Transcript of the Braille Version

2018 national curriculum tests
Key stage 2
Mathematics
Braille
Paper 2: reasoning

[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, symbol or word.
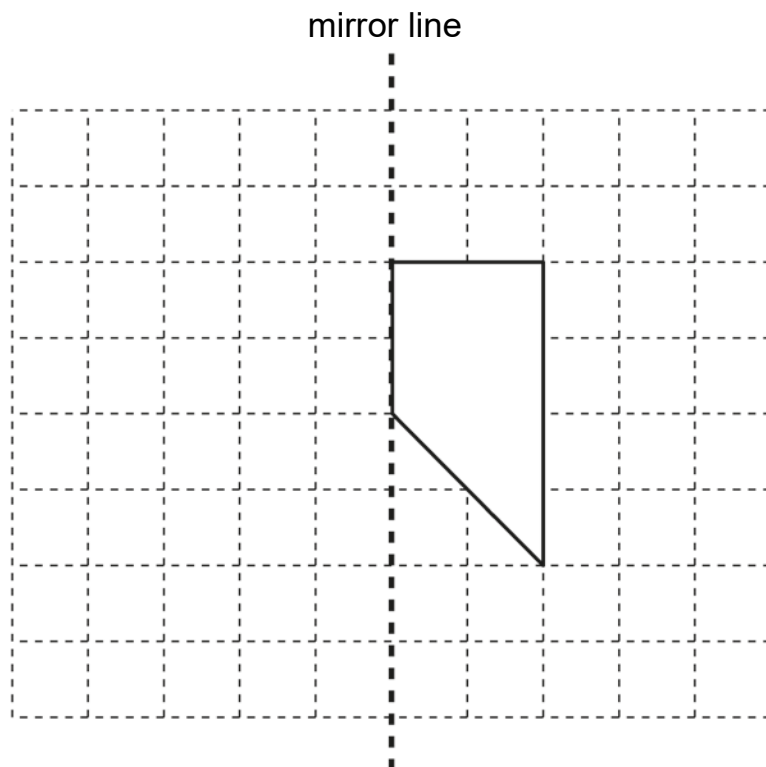
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Test administration guidance

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

mirror line

[braille page 3]
1. Stefan completes the calculation below.
   95 – 67 = 28
   Write an addition calculation he could use to check his answer.
   ____ + ____ = ____

....

2. You have a shape for this question.
   Look at the diagram on the opposite page.
   It shows a shape on a grid.
   Complete the design so that it is symmetrical about the mirror line.
   Use the separate copy of the diagram.
   Use a ruler.

....

Test administration guidance

2.   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.

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[braille page 4, facing page 5]
Diagram for question 3

A

[braille page 5]
3.   Look at the line on the opposite page.
     Mark the point that is 6.5 centimetres from A
     Use the separate copy of the diagram.

....

4.   a) $\dfrac{3}{4} = \dfrac{9}{\underline{}}$

     Write the missing number.

     b) $\dfrac{3}{4} = \dfrac{\underline{}}{24}$

     Write the missing number.

....

[braille page 6]
5.   The table below shows the temperatures in four cities at midnight and at midday.

City	At midnight	At midday
Paris	–4°C	–2°C
Oslo	–13°C	–7°C
Rome	3°C	10°C
Warsaw	–6°C	2°C

....

     a) At midnight, how many degrees colder was Paris than Rome?
     _____ degrees

     b) Which city was 6 degrees colder at midnight than at midday?

....

Test administration guidance

3. 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.

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

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

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6. Look at the sequence of four numbers below.

    303 604

    302 604

    301 604

    300 604

    The numbers in this sequence decrease by the same amount each time.

    What is the next number in the sequence?

....

7. Look at the five numbers below.

    0.25

    0.75

    $\dfrac{25}{100}$

    0.5

    $\dfrac{2}{5}$

    Write the two numbers that are equivalent to $\dfrac{1}{4}$

....

Test administration guidance

There is no specific guidance for questions 6 and 7.

[braille page 8]

8. Ken buys 3 large boxes and 2 small boxes of chocolates.
    Each large box has 48 chocolates.
    Each small box has 24 chocolates.
    How many chocolates did Ken buy altogether?
    Show your method.
    _____ chocolates

....

9. The list below shows the years in which the Cricket World Cup was held since 1992:
    1992
    1996
    1999
    2003
    2007
    2011
    2015
    Adam says that the Cricket World Cup has been held every four years since 1992
    Adam is not correct.
    Explain how you know.

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Test administration guidance

There is no specific guidance for questions 8 and 9.

[braille page 9]

10. Look at the three symbols below.

> = <

Write the correct symbol that should be put in the space to make each of the four statements below correct.

a) 11 × 12 _____ 15 × 10

b) 90 ÷ 30 _____ 60 ÷ 20

c) 120 ÷ 4 _____ 160 ÷ 8

d) 30 × 8 _____ 100 × 10

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11. You have a model of a 3-D shape for this question.

a) How many faces does it have?

b) How many vertices does it have?
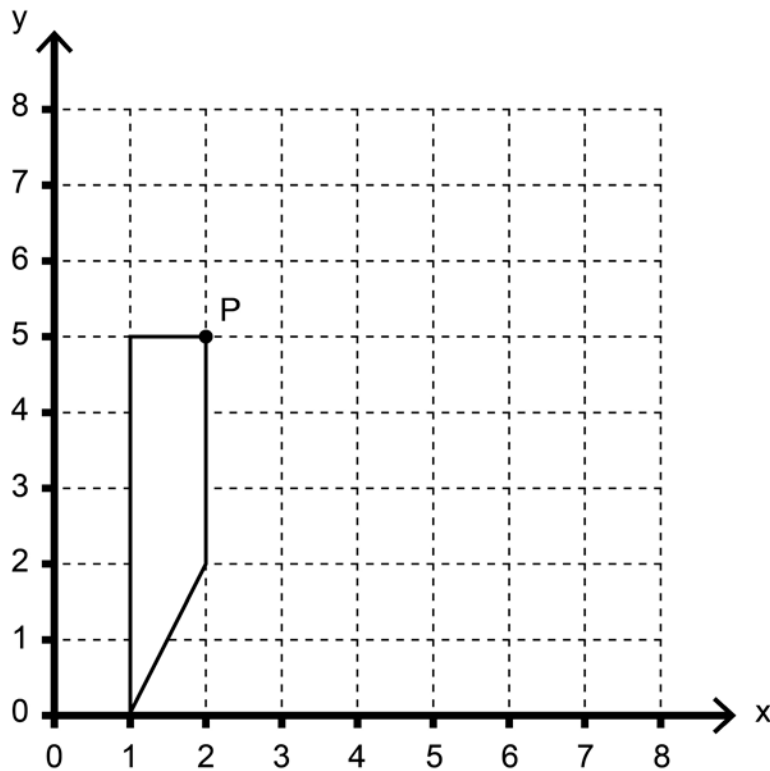
c) How many edges does it have?

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Test administration guidance

10. Encourage the pupil to write 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.

11. Provide the pupil with the solid shape for the question.

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Diagram for question 12

12. Look at the diagram on the opposite page.
    A shape is drawn on a grid.
    P is the point (2, 5)
    The shape is translated so that point P moves to (6, 7)
    Draw the shape in its new position.
    Use the separate copy of the diagram.
    Use a ruler.

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13. Look at the list of five improper fractions below.

    $\dfrac{67}{8}$

    $\dfrac{48}{8}$

    $\dfrac{62}{8}$

    $\dfrac{55}{8}$

    $\dfrac{76}{8}$

    Write the fraction from the list that is equivalent to $6\dfrac{7}{8}$

....

Test administration guidance

12. Teachers may mount the separate diagram on a board so that the pupil can use pins and bands 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.

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14. Look at the three fractions below.

    $\dfrac{6}{5}$ $\dfrac{3}{5}$ $\dfrac{3}{4}$

    Write these fractions in order, starting with the smallest.

    smallest ＿＿＿

    　　　　 ＿＿＿

    　　　　 ＿＿＿

....

15. A box contains trays of melons.
    There are 15 melons in a tray.
    There are 3 trays in a box.
    A supermarket sells 40 boxes of melons.
    How many melons does the supermarket sell?
    Show your method.
    ＿＿＿ melons

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16. Adam wants to use a mental method to calculate
    182 – 97
    He starts from 182
    Four methods that Adam could use are shown below.
    They are labelled P Q R and S
    P add 3 then subtract 90
    Q subtract 100 then add 3
    R subtract 7 then subtract 90
    S subtract 3 then subtract 100
    Write the letters of the methods that are correct.

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17. There are 28 pupils in a class.
    The teacher has 8 litres of orange juice.
    She pours 225 millilitres of orange juice for every pupil.
    How much orange juice is left over?
    Show your method.

....

Test administration guidance

There is no specific guidance for questions 14 – 17.

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18. Last year, Jacob went to four concerts.
    Three of his tickets cost £5 each.
    The other ticket cost £7
    What was the mean cost of the tickets?
    Show your method.
    £____

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19. Layla wants to estimate the answer to the calculation below.
    $$3\frac{9}{10} - 2\frac{1}{8} + 1\frac{4}{5}$$
    Look at the four calculations below.
    They are labelled P Q R and S
    P 3 − 2 + 2
    Q 4 − 2 + 1
    R 4 − 2 + 2
    S 3 − 2 + 1
    Write the letter of the calculation that is the best estimate.

....

20. The length of an alligator can be estimated by
    measuring the distance from its eyes to its nose
    then multiplying that distance by 12
    The distance from eyes to nose for one alligator is 17.5 cm
    The distance from eyes to nose for another alligator is 15 cm
    What is the difference in the estimated lengths of these two alligators?
    Show your method.
    ____ cm

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21. In this question

    ▲ (triangle) and ● (circle)
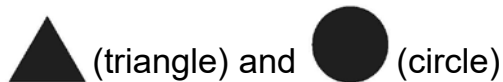
    stand for two different numbers.

    2 ▲ + 3 ● = 147

    ▲ + 3 ● = 111

    Calculate the value of each shape.

    triangle = ____

    circle = ____

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Test administration guidance

There is no specific guidance for questions 18 – 21.

Diagram for question 22
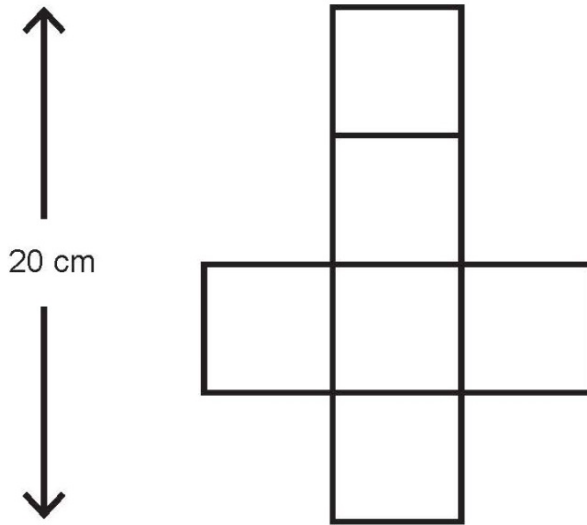
20 cm

22. Look at the diagram on the opposite page.
It is not actual size.
It shows the net of a cube.
The net is 20 cm long.
What is the volume of the cube?
_____ cm^3

....

23. The length of a day on Earth is
24 hours.
The length of a day on Mercury is

$58\frac{2}{3}$ times the length of a day on Earth.

What is the length of a day on Mercury, in hours?
Show your method.
_____ hours

⠿⠿⠿⠿⠿
End of test

Test administration guidance

22. Ensure the pupil finds the diagram on the facing page.
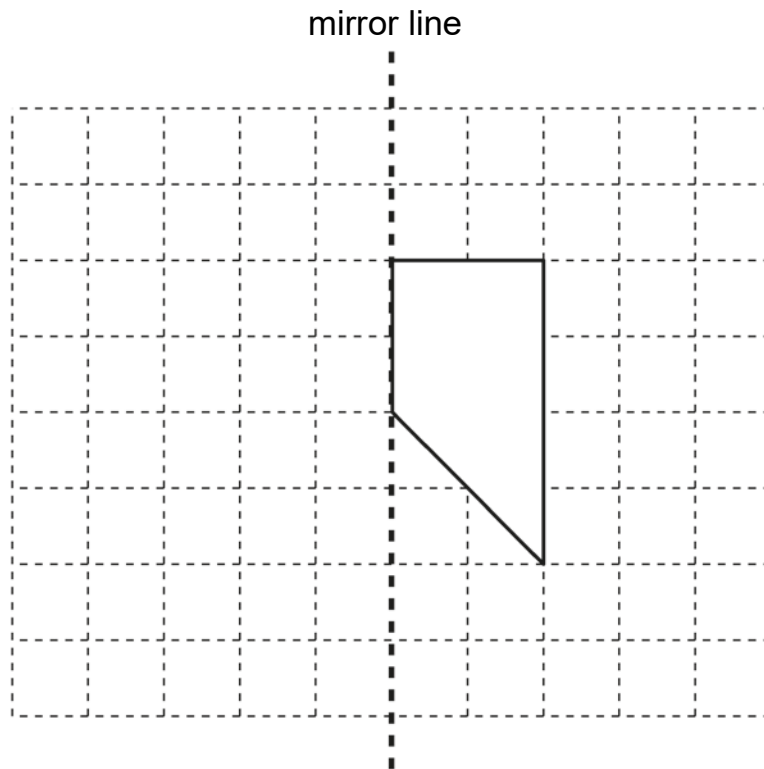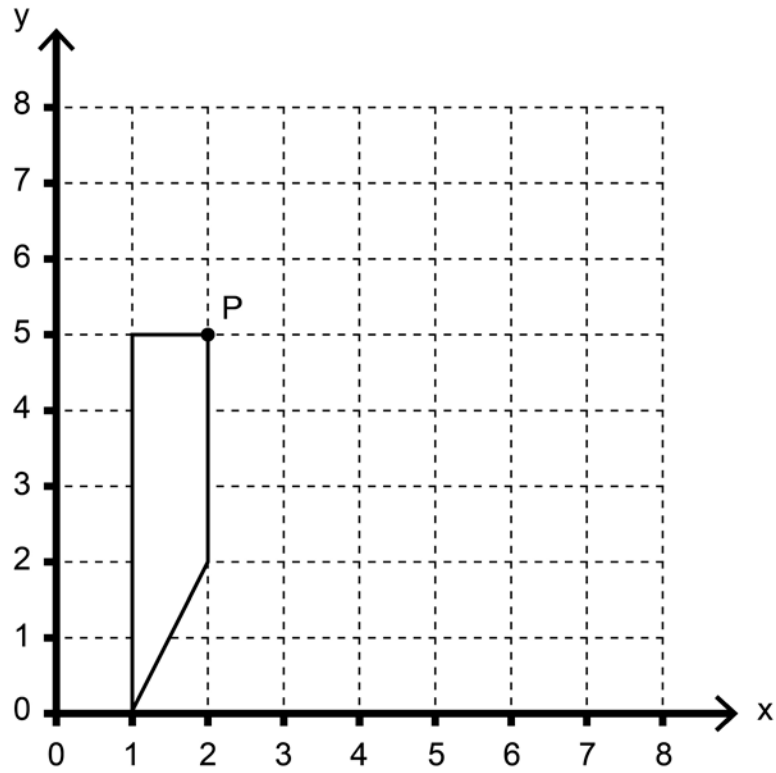
Diagram and film copies for question 2

mirror line

Diagram and film copies for question 3

A

Diagram and film copies for question 12

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Braille transcript