Transcription of the Braille Version

2019 national curriculum tests
Key stage 2
Mathematics
Braille
Paper 2: reasoning

Transcription of the Braille Version

[braille page 1]

On your paper write:

Your first name

Your last name

Your date of birth

Your school name

Instructions

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

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.

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.

The questions are on different types of paper and diagrams are on opposite pages. Make sure you read everything carefully.

_____ has been used in some questions to indicate a missing number.

::::::::::::

Test administration guidance

Note to test administrator

Please write the school DfE number on the pupil's braille script.

If you are acting as a scribe for a braillist, write the pupil's answers on a sheet of plain or lined paper and attach the braille diagrams showing the pupil's work.

[braille page 2]

1.   Write the missing numbers in the three multiplications below.

      a) 4 × 8 = _____

      b) 3 × _____ = 21

      c) 8 × _____ = 56

…………………………………………………………………………..………………………………

2.   Write the number that is 1000 less than 9072

…………………………………………………………………………..………………………………

[braille page 3]

3.   Look at the four numbers below. They are labelled P Q R S
      P 1 009 909
      Q 1 023 065
      R 1 009 099
      S 1 230 650
      Put these numbers in order starting with the largest.
      Write the letter of each number.
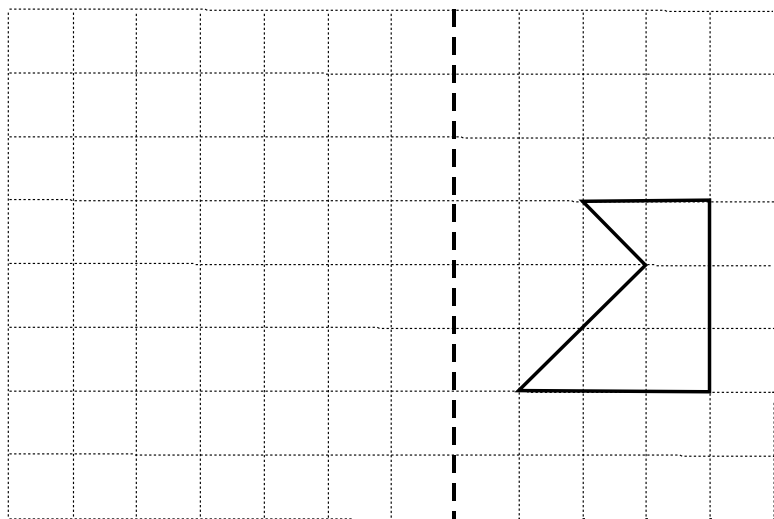   largest   _____

                  _____
                  _____
      smallest _____

…………………………………………………………………………..………………………………

Test administration guidance

1. Encourage the pupil to write a) before the answer to part a, b) before the answer to part b, and c) before the answer to part c.

Diagram for question 4

mirror line

4.   You have a cut-out shape for this question.
        Look at the diagram on the opposite page.
        A shape is drawn on a square grid.
        Reflect the shape in the mirror line.
        Use the separate copy of the diagram.
        Use a ruler.
....

5.   Look at the sequence below.
        The numbers **increase** by 45 each time.
        _____ 155 200 245 _____ _____
        Write the missing numbers.
....

6.   0.3 ÷ _____ = 0.03
        Write the missing number to make this division correct.
....

Test administration guidance

4.   Provide the pupil with the cut-out shape for this question. Separate copies of the diagram are provided on thermoform and plastic film. Teachers may mount the separate diagram on a board so that the pupil can use pins and bands or other tactile aids, or the coordinates can be marked on a film copy of the diagram.

   Teachers should then transcribe the pupil's work on the spare copy of the diagram.

   No tactile aids (i.e. 'blobs', bluetack, wikkisticks) should be sent with the pupil's braille script.

Diagram for question 7

litres

```
5 ─┐
   │
   │
4 ─┤
   │
   │
3 ─┤
   │
   ├─ ←
   │
   ┤
   │
   ┤
   │
   ┤
   │
   ┘
```
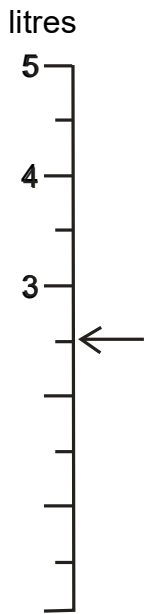
[braille page 7]
7.   Look at the number scale on the opposite page.
        It measures litres.
        Write the number of litres the arrow is pointing to.
....

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.
....

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.
....

[braille page 8]
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.
        They are labelled P Q R S
        P number of tickets × 3 + 24
        Q number of tickets × 24 + 3
        R number of tickets + 3 × 24
        S number of tickets + 24 × 3
        Write the letter of the calculation that works out the total cost in pounds.
....

Test administration guidance

7. Ensure the pupil finds the diagram on the facing page.

11.   Amina is shopping.
        She says that she would like to buy one-quarter of a kilogram of cheese.

        a) Write one-quarter as a decimal.
        _____ kg

        b) The cheese costs £1.35
        Amina pays with a £2 coin.
        How much change should Amina get?
……………………………………………………………………...……………………………

[braille page 9]
12.   Look at the three symbols below.
        < > =
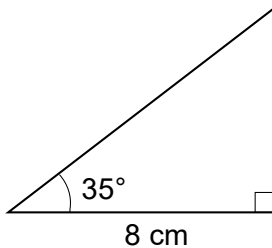   Write the missing symbol from each of the two statements below so that they are
correct.

        a) $\frac{7}{10}$ _____ 0.07

        b) $\frac{23}{1000}$ _____ 0.23
……………………………………………………………………...……………………………

[braille page 10, facing page 11]
Diagram for question 13

35°
8 cm

[braille page 11]
13.   Look at the sketch of a triangle on the opposite page.
        It is not drawn to scale.
        Draw the full-size triangle **accurately**.
        Use an angle measurer (protractor) and a ruler.
        Use the diagram on a separate sheet.
        One line has been drawn for you.
……………………………………………………………………...……………………………

14.   a) Write 39 476 rounded to the nearest 10 000

        b) Write 39 476 rounded to the nearest 1000

        c) Write 39 476 rounded to the nearest 100
……………………………………………………………………...……………………………

Test administration guidance

11. Encourage the pupil to write a) before the answer to part a and b) before the answer to part b.

13. Teachers may mount the separate diagram on a board so that the pupil can use pins and bands.
The child will need an appropriate angle measurer and ruler.

    Teachers should then transcribe the pupil's work on the spare copy of the diagram.

    No tactile aids (i.e. 'blobs', bluetack, wikkisticks) should be sent with the pupil's braille script.

14. Encourage the pupil to write a) before the answer to part a, b) before the answer to part b, and c) before the answer to part c.

[braille page 12]

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.   6 + 2 × 2 − ____ = 6
       Write the missing number.
....

[braille page 13, facing page 14]
Diagram for question 17
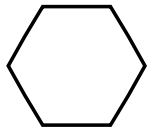
regular hexagon   square

[braille page 14]
17.   Look at the two shapes on the opposite page.
       They are not actual size.
       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

       a) Write the prime number.

       b) Explain how you know the other numbers are **not** prime.
....

Test administration guidance

17. Ensure the pupil finds the diagram on the facing page.

18. Encourage the pupil to write a) before the answer to part a and b) before the answer to part b.

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.

$\dfrac{1}{20}$

$\dfrac{20}{40}$

$\dfrac{1}{5}$

$\dfrac{3}{15}$

$\dfrac{2}{100}$

       Write the fractions that are equal to 20%
………………………………………………………...............………………………………

Diagram for question 21
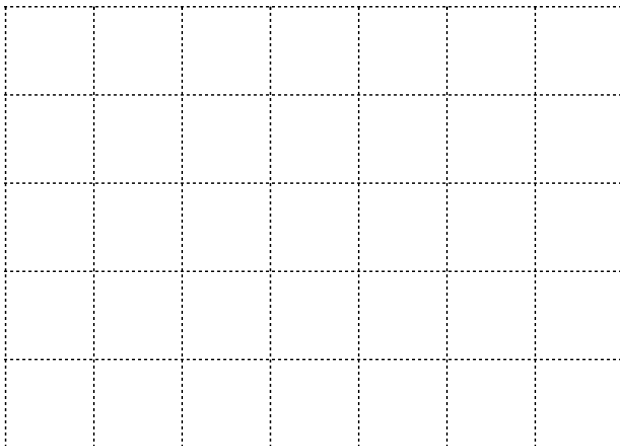
21.   Look at the diagram on the opposite page.
       Adam has this rectangular piece of card. It is marked with grid lines.
       Adam makes one straight cut along the grid lines.
       The cut divides the rectangle into 2 shapes:
       1 square and 1 rectangle.
       Using the spare copy of the diagram, draw one line that shows where Adam could
have made his cut.
       Use a ruler.
……………………………………………………………...............………………………………

Test administration guidance

21. Separate copies of the diagram are provided on thermoform and plastic film. A tactile ruler will be needed for this question. Teachers may mount the separate diagram on a board so that the pupil can use pins or other tactile aids.

    Teachers should then transcribe the pupil's work on the spare copy of the diagram.

    No tactile aids (i.e. 'blobs', bluetack, wikkisticks) should be sent with the pupil's braille script.

[braille page 18]

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

,,,,,,,,,,,,,
a) For what fraction of the five days was the maximum temperature below 10°C?

b) What was the mean maximum temperature, to one decimal place?
Show your method.
____°C

....

[braille page 19]

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
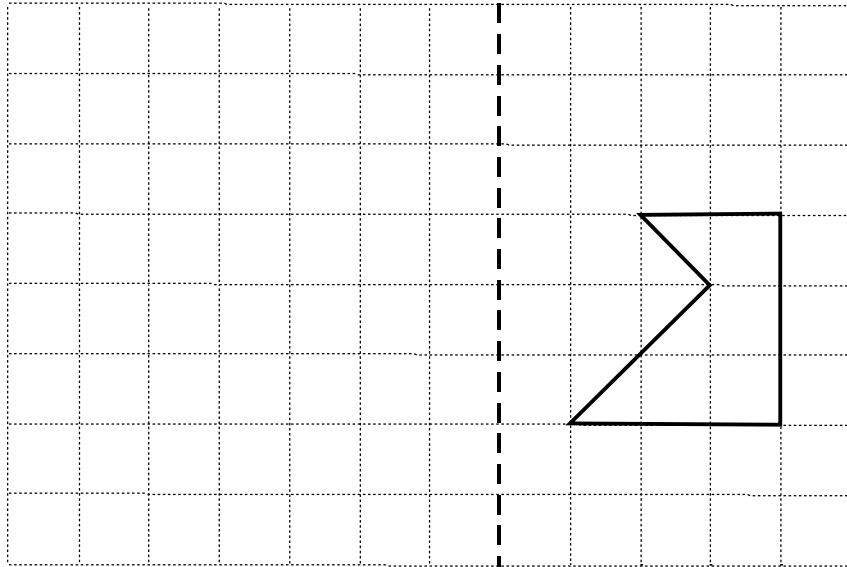cuboids?
Show your method.
____ cubes

....
::::::::::::
END OF TEST

Test administration guidance

22. Encourage the pupil to write a) before the answer to part a and b) before the answer to part b.

Diagram and film copies for question 4

mirror line

Diagram and film copies for question 13

8 cm

Diagram and film copies for question 21

Blank page