2024 national curriculum tests

Key stage 2

Mathematics braille transcript

Braille transcript for Paper 3: reasoning

Standards
& Testing
Agency

[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.

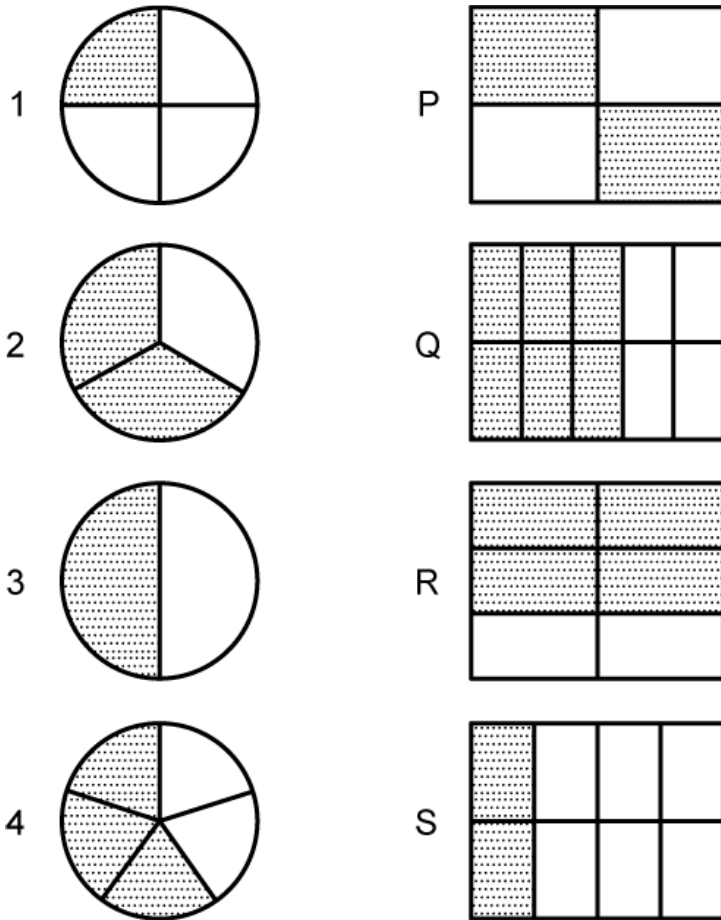::::::::::::

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.

Diagram for Question 1

1. Look the diagram on the opposite page.
    It shows four circles labelled 1, 2, 3 and 4 and four rectangles labelled
    P, Q, R and S. All the shapes have a fraction shaded.

    Match each shaded fraction circle to the same shaded fraction of a rectangle by
    writing the number and the letter.
    One has been done for you: 3P.

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Test administration guidance

1. Ensure the pupil finds the diagram on the opposite page.

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[braille page 4]

2.   The temperature in a freezer is –40°C.
       The temperature increases by 10°C.
       What is the new temperature?
       _____ °C

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3.   Jack buys milk and orange juice from a shop.
       The prices are shown below.
       Milk: £1.45
       Orange juice: £2.40
       He pays with a £5 note.
       How much change does Jack get?
       Show your method.
       £_____

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[braille page 5]

4.   The diameter of the Moon is 3476 kilometres.
       What is this diameter to the nearest hundred kilometres?
       _____ km

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

5.   Look at the three numbers below.

       1110   590   571

       Write the number from the list that is equivalent to the three Roman numerals below.
       For example CVI is equivalent to 106.

       (a) DXC
       (b) DLXXI
       (c) MCX

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Test administration guidance

5. Encourage the pupil to braille a before the answer to part a, b before the answer to part b, and c before the answer to part c. Make it clear the pupil only needs to write a number for each part.

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6.   Look at the list of three simplified fractions below.

$$\frac{4}{5} \quad \frac{3}{5} \quad \frac{3}{4}$$

Write the simplified fraction from the list that is equivalent to the three fractions below.

For example $\frac{2}{3}$ is equivalent to $\frac{12}{18}$.

(a) $\frac{12}{20}$

(b) $\frac{12}{15}$

(c) $\frac{12}{16}$

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7.   Emma thinks of a number. She then multiplies by 2, adds 11 and divides by 3. Her answer is 9.

What number is Emma thinking of?

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

Test administration guidance

6. Encourage the pupil to braille a before the answer to part a, b before the answer to part b, and c before the answer to part c. Make it clear the pupil only needs to write a number for each part.

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[braille page 7, facing page 8]

Diagram for Question 8

[Please note: the numbers on the x-axis have been turned vertical in order to fit the braille.]
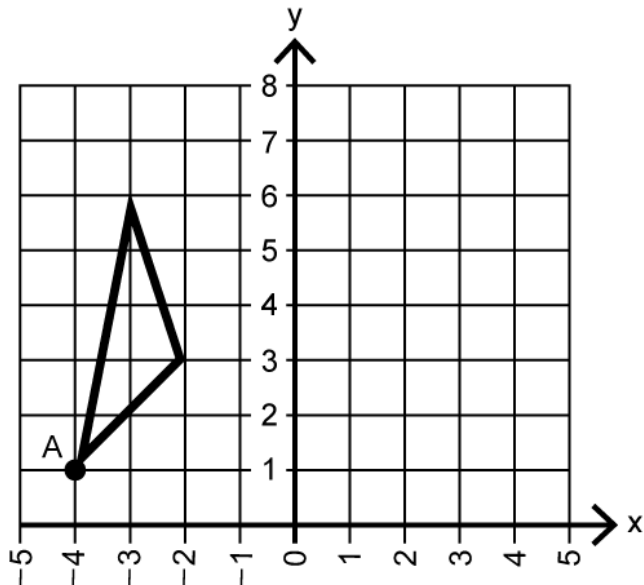
[braille page 8]

8. Look at the diagram on the opposite page. It shows a shape on a grid. Each square of the grid is 1 unit.
   One vertex of the shape is labelled point A.
   Mark point A on the grid after it has been translated right by 6 units.

....

9. Complete the table below by writing the missing numbers for the blank spaces labelled (a), (b) and (c).

Number of weeks	Number of days
1	7
2	14
4	28
6	(a)
10	(b)
(c)	105

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Test administration guidance

8. Ensure the pupil finds the diagram on the opposite page. Separate copies of the diagram are provided on thermoform and plastic film.
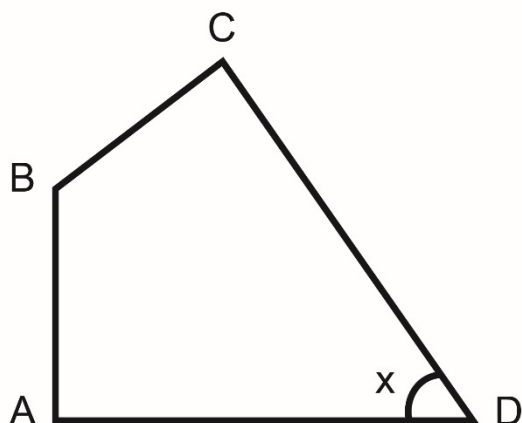
    You may mount the separate diagram on a board so that the pupil can use pins and bands or other tactile aids. You should then transcribe the pupil's work on the spare copy of the diagram.

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

9. Encourage the pupil to braille a before the answer to part a, b before the answer to part b, and c before the answer to part c.

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Diagram for Question 10

10.   Look at the diagram on the opposite page. It shows shape ABCD with angle x labelled.

(a) What is the perimeter of the shape, in millimetres?
Use a ruler.
_____ mm

(b) Measure the size of angle x.
Use an angle measurer.
x is _____ °

....

Test administration guidance

10. Ensure the pupil finds the diagram on the opposite page.
Encourage the pupil to braille a before the answer to part a and b before the answer to part b.

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[braille page 11]

11.   In this question _ stands for a missing digit.
       Write the missing digits to make the subtraction correct.

       573 – 3_5 = _68

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12.   Look at the four fractions below.

       $\dfrac{7}{8}$ $\dfrac{1}{5}$ $\dfrac{3}{4}$ $\dfrac{8}{10}$

       Write the fractions in order starting with the least.

       least ____

              ____

              ____

              ____

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[braille page 12]

13.   There are 20 boxes on a truck.
       The boxes are in 4 different sizes as shown below.
       8 of these boxes have a mass of 4 kg.
       6 of these boxes have a mass of 2.5 kg.
       4 of these boxes have a mass of 6.5 kg.
       2 of these boxes have a mass of 13 kg.

       What is the total mass of the 20 boxes on the truck?
       Show your method.
       _____ kg

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11. You may explain to the pupil that in this question _ stands for a missing digit.
     E.g. 45_9 would be brailled #45_9
     If the missing digit is at the front of a number, e.g. _459, this would be brailled as #_459

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Diagram for Question 14

KEY:

P

Q

R

S

T
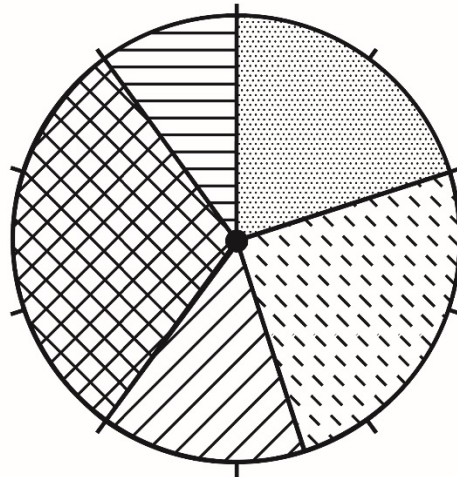
14.   Look at the diagram on the opposite page.
        It shows a pie chart marked in 10% intervals.
        Now look at the data in the table below, it is incomplete.

Label   Percentage
P ……… 20%
Q ……... 25%
R ……… (a)
S ……… (b)
T ……… (c)

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        Using the pie chart, complete the table by writing the missing values labelled (a), (b)
        and (c).

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Test administration guidance

14. Ensure the pupil finds the diagram on the opposite page.
    Encourage the pupil to braille a before the answer to part a, b before the answer to part b, and c before the answer to part c.

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15.   35% of the 680 pupils at a school have a pet dog.
      159 of the pupils who have a pet dog are boys.

      How many of the pupils who have a pet dog are girls?
      Show your method.

      ....

16.   In this question _ stands for a missing number.
      A number in the calculation below is missing.
      Write a number to make the calculation correct.

      $$\frac{3}{5} < \frac{}{100} < 0.7$$

      ....

17.   Write the letters of the numbers that are factors of both 54 and 72

P. 2
Q. 3
R. 4
S. 8
T. 9

      ....

18.   Layla wants to buy a camera that costs £65
      For the first 10 weeks, she saves £2 each week.
      Then she saves £3 each week.

      How many weeks altogether does it take Layla to save £65?
      Show your method.
      _____ weeks

      ....

Test administration guidance

16. You may explain to the pupil that in this question _ stands for a missing number.

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Diagram for Question 20
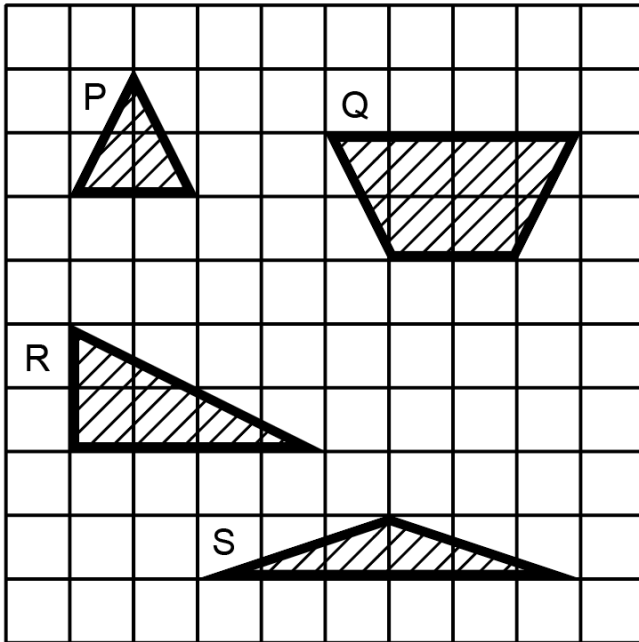
19. In this question _ stands for a missing digit.
    Write the missing digits to make the division correct.

    436_ ÷ 12 = 3_4 r1

....

20. Look at the diagram on the opposite page.
    It shows four shapes PQRS on a grid.

    Write the letters of all the shapes that have only two acute angles.

....

21. A band holds a concert for charity.
    The tickets cost £27 each.
    They sell 635 tickets.
    They pay £3180 to use the hall.
    They give one-third of the remaining amount to charity.

    How much money does the band give to charity?
    Show your method.
    £_____

....

19. You may explain to the pupil that in this question _ stands for a missing digit.
    E.g. 45_9 would be brailled #45_9
    If the missing digit is at the front of a number, e.g. _459, this would be brailled as #_459

20. Ensure the pupil finds the diagram on the opposite page.

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[braille page 20]

22. Sarah makes jewellery using black and white beads.

    She uses this rule to work out how many black beads to use.
    black = (white × 3) + 4

    (a) Sarah uses 12 white beads to make a necklace. How many black beads does she use?

    (b) Sarah uses 25 black beads to make a bracelet. How many white beads does she use?

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

[braille page 21]

23. The rule to find the number of faces of any pyramid is:

    Number of sides on its base shape + 1

    Use the rule to complete the table below, by writing the missing numbers for the blank spaces labelled (a) and (b).
    One has been done for you.

Name of 3D Shape	Number of faces
Square based pyramid ……...	5
Pentagonal based pyramid …	(a)
Octagonal based pyramid …..	(b)

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24. $\frac{1}{2} \times \frac{5}{6}$ is greater than the value of $\frac{1}{3} \times \frac{7}{8}$

    Explain how you know.

:::::::::::

END OF TEST

Test administration guidance

22. Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

23. Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

[Please note: the numbers on the x-axis
have been turned vertical in order to fit
the braille.]

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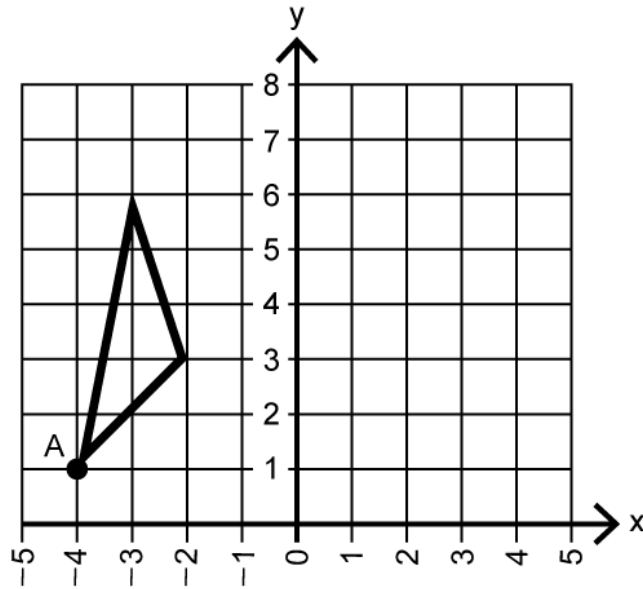
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Print version product code: STA/24/8819/BTp   ISBN: 978-1-83507-094-9
Electronic PDF version product code: STA/24/8819/BTe   ISBN: 978-1-83507-106-9

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