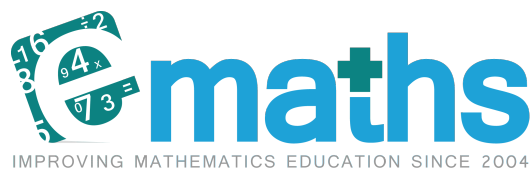


National curriculum tests

# Key stage 2

## Practice Paper: Reasoning R8

|               |     |  |       |  |      |  |
|---------------|-----|--|-------|--|------|--|
| 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. A rounded rectangle on the left contains the text "Show your method". To its right is a large grid of 20 columns and 10 rows. In the bottom right corner 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.

One is done for you.

is 70 more than

→ 218

2

4 children each take 7 sheets

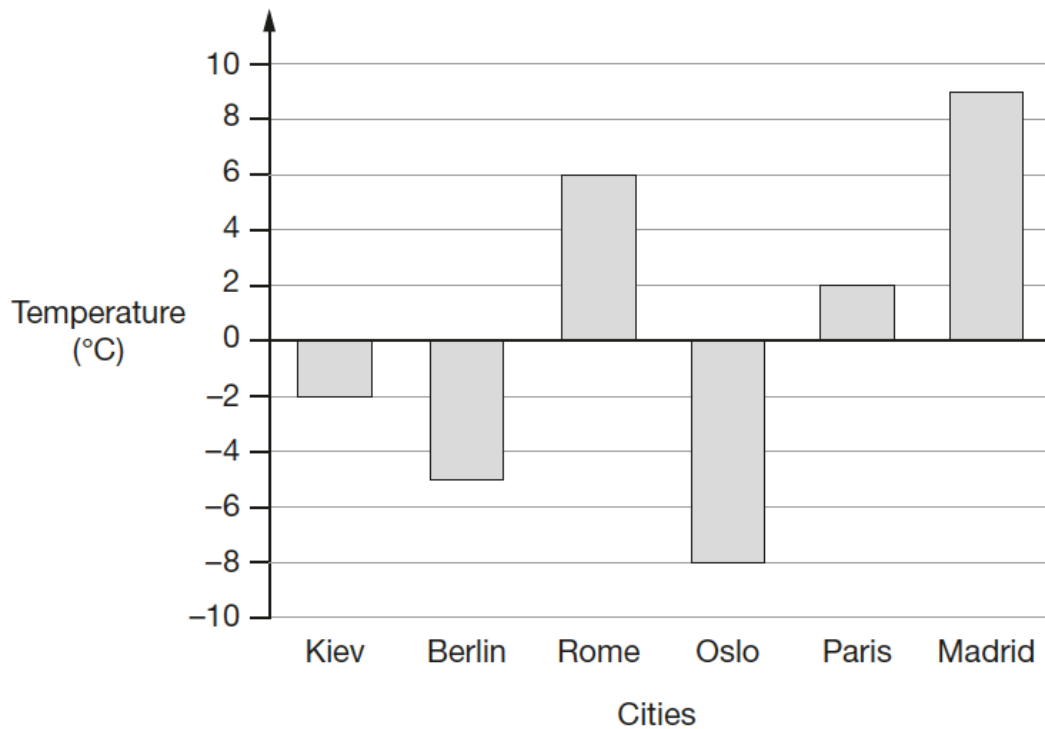
Show  
your  
method

A blank sheet of graph paper with a light blue grid pattern. The grid consists of small squares. On the right side of the page, there is a rectangular box with a thick black border, which appears to be a placeholder for a drawing or label. The box is approximately 10 units wide and 2 units high.

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3

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



Which city was 11 degrees **colder** than Madrid?

---



---

 1 mark

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

°C

---

 1 mark

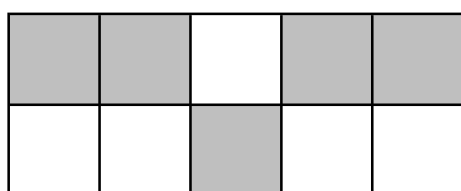
4

Here are some shapes made of squares.

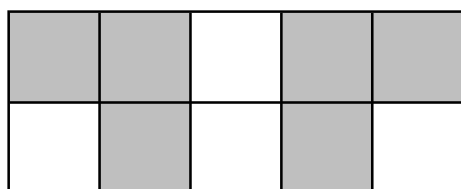
A fraction of each shape is shaded.

Match each shape to its equivalent fraction.

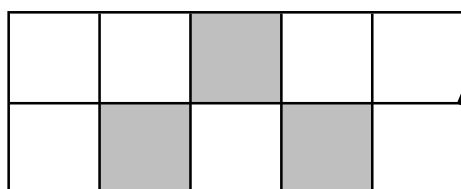
One has been done for you.



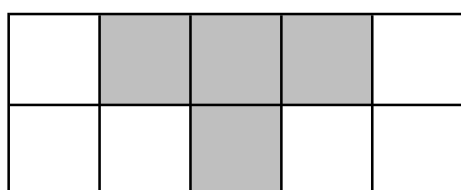
$$\frac{3}{5}$$



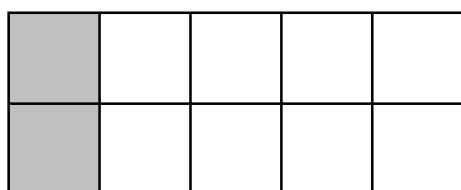
$$\frac{1}{5}$$



$$\frac{2}{5}$$



$$\frac{1}{2}$$



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

2 marks

5

What is **227** minutes in hours and minutes?

hours

minutes

1 mark

6

Jude's watch shows five minutes past nine.

The watch is thirteen 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 10

40

numbers from 101 to 199

multiple of 30

numbers from 201 to 299

multiple of 40

numbers from 301 to 399

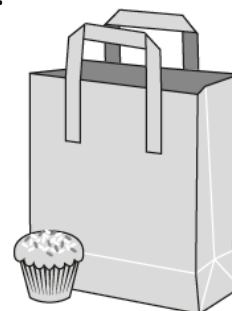
multiple of 20

---

2 marks

**8** Gill bakes cakes and sells them in bags.

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



$$\text{Cost} = \text{number of cakes} \times 25 \text{ p} + 15 \text{ p for the bag}$$

How much will a bag of 15 cakes cost?

£

1 mark

Phil buys a bag of cakes for £4.65

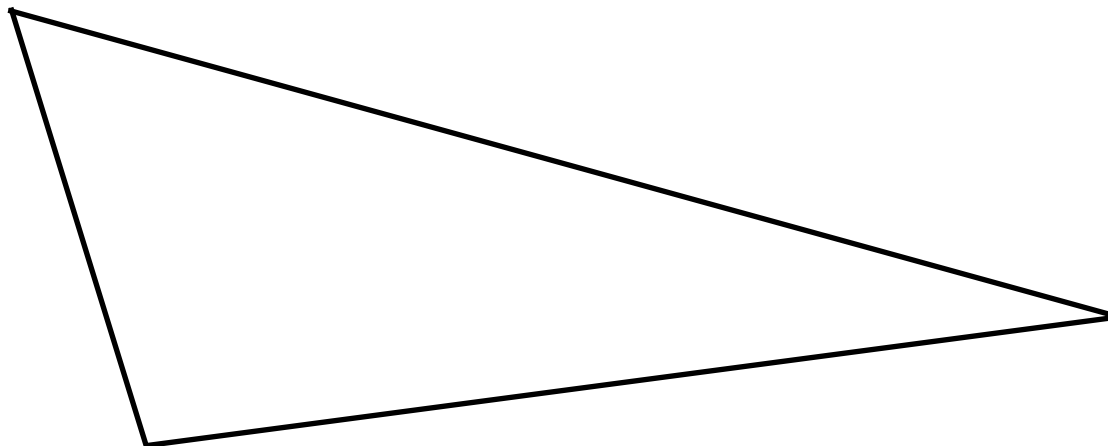
Use the formula to calculate how many cakes are in the bag.

Show  
your  
method

cakes

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.

$$\begin{array}{r}
 \phantom{\times} \phantom{00} 4 \square \\
 \times \phantom{00} \square 7 \\
 \hline
 \phantom{\times} \phantom{00} 294 \\
 \phantom{\times} 840 \\
 \hline
 1134
 \end{array}$$

---

 2 marks

- 11 Here is a number written in Roman numerals.

DXIII

Write the number in figures

1 mark

- 12 What number is halfway between 1.7 and 3.2 ?

1 mark

- 13 Round 162,835

to the nearest 10,000

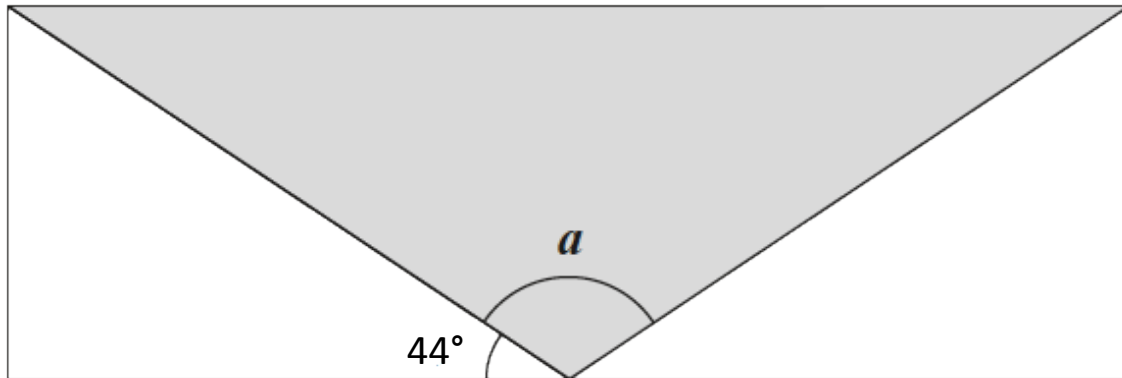
to the nearest 1,000

to the nearest 100

2 marks

R8

- 14 A shaded isosceles triangle is drawn inside a rectangle.



Not to scale

Calculate the size of angle  $a$ .

Show your method

$a$  is  °

2 marks

**15** Large pizzas cost £9.50 each.

Small pizzas cost £6.25 each.

5 children together buy 2 large pizza and 6 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) |
|--------|-------------|
| Bill   | 152         |
| Gill   | 143         |
| Phil   | 149         |
| Will   | 150         |
| Harry  | 145         |
| Carrie | 137         |
| Barry  | 139         |

What is the mean height of the children?

Show  
your  
method

cm

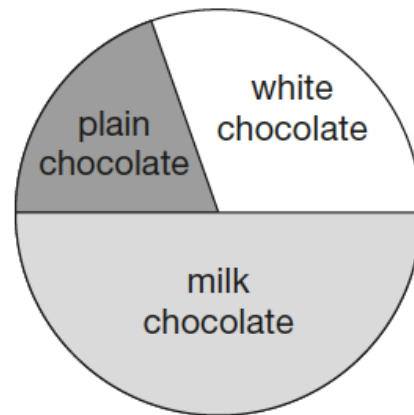
2 marks

**17** 90 girls and 220 boys were asked which kind of chocolate they like best.

These two pie charts show the results.



90 girls



220 boys

Steve says,

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

Steve is wrong.

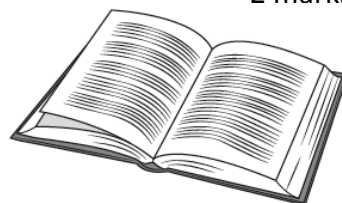
Explain how you know.

1 mark

Show  
your  
method

£

19 On Saturday, Lara read  $\frac{3}{8}$  of her book.



Show  
your  
method

pages

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