2019 national curriculum tests

Key stage 2

Mathematics

Paper 2: reasoning

MODIFIED LARGE PRINT

First name _____

Middle name _____

Last name _____

Date of birth **Day** _____ **Month** _____ **Year** _____

School name _____

DfE number _____

Note to markers

This paper should be marked using the standard mark schemes for KS2 Mathematics: Paper 2. There is additional guidance on marking some questions in this paper in the Key stage 2 Mathematics amendments to mark schemes – MLP document.

Instructions

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

Questions and answers

You have 40 minutes to complete this test, plus your additional time allowance.

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 any space on the page.

Some questions say 'Show your method.' For these questions, you may get a mark for showing your method.

If you cannot do a question, 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.

1. **Look at the three multiplications below.**

Write the missing numbers in the boxes.

$4 \times 8 = \square$

$3 \times \square = 21$

$8 \times \square = 56$

2. **Write the number that is**

1 000 less than 9 072

3. **Order the numbers below starting with the largest.**

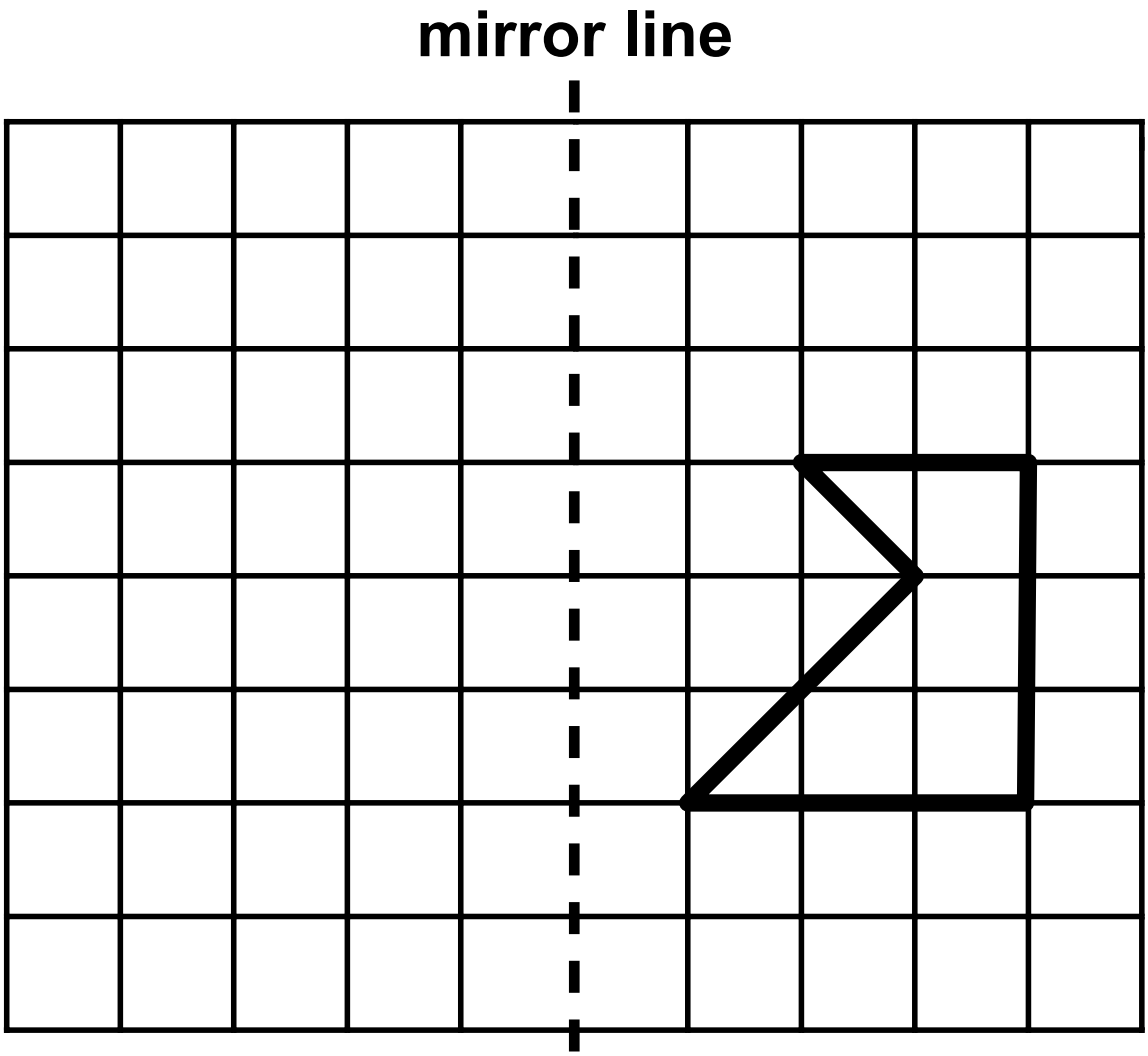
Draw lines to match each number with its order.

	largest
1 230 650	**1st**
1 009 909	**2nd**
1 023 065	**3rd**
1 009 099	**4th**
	smallest

4. **You have a cut–out shape for this question.**

Look at the diagram below.

A shape is drawn on a square grid.



Reflect the shape in the mirror line.

Use a ruler.

5. **Look at the sequence below.**

The numbers increase by 45 each time.

_____ 155 200 245 _____ _____

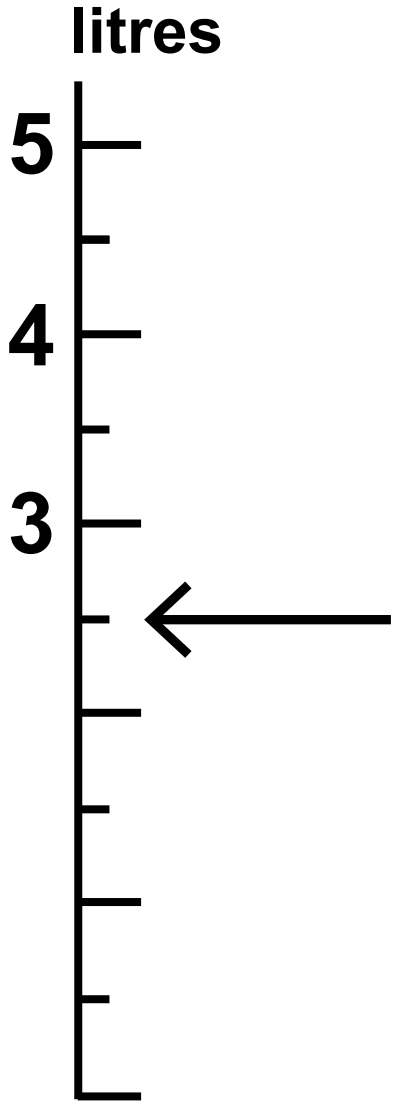
Write the missing numbers in the three spaces.

6. **Write the missing number in the box to make the division below correct.**

$$0{\cdot}3 \div \square = 0{\cdot}03$$

7. **Look at the number scale below.**

It measures litres.



Write the number of litres the arrow is pointing to.

_____ litres

8. **In the sequence below, the rule to get the next number is multiply by 2 and then add 3**

Some numbers in the sequence are shown below.

_____ 25 53 _____

Write the missing numbers in the two spaces.

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9. **Jack chose a number.**

He multiplied the number by 7

Then he added 85

His answer was 953

What number did Jack choose?

Show your method.

10. **A theme park sells tickets online.**

Each ticket costs £24

There is a £3 charge for buying tickets.

Look at the four calculations below.

number of tickets × 3 + 24

number of tickets × 24 + 3

number of tickets + 3 × 24

number of tickets + 24 × 3

Tick or mark the calculation that shows how to calculate the total cost in pounds.

11. Amina is shopping.

She says that she would like to buy one–quarter of a kilogram of cheese.

Write one–quarter as a decimal.

_____ kg

The cheese costs £1·35

Amina pays with a £2 coin.

How much change should Amina get?

_____

12. Look at the three symbols below.

< > =

Write one symbol in each box below to make the statements correct.

$\frac{7}{10}$ ☐ **0·07**

$\frac{23}{1000}$ ☐ **0·23**

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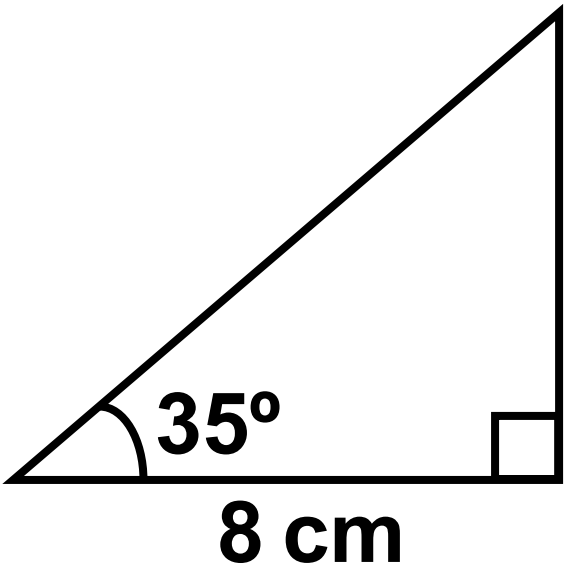
13. Look at the sketch of a triangle below.

It is not drawn to scale.



Draw the full–size triangle accurately.

Use the diagram on the next page.

Use an angle measurer (protractor) and a ruler.

One line has been drawn for you.

14. Round 39 476 to the nearest 10 000

Round 39 476 to the nearest 1 000

Round 39 476 to the nearest 100

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15. Amina asked 60 children to choose their favourite flavour of jelly.

Her results are shown in the table below.

Flavour	Number of children
Raspberry	12
Lemon	8
Orange	15
Blackcurrant	25
Total	60

What percentage of the 60 children chose orange?

_____ %

16. Write the missing number in the box.

$$6 + 2 \times 2 - \square = 6$$

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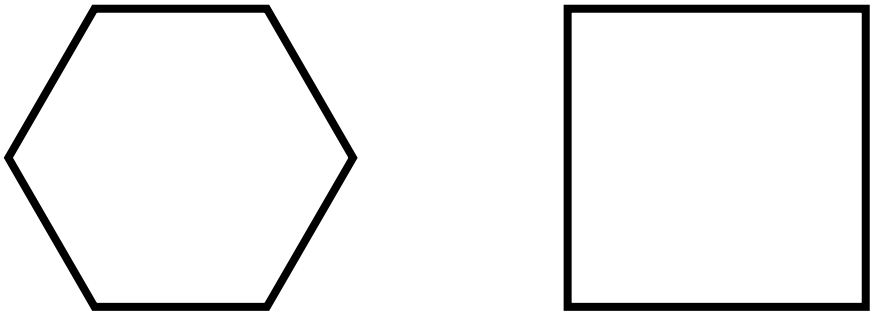
17. Look at the two shapes below.

They are not actual size.

regular hexagon **square**



The two shapes have the same perimeter.

The length of each side of the hexagon is 8 centimetres.

Calculate the area of the square.

Show your method.

_____ cm^2

18. Look at the three numbers below.

95 89 87

Write the prime number.

_____

Explain how you know the other numbers are not prime.

_____

_____

_____

_____

_____

19. **A machine pours 250 millilitres of juice every 4 seconds.**

How many litres of juice does the machine pour every minute?

Show your method.

_____ litres

20. Look at the five fractions below.

$$\frac{1}{20} \qquad \frac{20}{40} \qquad \frac{1}{5} \qquad \frac{3}{15} \qquad \frac{2}{100}$$

Tick or mark the fractions that are equal to 20%

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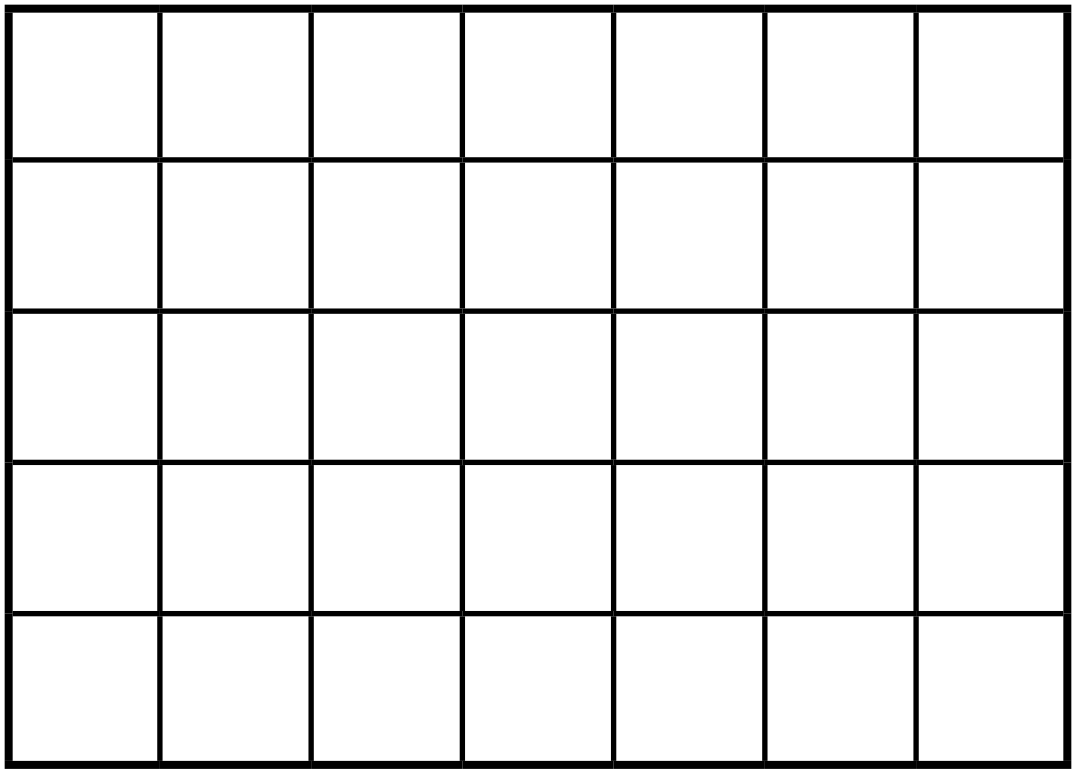
21. Adam has this rectangular piece of card. It is marked with grid lines.



Adam makes one straight cut along the grid lines.

The cut divides the rectangle into 2 shapes:

1 square and

1 rectangle.

Using the grid lines, draw one line that shows where Adam could have made his cut.

Use a ruler.

22. **The table below shows the maximum temperature for five days.**

Day	Temperature °C
Monday	8·1
Tuesday	9·3
Wednesday	11·9
Thursday	11·8
Friday	12·4

For what fraction of the five days was the maximum temperature below 10ºC?

What was the mean maximum temperature, to one decimal place?

Show your method.

_____ºC

23. **Amina makes a cuboid using centimetre cubes.**

Her cuboid has

length 6 cm

width 3 cm

height 4 cm

Stefan makes a cuboid that is

5 cm longer

5 cm wider

5 cm taller than Amina's cuboid.

What is the difference between the number of cubes in Amina's and Stefan's cuboids?

Show your method.

_____ cubes

End of test

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