grape than chose apple.

How many children took part in the survey?

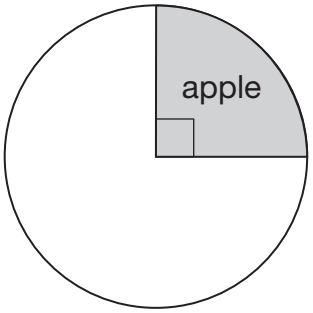
Show your method

children

2 marks

(b) Chen makes a pie chart to show the results.

What **angle** should he use for the children who chose **mango**?

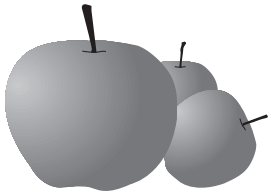


°

1 mark

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

11 Three apples have a **mean** (average) mass of 100 grams.



The largest apple is removed.

The **mean** mass of the remaining two apples is 70 grams.

What is the mass of the largest apple?

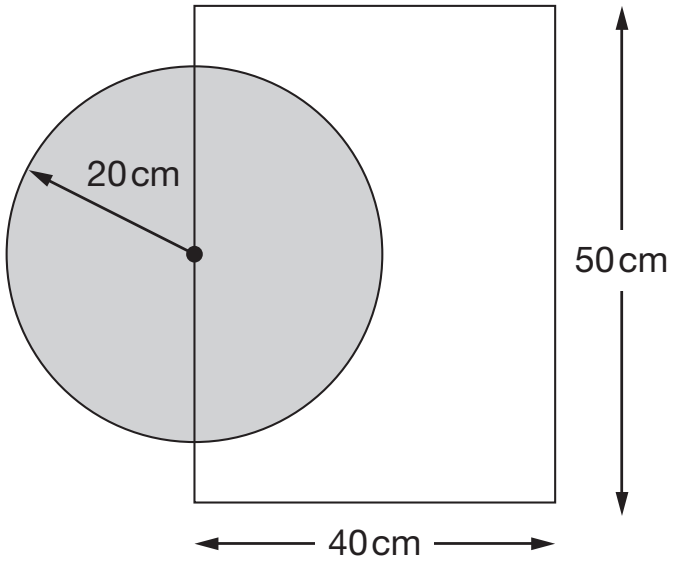
Show your method

g

2 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

12 The diagram shows a rectangle and a shaded circle with radius 20 cm.



Not actual size

Calculate the **area** of the rectangle that is **not** shaded.

Use this formula:
The area of a circle is **3.14 × (radius)^2**

Show your method

cm^2

3 marks

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk

Standards & Testing Agency

2015 key stage 2 level 6 mathematics test: paper 2 - calculator allowed
Print version product code: STA/15/7220/p ISBN: 978-1-78315-422-7
Electronic PDF version product code: STA/15/7220/e ISBN: 978-1-78315-449-4

For more copies
Additional printed copies of this booklet are not available. It can be downloaded from www.gov.uk/government/publications from Tuesday 7 July.

© Crown copyright and Crown information 2015

Re-use of Crown copyright and Crown information in test materials
Subject to the exceptions listed below, the test materials on this website are Crown copyright or Crown information and you may re-use them (not including logos) free of charge in any format or medium in accordance with the terms of the Open Government Licence v3.0 which can be found on the National Archives website and accessed via the following link: www.nationalarchives.gov.uk/doc/open-government-licence. When you use this information under the Open Government Licence v3.0, you should include the following attribution: "Contains public sector information licensed under the Open Government Licence v3.0" and where possible provide a link to the licence.

OGL

Exceptions - third party copyright content in test materials
You must obtain permission from the relevant copyright owners, as listed in the '2015 key stage 2 test materials copyright report', for re-use of any third party copyright content which we have identified in the test materials, as listed below. Alternatively you should remove the unlicensed third party copyright content and/or replace it with appropriately licensed material.

Third party content
These materials contain no third party copyright content.

If you have any queries regarding these test materials contact the national curriculum assessments helpline on 0300 303 3013 or email assessments@education.gov.uk.

Sourced from SATs-Papers.co.uk https://www.SATs-Papers.co.uk