Transcription of the Braille Version

2017 national curriculum tests
Key stage 2
Mathematics
Braille
Paper 3: 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

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 answer on a sheet of plain or lined paper and attach the braille diagrams showing the pupil's work.

1. Write the missing number to make the division below correct.

    $75 \div$ _____ $= 7.5$

··......................··

2. A group of friends earns £80 by washing cars.
    They share the money equally.
    They get £16 each.
    How many friends are in the group?

···......................···

3. In this question -- stands for a 2-digit number.
    - stands for a 1-digit number.
    Chen uses the digits 5 and 6 and 9
    She uses each digit only once.
    She makes a 2-digit number and a 1-digit number.
    She multiplies them together.
    Her answer is a multiple of 10
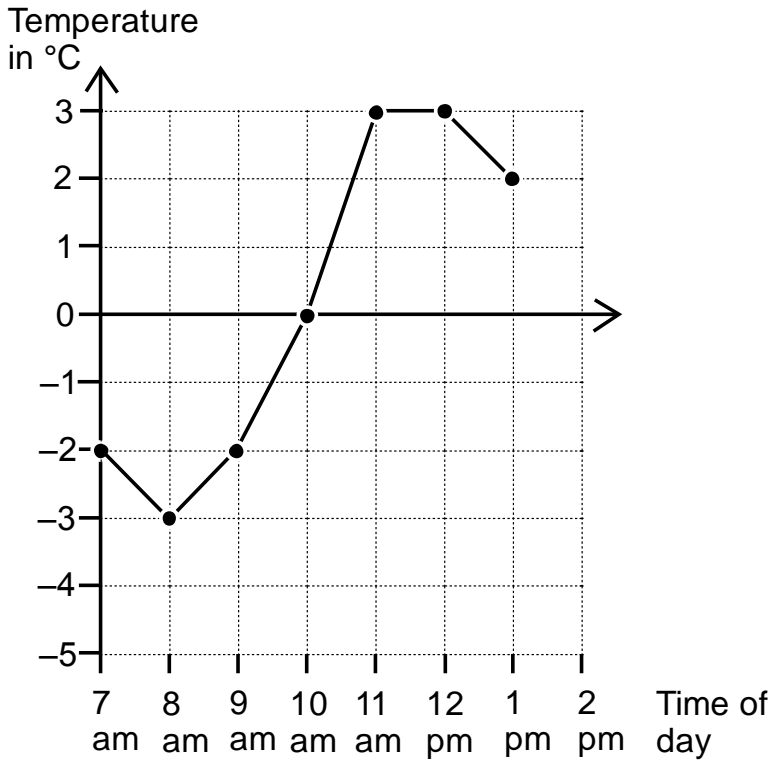   What could Chen's multiplication be?
    -- ✕ -

···

Test administration guidance

There is no specific guidance for questions 1 – 3.

Diagram for question 4

Temperature
in °C

[braille page 4]

4. Look at the graph on the opposite page.
   The graph shows the temperature in °C from 7 am to 1 pm on a cold day.

   a) How many degrees warmer was it at 1 pm than at 7 am?
   _____ °C

   b) At 2 pm the temperature was 4 degrees lower than at 1 pm.
   What was the temperature at 2 pm?
   _____ °C

....

5. The children at Farmfield School are collecting money for charity.
   Their target is to collect £360
   So far they have collected £57.73
   How much more money do they need to reach their target?
   £ _____

....

Test administration guidance

4.   Ensure the pupil finds the graph on the facing page.
Encourage the pupil to braille a) before the answer to part a and b) before the answer to part b.

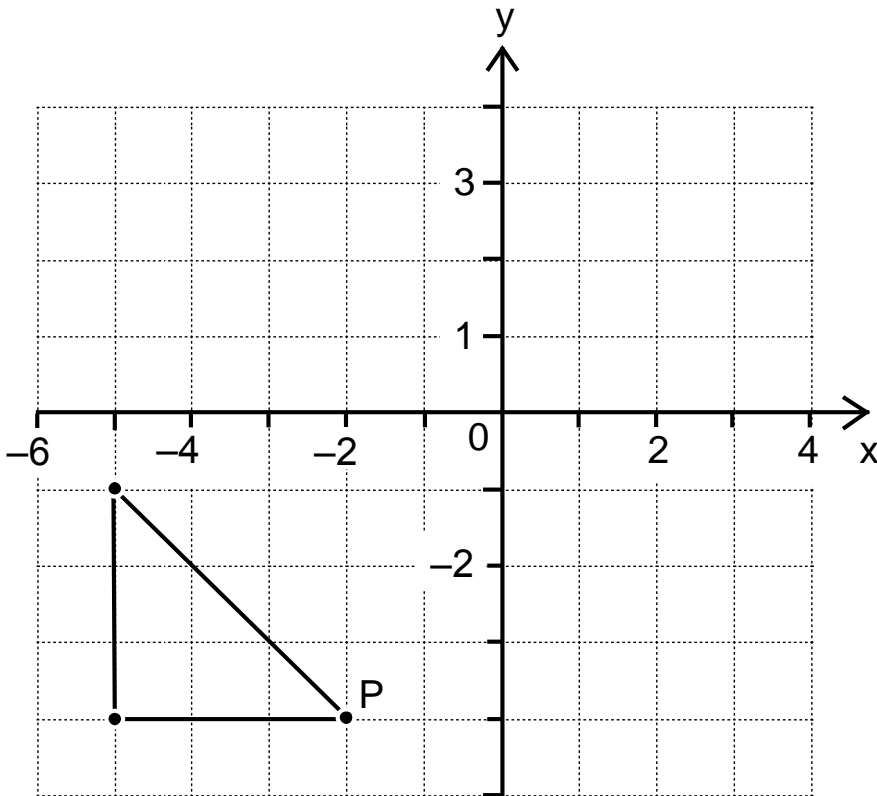6.   The timetable below is for train journeys from London to Paris.

Leaves London   Arrives Paris
12:01 .... 15:22
12:25 .... 15:56
14:01 .... 17:26
14:31 .... 17:53
15:31 .... 18:53

,,,,,,,,,,,,
      William wants to travel to Paris by train.
      He needs to arrive in Paris by 5:30 pm.
      Write the latest time that William can leave London.
      ____ : ____

....

Diagram for question 7

7.   Look at the diagram on the opposite page.
      A triangle is drawn on a coordinate grid.
      The triangle is translated 6 right and 5 up.
      Mark the new position of the point labelled P
      Use the separate copy of the diagram.

....

Test administration guidance

7. Teachers may mount the separate diagram on a board so that the pupil can use a pin or any other tactile aid to mark the new position of P or the new position of P can be marked on a film copy of the diagram.

   Teachers should then transcribe pupil's mark on the diagram.

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

8. Write three factors of 30 that are NOT factors of 15

   ____

   ____

   ____

....

[braille page 8]

9. Look at the morning timetable below for Chen's class this week.

Time   09:00-   10:30-   11:00-
          10:30   11:00   12:00
Mon .... Maths .... Break ..... English
Tue .... English ..... Break ..... Maths
Wed ...... Maths .... Break ..... Science
Thur ...... English ..... Break ..... Maths
Fri .... Maths .... Break ..... English

                              ,,,,,,,,,,,,
   What is the total number of hours for English on this timetable?
   ____ hours

....

10. A bottle contains 568 millilitres of milk.
    Jack pours out half a litre.
    How much milk is left?

....

[braille page 9]

11. A bicycle wheel has a diameter of 64 cm.
    What is the radius of the bicycle wheel?
    ____ cm

....
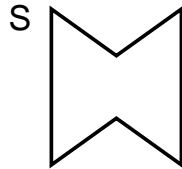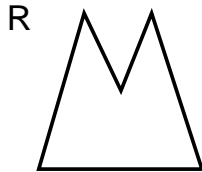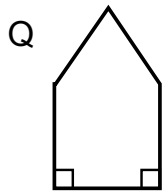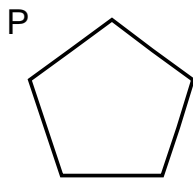
12. White balloons are sold in bags of 24
    Red balloons are sold in bags of 12
    Adam buys 6 bags of white balloons.
    Chen buys 3 bags of red balloons.
    Adam says that he has four times as many balloons as Chen.
    Explain why Adam is correct.

....

Test administration guidance

There is no specific guidance for questions 8 – 12.

Diagram for question 13

P

Q

R

S

[braille page 11]

13. Look at the four shapes on the opposite page.
    They are labelled P Q R and S
    Write the letter of the PENTAGON with exactly four acute angles.

....

14. 3 pineapples cost the same as 2 mangoes.
    pineapple pineapple pineapple
    mango mango
    One mango costs £1.35
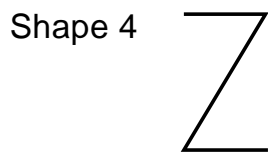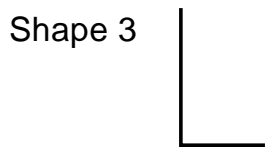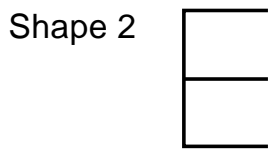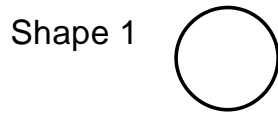   How much does one pineapple cost?
    Show your method.
    £ ____

....

Test administration guidance

13. Ensure the pupil finds the four shapes on the facing page.

Diagram for question 15

Shape 1

Shape 2

Shape 3

Shape 4

15. Look at the shapes on the opposite page.
     Write the number of the shape that has both parallel and perpendicular lines.
     Shape _____

....

16. There are 2400 leaflets in a box.
     William and Ally take 450 leaflets each.
     Adam and Chen share the rest of the leaflets equally.
     How many leaflets does Adam get?
     Show your method.

....

17. Look at the four pairs of numbers below.

     a) $1\frac{1}{2}$ 1.2

     b) $1\frac{1}{4}$ 1.3

     c) $1\frac{5}{100}$ 1.4

     d) $1\frac{3}{5}$ 1.5

     For each pair write the number that is greater.

....

Test administration guidance

15. Ensure the pupil finds the four shapes on the facing page.

17. Encourage the pupils to braille a) before the answer to part a, b) before the answer to part b, c) before the answer to part c and d) before the answer to part d.

18.   A square number and a prime number have a total of 22

a) What is the square number?

b) What is the prime number?

....
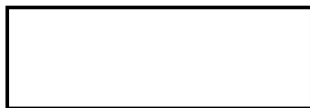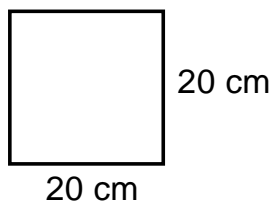
[braille page 15]
19.   Dev thinks of a whole number.
He multiplies it by 4
He rounds his answer to the nearest 10
The result is 50
Write all the possible numbers that Dev could have started with.

....

[braille page 16, facing page 17]
Diagram for question 20

20 cm

20 cm

[braille page 17]
20.   A square tile measures 20 cm by 20 cm.
A rectangular tile is 3 cm longer and 2 cm narrower than the square tile.
A square and a rectangle are shown on the opposite page.
They are not actual size.
What is the difference in area between the two tiles?
Show your method.
____ cm^2

....

21.   The numbers in the sequence below increase by the same amount each time.

____   1 $1\frac{5}{8}$ $2\frac{1}{4}$ ____

Write the two missing numbers.

....
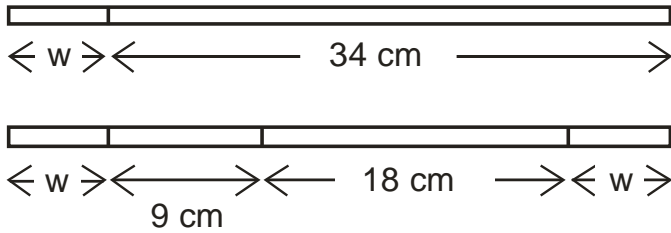
Test administration guidance

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

20.   Ensure the pupil finds the two shapes on the facing page.

[braille page 18, facing page 19]
Diagram for question 22

Not to scale

⟨ w ⟩⟨———————— 34 cm ————————⟩

⟨ w ⟩⟨————⟩⟨— 18 cm —⟩⟨ w ⟩
      9 cm

[braille page 19]
22. Look at the diagram on the opposite page.
It shows two sticks, made of different lengths.
Each stick has the same total length. Each length w is the same.
Calculate the length w
____ cm

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

23. The table below shows a pattern of number pairs.

a   b
1 9
2 19
3 29
4 39

,,,,,,,,,,,,
Complete the rule for the number pattern.
b = ____ × a − ____

………………………………………………………………………………………………...…………..
[braille page 20]
24. The volume of a cuboid is 216 cubic centimetres.
It is 4 cm high.
It is 6 cm wide.
What is its length?
Show your method.
____ cm

………………………………………………………………………………………………...…………..
END OF TEST

Test administration guidance

22.   Ensure the pupil finds the two diagrams on the facing page.

One braillon copy and film copies of diagram for question 7