

# **Transcription of the Braille Version**

2022 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.

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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]**

1. You have a model of a hexagonal prism for this question.  
How many faces does the prism have?
- .....

2. Steve has six number cards.  
The numbers on his cards are  
3 4 5 6 7 8  
Use all six numbers to complete the three multiplications below.

a)  $24 = \underline{\quad} \times \underline{\quad}$

b)  $28 = \underline{\quad} \times \underline{\quad}$

c)  $30 = \underline{\quad} \times \underline{\quad}$

.....

**[braille page 3]**

3. Olivia buys a banana, an apple and a bag of nuts.  
The banana costs 30p  
The apple costs 45p  
The bag of nuts costs 60p  
She pays with three 50p coins.  
What is her change?  
Show your method.  
 $\underline{\quad}$  p
- .....

4. Look at the list of six decimals below.  
0.3 0.5 0.8 0.03 0.25 0.75  
Write the decimal from the list that is equivalent to the four fractions below.

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

b)  $\frac{3}{10}$

c)  $\frac{3}{4}$

d)  $\frac{3}{100}$

.....

## Test administration guidance

1. Provide the pupil with the model for this question.
2. 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.
4. 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.

**[braille page 4]**

5. Some children vote for their favourite ice-cream flavour.  
Their votes are shown in the table below.

Ice-cream flavour	Number of children
vanilla .....	87
chocolate .....	154
strawberry .....	_____
mint .....	38
total .....	402

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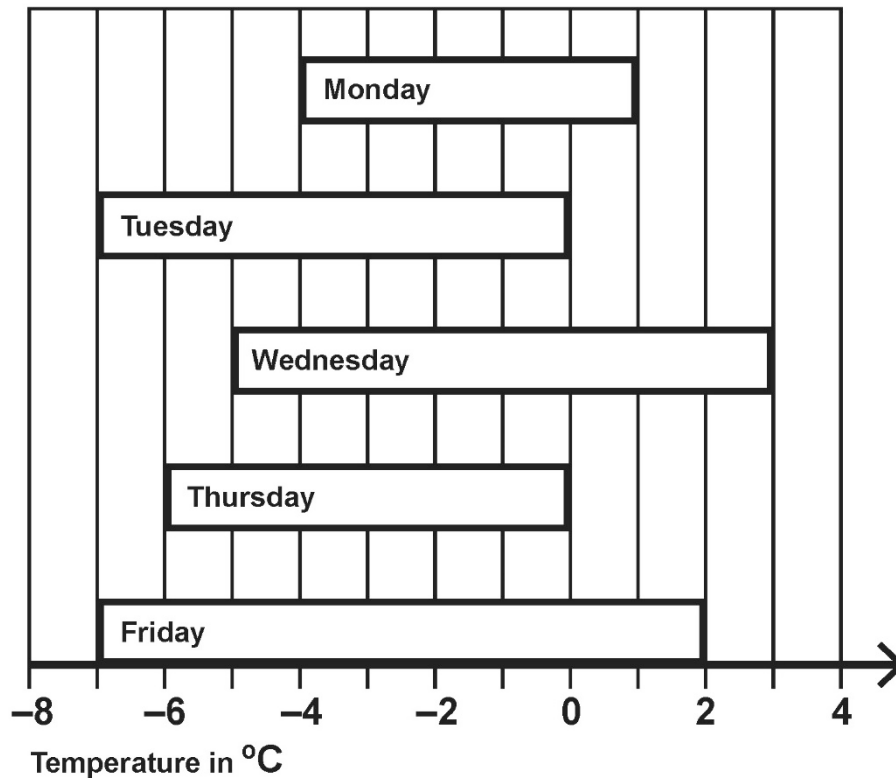
How many children vote for strawberry?

Show your method.

\_\_\_\_\_ children

**[braille page 5, facing page 6]**

Diagram for question 6

**[braille page 6]**

6. The chart on the opposite page shows the range of temperatures each day during one week from Monday to Friday.

a) What was the lowest temperature?

\_\_\_\_\_ °C

b) What was the difference between the highest and lowest temperatures on Wednesday?

\_\_\_\_\_ °C

## Test administration guidance

6. Ensure the pupil finds the diagram on the facing page.  
Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

7. One Saturday afternoon, a total of 234 869 people attended three rugby matches.  
 80 978 people attended match 1  
 72 319 people attended match 2  
 Write how many people attended match 3.  
 Show your method.
- .....

8. a) Round 7546 to the nearest 1000  
 b) Round 7546 to the nearest 100  
 c) Round 7546 to the nearest 10
- .....

**[braille page 7]**

9. Look at the calculation below.

$$1000 \times 416 = 10 \times \underline{\hspace{2cm}}$$

Write the missing number.

.....

10. Adam buys 4 pens and a ruler.  
 He pays £4.75 altogether  
 pen pen pen pen  
 ruler

Jack buys 2 pens.  
 He pays £1.98 altogether.  
 pen pen  
 How much does a ruler cost?  
 Show your method.

.....

11. Ally chooses a whole number.  
 When she multiplies her number by 4  
 the answer is less than 100  
 When she multiplies her number by 5  
 the answer is greater than 100  
 Write a number that Ally could have started with.
- .....

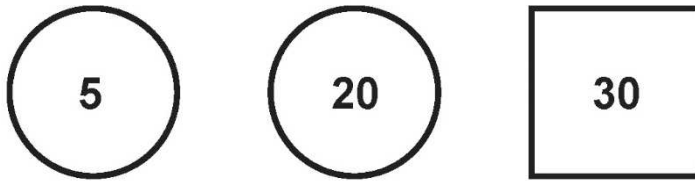


## Test administration guidance

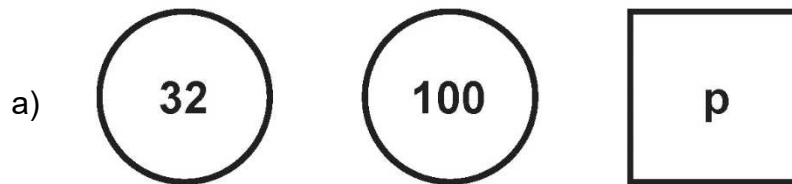
8. Encourage the pupil to braille a before the answer to part a, b before the answer to part b and c before the answer to part c.

**[braille page 8]**

12. Look at the diagram below.

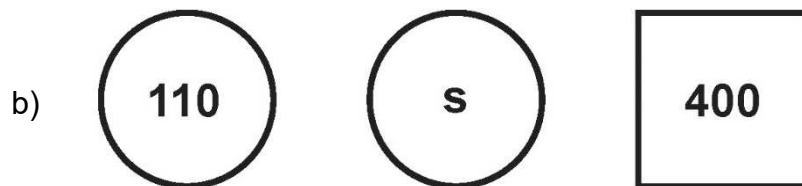


The rule for this diagram is:  
 Find the difference between the numbers in the circles.  
 Double this to make the number in the square.  
 Use the same rule to write the missing numbers below.



Write the value of p

p = \_\_\_\_\_



Write the value of s

s = \_\_\_\_\_

**[braille page 9]**

13. Look at the addition below.

$$\frac{2}{3} + \underline{\hspace{2cm}} = \frac{5}{6}$$

Write the missing fraction.

14. Jack hires a hall for a party.  
 The formula below is used to work out the total cost.

Total cost = £15 booking fee + £12.50 per hour

What is the total cost of hiring the hall from 6 pm until 11 pm?

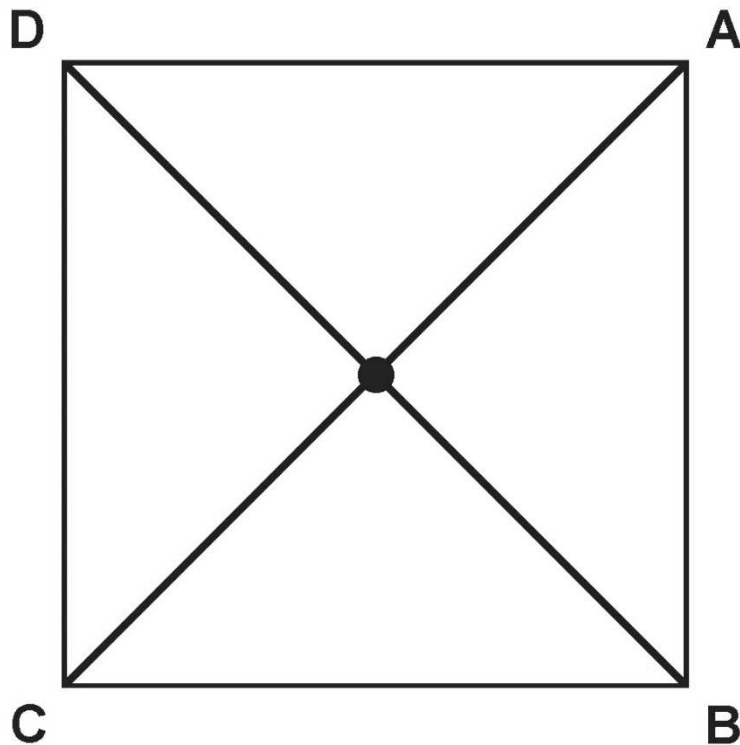
£ \_\_\_\_\_

## Test administration guidance

12. Ensure the pupil understands that p represents a missing number and s represents a different missing number.  
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 15



[braille page 11]

15. Look at the diagram on the opposite page.  
Stefan stands in the centre of this square.

a) Stefan is facing towards B  
He turns anti-clockwise to face A  
What angle does Stefan turn through?  
\_\_\_\_\_ degrees

b) Stefan is now facing towards A  
He turns 3 right angles clockwise.  
Write the letter he faces after the turn.

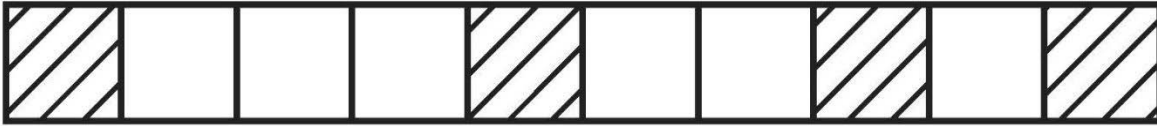
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## Test administration guidance

15. Ensure the pupil finds the diagram on the facing page.  
Encourage the pupil to braille a before the answer to part a, and b before the answer to part b.

**[braille page 12, facing page 13]**

Diagram for question 16

**[braille page 13]**

16. Look at the line of squares on the opposite page.  
Now look at the five fractions below.

$$\frac{1}{4} \quad \frac{2}{5} \quad \frac{4}{10} \quad \frac{6}{10} \quad \frac{40}{100}$$

Write the fractions that represent the shaded part of the line.

17. Kim makes a cuboid using straws.  
She uses 4 straws that are 7.5 cm long.  
She uses 4 straws that are 11 cm long.  
She uses 4 straws that are 8.5 cm long.  
What is the total length of all the straws in her cuboid?  
Show your method.  
\_\_\_\_\_ cm

18. The full price of a T-shirt is £15  
In a sale the price is reduced by 30%  
What is the reduced price?  
Show your method.  
£\_\_\_\_\_

**[braille page 14]**

19. Jack says that when you square a prime number, the answer has only two factors.  
Explain why Jack is not correct.

20. The table below shows how many people finished the New York Marathon in each of the first four decades it was held.

Decade	Total number of people who finished
1 <sup>st</sup> decade .....	24 863
2 <sup>nd</sup> decade .....	170 932
3 <sup>rd</sup> decade .....	282 420
4 <sup>th</sup> decade .....	350 824

.....

What is the mean number of people who finished the marathon per decade?  
Round your answer to the nearest hundred.  
Show your method.

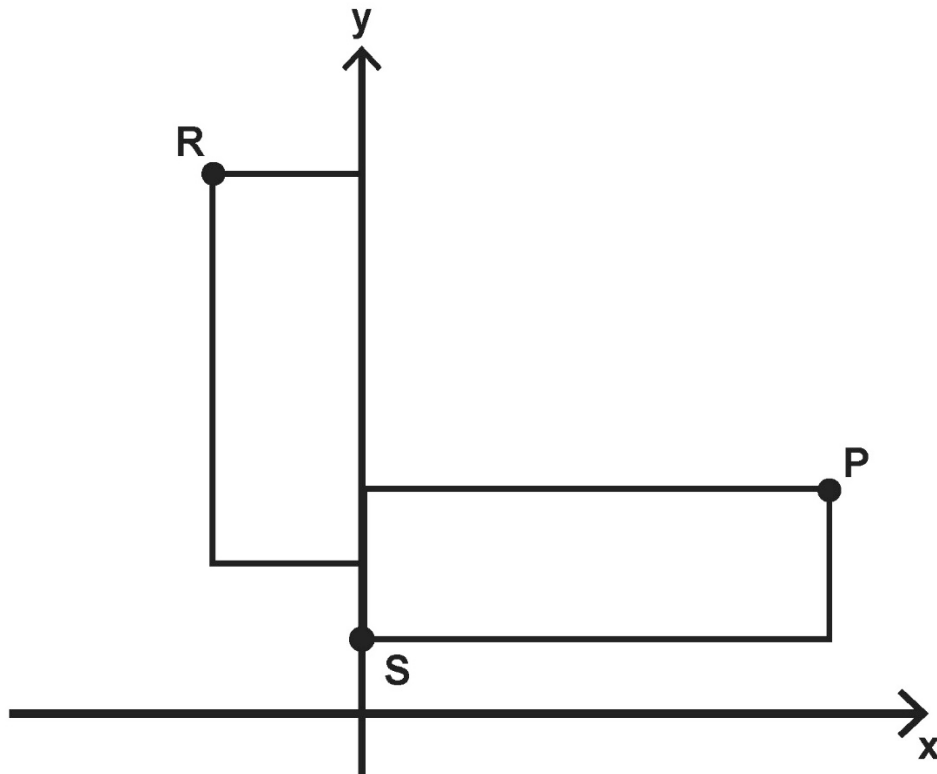
\_\_\_\_\_ people

## Test administration guidance

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

[braille page 15, facing page 16]

Diagram for question 21



[braille page 16]

21. Look at the diagram on the opposite page.  
 It is not to scale.  
 The two rectangles are identical.  
 The length of each rectangle is three times its width.  
 The point R has coordinates  
 $(-2, 8)$   
 The point S has coordinates  
 $(0, 1)$   
 What are the coordinates of point P?  
 $(\quad, \quad)$

.....  
 END OF TEST



## **Test administration guidance**

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

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