

**2024 national curriculum tests**

# **Key stage 2**

## **Mathematics braille transcript**

**Braille transcript for Paper 2: reasoning**



**Standards  
& Testing  
Agency**

## 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.

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## **Test administration guidance**

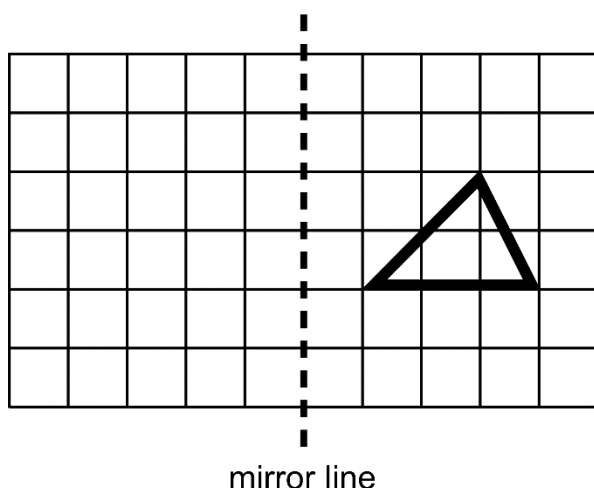
Note to test administrator:

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

If you are acting as a scribe for a brailist, 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, facing page 3]**

Diagram for Question 1



**[braille page 3]**

1. You have a cut-out shape for this question.  
Look at the diagram on the opposite page.  
It shows a triangle on a grid.

Draw the reflection of the triangle in the mirror line.  
Use a ruler.

**[braille page 4]**

2. The table below shows the cost of fruit at a school cafeteria.

| Fruit        | Cost for one |
|--------------|--------------|
| banana ..... | 12p          |
| plum .....   | 23p          |
| apple .....  | 32p          |
| pear .....   | 38p          |

.....

Amir buys two pieces of fruit.  
He pays with a £2 coin.  
He gets £1.50 change.

Write the letters of the two pieces of fruit that Amir buys.

- P. banana
- Q. plum
- R. apple
- S. pear

## **Test administration guidance**

1. Ensure the pupil finds the diagram on the facing page. Provide the pupil with the cut-out shape for this question. A separate copy of the diagram on thermoform and two film copies are provided. A tactile ruler will be needed for this question.

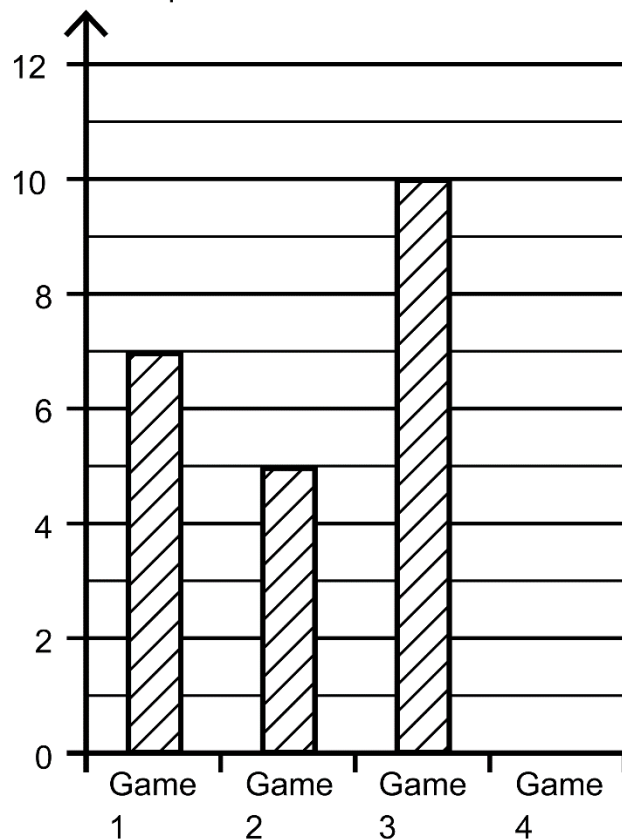
You may mount the separate diagram on a board so that the pupil can use pins and bands or other tactile aids. You should then transcribe the pupil's work on the spare copy of the diagram.

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

[braille page 5, facing page 6]

Diagram for Question 3

Number of points



[braille page 6]

3. Look at the graph on the opposite page.  
Layla plays basketball.  
The graph shows how many points she scored in her first 3 games.

After 4 games, Layla had scored a total of 25 points.  
Complete the graph.  
Use a ruler.

4. The numbers in the sequence below increase by the same amount each time.  
Two numbers are missing.

Write the missing numbers.

-11    \_\_\_\_    1    7    \_\_\_\_    19

### **Test administration guidance**

3. Ensure the pupil finds the diagram on the opposite page. Separate copies of the diagram are provided on thermoform and plastic film. A tactile ruler will be needed for this question.

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.

**[braille page 7]**

5. In this question \_ stands for a missing digit.  
Write the two missing digits to make the multiplication correct.

$$\_54 \times 3 = 7\_2$$

.....

6. Olivia is thinking of a number.

Her number  
is greater than 236  
is less than 245  
has a 3 in the tens' place  
is an even number.

What number is Olivia thinking of?

.....

7. A box holds 40 packets of envelopes.  
Each packet holds 25 envelopes.  
How many envelopes does the box hold?
- .....

**[braille page 8]**

8. Look at the statements below.  
They are labelled P, Q and R.  
Write a whole number to make the statements correct.  
P has been done for you.

P. 18 rounded to the nearest ten is 20

Q. \_\_\_\_\_ rounded to the nearest thousand is 4000

R. \_\_\_\_\_ rounded to the nearest ten thousand is 820 000

.....

9. Look at the four calculations below.

$$4 \div 10$$

$$40 \div 10$$

$$4 \div 100$$

$$40 \div 100$$

Two of these calculations have the same answer.  
Write this answer as a decimal.

.....



## Test administration guidance

5. 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

**[braille page 9]**

10. Look at the numbers below.  
Write the two prime numbers that have a difference of 2

15 17 19 21 23 25

---

11. The table below shows the number of children and adults at a childcare centre.  
Complete the table below, by writing the missing numbers for the blank spaces  
labelled (a) and (b).  
The first row has been done for you.

| Age in<br>years | Number of<br>children | Number<br>of<br>adults | Number<br>of children per<br>adult |
|-----------------|-----------------------|------------------------|------------------------------------|
| 1 and under ... | 12 .....              | 4 .....                | 3                                  |
| 2 or 3 .....    | 20 .....              | (a) .....              | 4                                  |
| 4 or 5 .....    | (b) .....             | 3 .....                | 8                                  |

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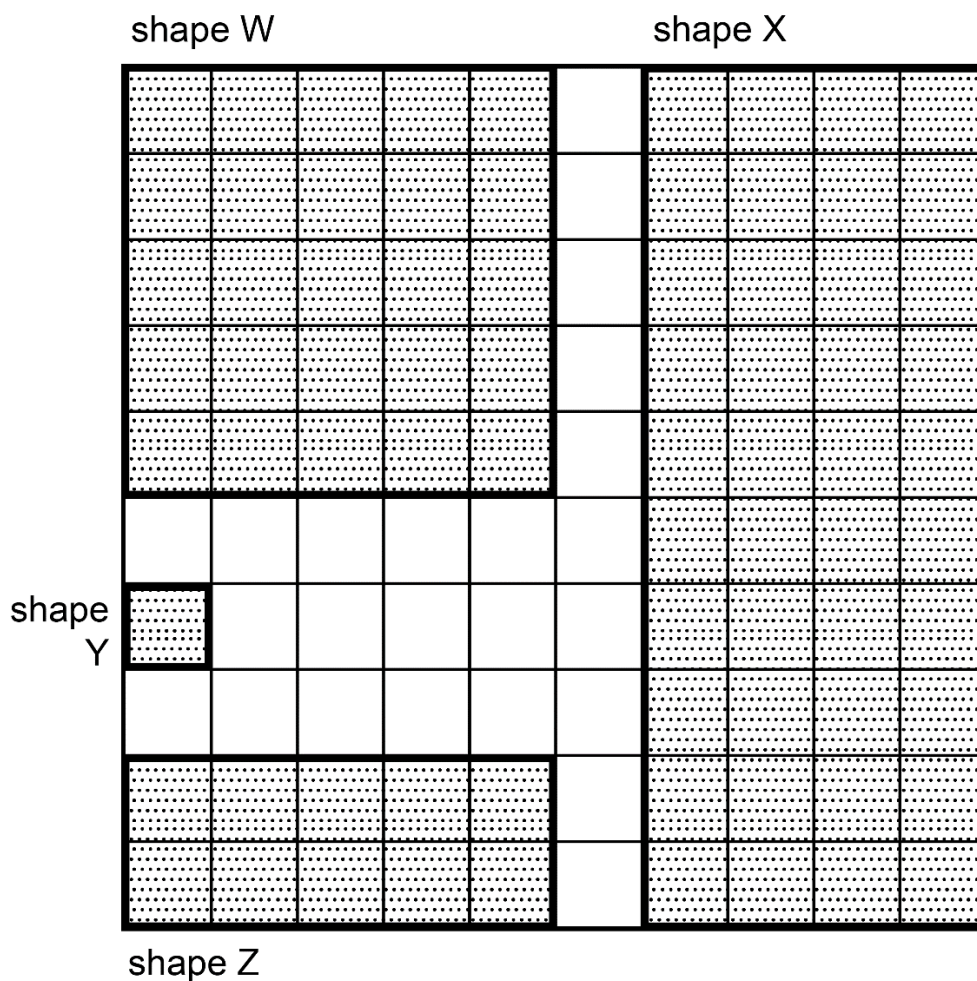
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### **Test administration guidance**

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

[braille page 10, facing page 11]

Diagram for Question 12



[braille page 11]

12. Look at the diagram on the opposite page.  
Shapes W, X, Y and Z cover different fractions of the 10 by 10 square shown in the diagram.

Match each shape to the correct fraction.

- a)  $\frac{1}{100}$  \_\_\_\_\_
- b)  $\frac{1}{4}$  \_\_\_\_\_
- c)  $\frac{2}{5}$  \_\_\_\_\_
- d)  $\frac{1}{10}$  \_\_\_\_\_
- .....

### **Test administration guidance**

12. 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, c before the answer to part c, and d before the answer to part d.  
Ensure the pupil finds the labels for the shapes on the diagram.

**[braille page 12]**

13. You have a model for this question.  
The model is a hexagonal prism.

- a) How many vertices does it have?  
b) How many edges does it have?
- .....

14. A class votes for a captain.  
Three-quarters of the class vote for Sam.  
The remaining 7 pupils vote for Alex.

How many pupils are in the class?

.....

**[braille page 13]**

15. Write the missing number to make the multiplication below correct.

$$3.207 \times 100 = \underline{\hspace{2cm}} \times 10$$

.....

16. Look at the number below.

9 658 214

Write the letters of the statements that are true.

- P. The digit 5 represents 50 000  
Q. The value of the digit 9 is nine hundred thousands.  
R. The digit 6 represents 6 millions.  
S. The value of the digit 2 is twenty tens.
- .....

**[braille page 14]**

17. Chen buys these four items.

670 grams of apples for £1.50  
400 grams of bread for £0.70  
500 grams of butter  
750 grams of cereal for £1.45

Chen pays for the four items with a £10 note.  
The price of the butter is not shown.  
She receives £3.85 change.  
What is the price of the butter?  
Show your method.  
£           

.....

### **Test administration guidance**

13. Provide the pupil with the model for this question. Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

Diagram for Question 18



- What is the total time the school has for breaks and lunchtime in a 5-day week?  
Show your method.
- \_\_\_\_\_ hours \_\_\_\_\_ minutes



### **Test administration guidance**

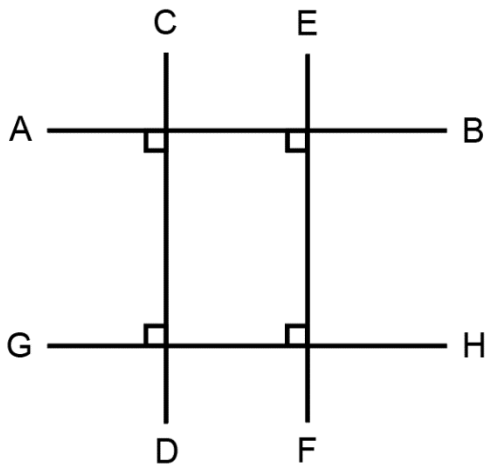
18. Ensure the pupil finds the diagram on the opposite page. Separate copies of the diagram are provided on thermoform and plastic film.

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.

**[braille page 17, facing page 18]**

Diagram for Question 21



**[braille page 18]**

21. Look at the diagram on the opposite page.  
It shows lines AB, GH, CD and EF.  
Four right angles are marked.  
Write the letters of all the correct statements.

- P. AB is parallel to CD
  - Q. GH is parallel to AB
  - R. CD is perpendicular to GH
  - S. EF is perpendicular to CD
- .....

### **Test administration guidance**

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

**[braille page 19]**

22. The table below shows the distance that five friends travel to school each day.

| Name          | Distance (km) |
|---------------|---------------|
| Amina .....   | 1.8           |
| William ..... | 2.4           |
| Layla .....   | 3.2           |
| Chen .....    | 1.6           |
| Dev .....     | 4.5           |

~~~~~

What is the mean distance they travel to school each day?

Show your method.

\_\_\_\_\_ km

23. Mrs Mills has 940 seeds to plant into trays.  
She plants 12 seeds in each tray.  
The last tray is not full.

What fraction of the last tray is filled?

Show your method.

**[braille page 20]**

24. Look at the four numbers below.

40 60 64 100

Use each number once to complete the statements P, Q, R and S.

P. \_\_\_\_\_ is a square number.

Q. \_\_\_\_\_ is a cube number.

R. \_\_\_\_\_ is a common multiple of 4 and 5

S. \_\_\_\_\_ is a common factor of 80 and 120

25.  $3 \times q - p = 2$

(a) Write the value of p when q = 2

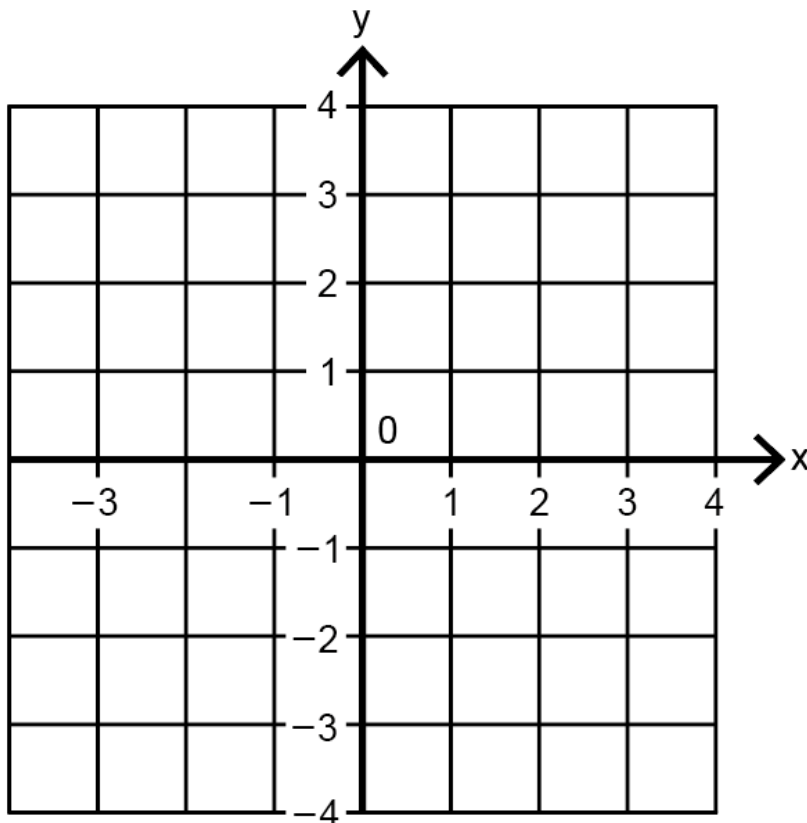
(b) Write the value of q when p = 13

### **Test administration guidance**

24. Remind the pupil that \_ indicates a missing number.  
Encourage the pupil to braille the sentence after each \_ before answering.
25. Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

**[braille page 21, facing page 22]**

Diagram for Question 26



**[braille page 22]**

26. Look at the 3 translations below.  
Write the letters of the translations below that are four units to the left.  
You can use the coordinate grid on the opposite page to help you.

P. from (0, 2) to (4, 2)  
Q. from (4, 3) to (0, 3)  
R. from (1, 2) to (-3, 2)

27. Olivia has two jars of beads.  
The number of beads in Jar A is double the number of beads in Jar B.
- Olivia says,  
25% of the number of beads in Jar A is the same as 50% of the number of beads in Jar B.

Explain why Olivia is correct.

.....  
END OF TEST

### **Test administration guidance**

26. Ensure that the pupil finds the diagram on the opposite page. They can use the diagram to support them in answering the question, if needed. If the pupil uses the grid, ensure they have written the letter of the translations for their answer on their answer paper rather than just marking the grid.  
The numbers  $-2$  and  $-4$  from the x-axis have been omitted from the diagram due to space.

Diagram and film copies for Question 1

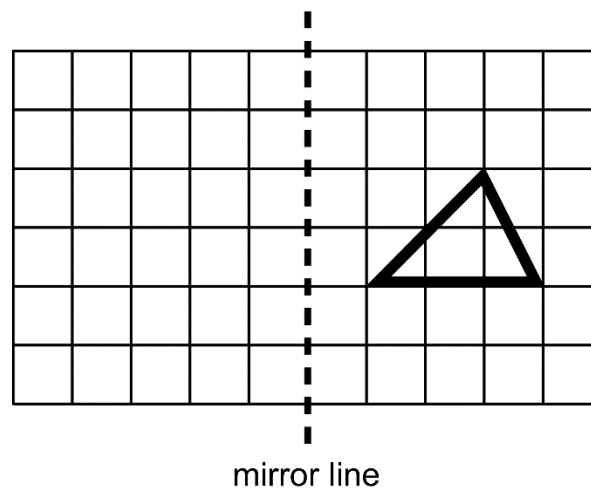


Diagram and film copies for Question 3

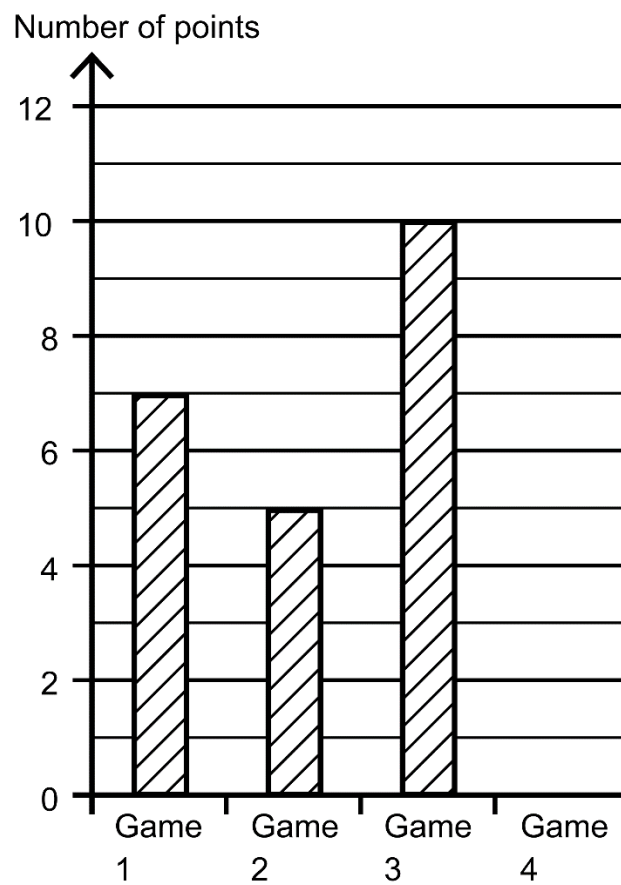
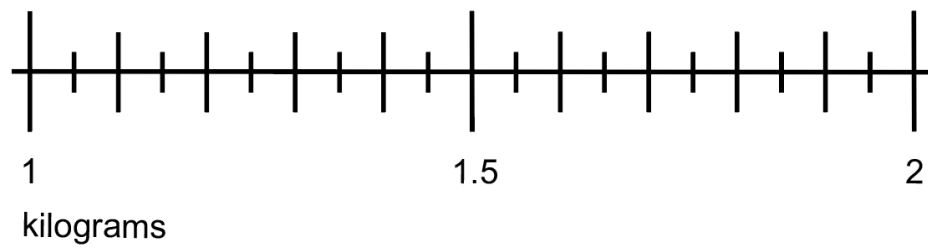




Diagram and film copies for Question 18



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Braille transcript for Paper 2: reasoning

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