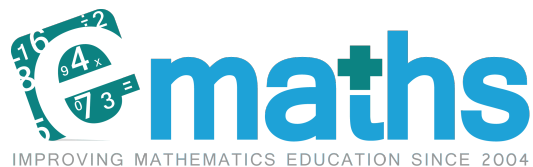


National curriculum tests

# Key stage 2

## Practice Paper: Reasoning R4

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



# Key Stage 2 National Curriculum Tests - Practice Paper - Reasoning

## 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:**

Diagram illustrating a method box for a question. The box is a grid of 20 columns and 10 rows. On the left side of the grid, there is a rounded rectangular box containing the text "Show your method". On the right side of the grid, there is a smaller, empty rectangular box.

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

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.**

### Marks

The number under each line at the side of the page tells you the maximum number of marks for each question.

**1** Write the missing number.

One is done for you.

210      is    20   more than      190

$\xrightarrow{\hspace{10em}}$

          is    20   more than      317

$\xrightarrow{\hspace{10em}}$

1 mark

**2** A packet of paper has 160 sheets

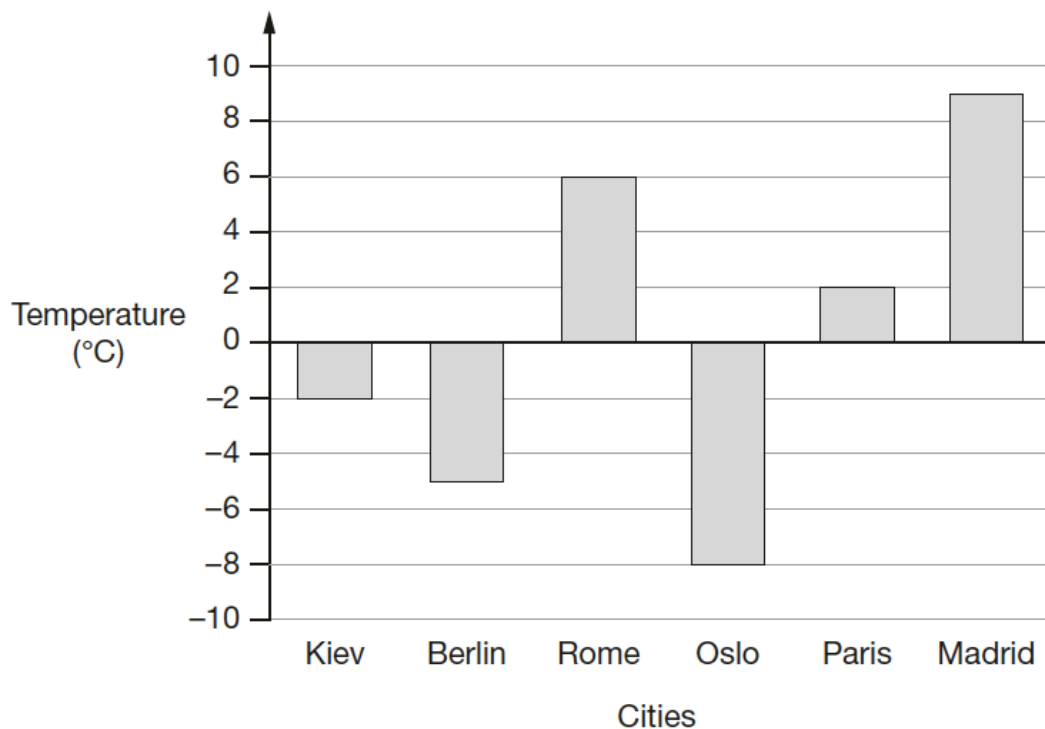
4 children each take 4 sheets

How many sheets of paper are left in the packet?

Show your method

2 marks

- 3 This graph shows the temperature in six cities on a day in January.



Which city was 17 degrees **warmer** than Oslo?

\_\_\_\_\_

1 mark

What was the **difference** between the temperature in **Berlin** and the temperature in **Rome**?

°C

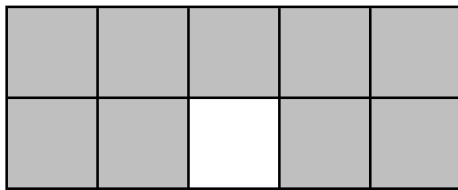
1 mark

4 Here are some shapes made of squares.

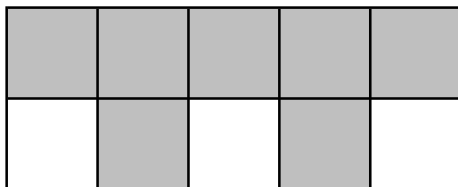
A fraction of each shape is shaded.

Match each shape to its equivalent fraction.

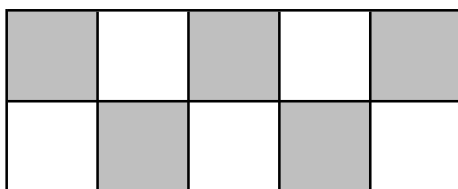
One has been done for you.



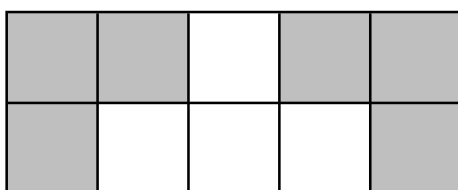
$$\frac{7}{10}$$



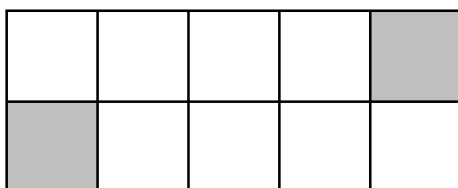
$$\frac{9}{10}$$



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



$$\frac{5}{10}$$



$$\frac{1}{5}$$

2 marks

R4

5

What is **354** minutes in hours and minutes?

hours	minutes
-------	---------

1 mark

6

Sam's watch shows five minutes past nine.

The watch is **sixteen** minutes fast



What is the correct time?

--

1 mark

**7** In the squares, write a multiple that belongs to each set.

One has been done for you.

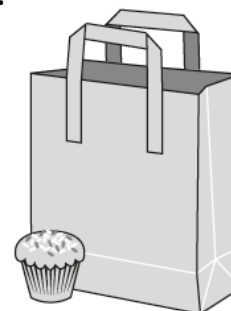
numbers from 1 to 99	multiple of	20	60
numbers from 101 to 199	multiple of	40	
numbers from 201 to 299	multiple of	30	
numbers from 301 to 399	multiple of	10	

---

2 marks

8 Molly bakes cakes and sells them in bags.

She uses this formula to work out how much to charge for one bag of cakes.



$$\text{Cost} = \text{number of cakes} \times 25 \text{ p} + 12 \text{ p for the bag}$$

How much will a bag of 14 cakes cost?

£

1 mark

Tom buys a bag of cakes for £3.37

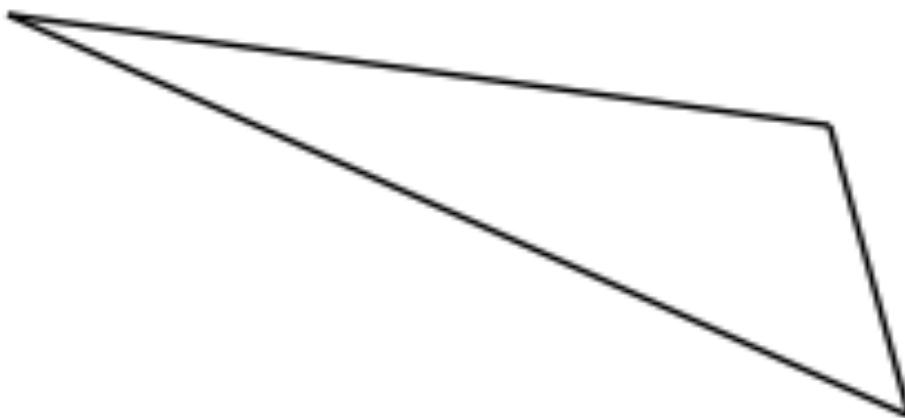
Use the formula to calculate how many cakes are in the bag.

Show your method	<div style="position: absolute; bottom: 10px; right: 10px; border: 1px solid black; padding: 5px; width: fit-content;">cakes</div>
------------------------	--

2 marks



9 Here is a triangle.



Measure the longest side accurately, in centimetres.

1 mark

Measure the smallest angle.

1 mark

10

Write the missing digits to make this long multiplication correct.

$$\begin{array}{r}
 \phantom{\times} \phantom{0} \phantom{0} 3 \square \\
 \times \phantom{0} \square 8 \\
 \hline
 \phantom{\times} \phantom{0} 288 \\
 \phantom{\times} 720 \\
 \hline
 1008
 \end{array}$$

---

 2 marks

11 Here is a number written in Roman numerals.

CXXXI

Write the number in figures

1 mark

12 What number is halfway between 3.2 and 3.9 ?

1 mark

13 Round 115,535

to the nearest 10,000

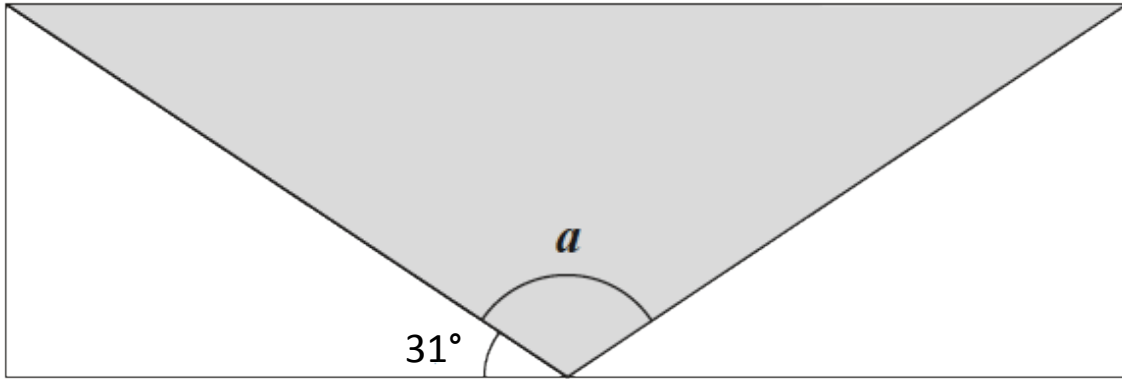
to the nearest 1,000

to the nearest 100

2 marks

R4

14 A shaded isosceles triangle is drawn inside a rectangle.



Not to scale

Calculate the size of angle  $a$ .

Show your method

$a$ is <input type="text"/> °
-------------------------------

2 marks

15 Large pizzas cost £9.25 each.

Small pizzas cost £6.50 each.

3 children together buy 2 large pizza and 5 small pizzas.

They share the cost equally.

How much does each child pay?

Show your method

£

2 marks

16 Seven children measure their heights.

Child	Height (cm)
Phil	140
Stephen	145
Dev	139
Krista	143
Poppy	148
Tom	150
Jane	136

What is the mean height of the children?

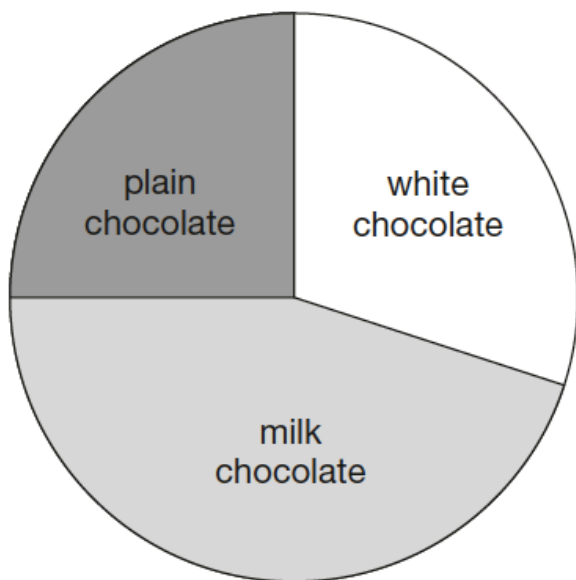
Show your method

cm

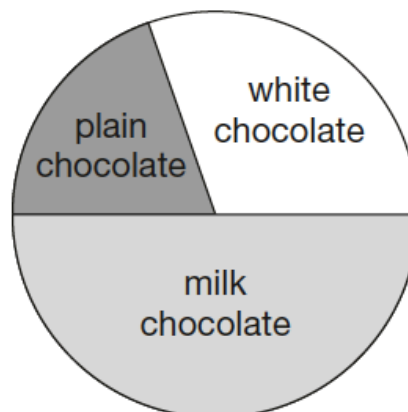
2 marks

17 210 girls and 100 boys were asked which kind of chocolate they like best.

These two pie charts show the results.



210 girls



100 boys

Ryan says,

"The pie charts show that more girls than boys liked milk chocolate best."

Ryan is correct.

Explain how you know.

A large, empty, cloud-shaped box with a scalloped border, intended for the student to write their explanation.

1 mark

**18** One gram of gold costs £35.14

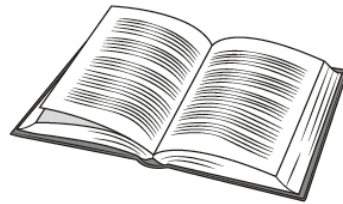
What is the cost of half a kilogram of gold?

Show your method

£

2 marks

**19** On Saturday, Lara read  $\frac{3}{5}$  of her book.



On Sunday, she read the other 110 pages to finish her book.

How many pages are there in Lara's book?

Show your method

pages

2 marks