

Transcription of the Braille Version

2022 national curriculum tests

Key stage 2

Mathematics

Braille

Paper 2: 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

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. Look at the five numbers below.
They are labelled P Q R S T
P 9 206 499
Q 9 215 300
R 9 206 504
S 9 215 298
T 9 206 909
Write the letter of the greatest number.
-

2. One table can seat 8 people.
How many tables are needed to seat 40 people?
_____ tables
-

3. Write the missing number to make the addition below correct.
 $400\,000 + \text{_____} + 70 = 430\,070$
-

[braille page 3]

4. Children estimated the number of beans in a jar.
The estimates of five children are shown in the table below.

| | | |
|--------|-------|------|
| Amir | | 1310 |
| Olivia | | 1220 |
| Emma | | 1400 |
| John | | 1290 |
| Chen | | 1460 |

.....

The exact number of beans in the jar was 1380

- a) Whose estimate was closest to the exact number?
- b) Whose estimate was furthest from the exact number?
-

Test administration guidance

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

[braille page 4]

5. One tonne is 1000 kilograms.
A truck can carry a load of 2.3 tonnes.
How many kilograms can the truck carry?
_____ kg
-

6. Emma has a 5 litre bag of compost.
She uses 2.75 litres.
How much compost does Emma have left?
_____ litres
-

7. In a race, Ali completes a swim, a run and a bicycle ride.
The swim is $\frac{1}{10}$ of the total distance.
The run is $\frac{3}{10}$ of the total distance.
What fraction of the total distance is the bicycle ride?
-

[braille page 5]

8. Look at the five fractions below.
 $\frac{5}{8}$ $\frac{14}{8}$ $\frac{19}{8}$ $\frac{23}{8}$ $\frac{26}{8}$
Write the improper fraction that is equivalent to $2\frac{3}{8}$
-

9. The pictogram below shows how many DVDs a shop sells in one week.
Key: :: stands for a number.

Mon :: :: ::
Tue :: :: :: :: :: :: :: ::
Wed :: :: :: ::
Thu :: :: :: ::
Fri :: :: :: :: :: :: ::

On Monday, 24 DVDs were sold.
How many DVDs were sold on Friday?

.....

Test administration guidance

9. Ensure the pupil understands the key, without indicating what number is represented by the braille sign ::

[braille page 6]

10. A shop has an offer on cereal:

Buy one box for £1.90
Get the second box for half price.

Ali buys two boxes of cereal.
How much must he pay altogether?
Show your method.
£ _____

.....

11. a) $\frac{3}{10} = \frac{\quad}{20}$
Write the missing value.

- b) $\frac{12}{15} = \frac{4}{\quad}$
Write the missing value.
-

[braille page 7]

12. William has four parcels.
Their masses are shown below.
1.4 kg
1500 g
2 kg
300 g
Write the masses in order, starting with the heaviest.
heaviest _____

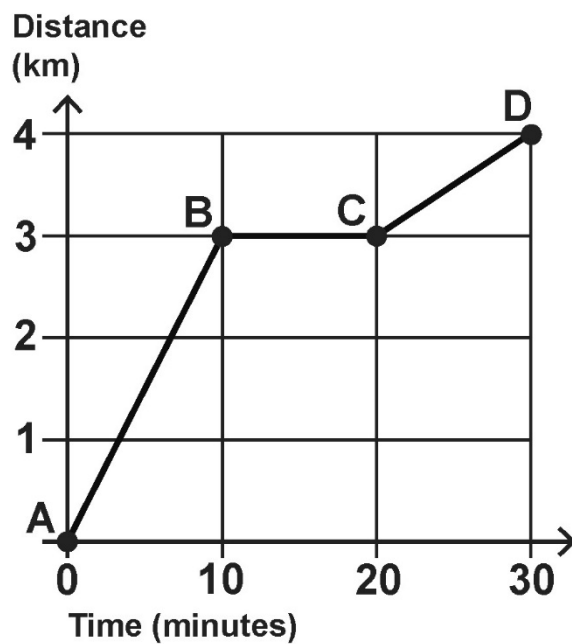
-

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 8, facing page 9]

Diagram for question 13



[braille page 9]

13. Look at the graph on the opposite page.
It shows Dev's bike ride.

Look at the three sentences below.
They are labelled P, Q and R.

- P Dev rests for 10 minutes.
Q Dev cycles 1 km in 10 minutes.
R Dev cycles 3 km in 10 minutes.

Dev's journey is divided into three parts
A to B, B to C and C to D

Write the letter of the correct sentence for each part of Dev's journey.

- a) A to B matches sentence ____
b) B to C matches sentence ____
c) C to D matches sentence ____
-

Test administration guidance

13. Ensure the pupil finds the diagram on the facing 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.

[braille page 10]

14. One 850 ml bottle of squash makes 17 drinks.
How many millilitres of squash are in each drink?
_____ ml
-

15. Look at the three signs below.

= > <

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

- a) $1 \times 2 \times 3$ _____ $1 + 2 + 3$
b) $2 \times 2 \times 2$ _____ $2 + 2 + 2$
c) $1 \times 10 \times 10$ _____ $1 + 10 + 10$
d) $0 \times 10 \times 10$ _____ $0 + 10 + 10$
-

[braille page 11]

16. Look at the five numbers below.

28.07

28.65

28.71

28.75

28.97

Write the numbers that round to 28.7

.....

17. 6 divides into 40 with a remainder of 4

Write one other number that divides into 40 with a remainder of 4

.....

18. A car park has two levels.

The numbers of empty spaces on each level at 10 am are shown below.

Level 2 511

Level 1 268

In this car park, each level has 800 spaces.

What is the total number of cars parked in the car park at 10 am?

Show your method.

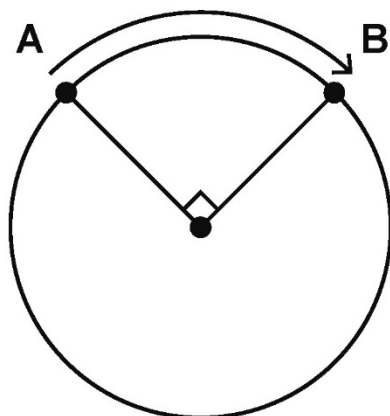
.....

Test administration guidance

15. 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 12, facing page 13]

Diagram for question 19



[braille page 13]

19. Look at the circle on the opposite page.
It is not actual size.
The circumference of this circle is 60 centimetres.
What is the distance around the edge of the circle from A to B?
_____ cm
-

20. There are 432 places at a dance school.
There are two age groups.
The table below shows the number of classes and the number of pupils in each class for each age group at the moment.

| Age in years | Number of classes | Number of pupils in each class |
|--------------|-------------------|--------------------------------|
| 7-12 | 15..... | 16 |
| 13-18 | 10..... | 18 |

.....

How many more pupils can join the dance school?
Show your method.

.....

[braille page 14]

21. In this question \therefore stands for a number and \therefore stands for a different number.
- a) Look at the addition below
 $\therefore + \therefore + \therefore = 48$
Work out the value of \therefore
- b) Look at the addition below
 $\therefore + \therefore + \therefore + \therefore = 92$
Work out the value of \therefore
-

Test administration guidance

19. Ensure the pupil finds the diagram on the facing page and the symbol for a right angle, without explaining that the symbol means 90 degrees.
21. Encourage the pupil to braille a before the answer to part a and b before the answer to part b. You may explain the braille code \therefore and \therefore used for the two different numbers, but do not indicate what numbers the symbols represent.

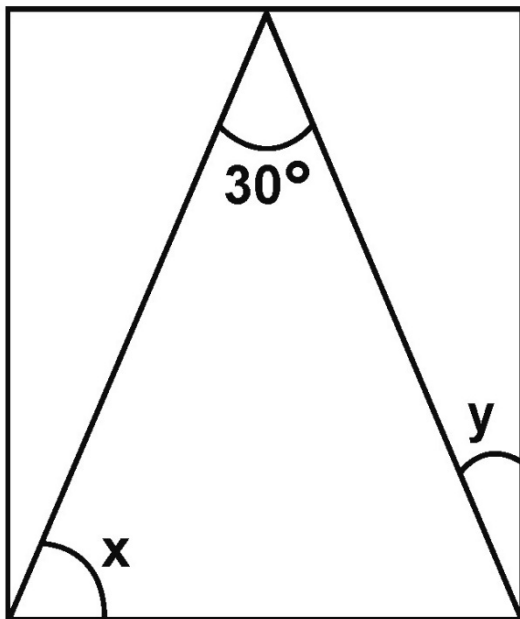
22. You can make green paint by mixing:
250 ml of blue paint
1150 ml of yellow paint.
Stefan wants to make some of this green paint.
He uses 750 ml of blue paint.
How much green paint does he make?
Show your method.
___ ml
-

[braille page 15]

23. Adam has a bag of fruit that weighs 1.25 kilograms.
He takes out a banana.
Now the bag of fruit weighs 1.1 kg
Next, he takes out an orange.
Now the bag weighs 920 g
How much more does the orange weigh than the banana?
Show your method.
___ g
-

[braille page 16, facing page 17]

Diagram for question 24



[braille page 17]

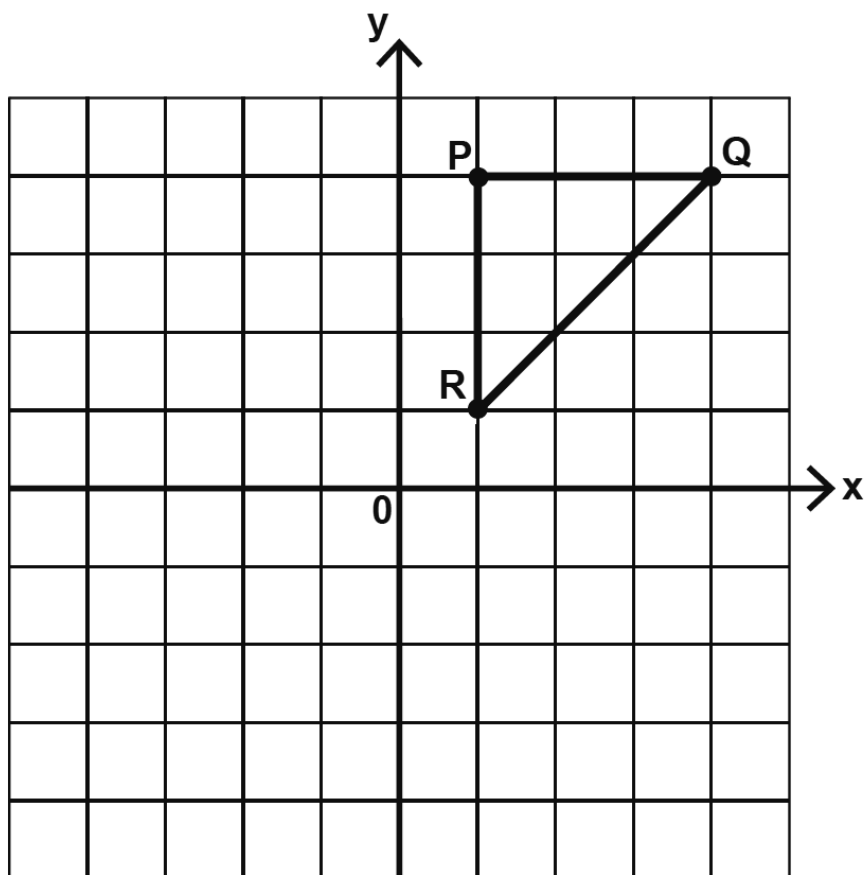
24. Look at the diagram on the opposite page.
It is not to scale.
An isosceles triangle is drawn inside a rectangle.
Calculate the sizes of angles x and y
Show your method.
 $x = \underline{\hspace{1cm}}^\circ$
 $y = \underline{\hspace{1cm}}^\circ$
-

Test administration guidance

24. Ensure the pupil finds the diagram on the facing page.
Encourage the pupil to braille x before the first number of degrees and y before the second number of degrees.

[braille page 18, facing page 19]

Diagram for question 25



[braille page 19]

25. Look at the diagram on the opposite page.
Triangle PQR is drawn on a coordinate grid.
Each square of the grid is 1 unit.
The triangle is translated 6 units down.
Mark the point A that point Q moves to.

The new triangle is then reflected in the y-axis.
Mark the point X that point A moves to.

.....
END OF TEST

Test administration guidance

25. Ensure the pupil finds the diagram on the facing page.
The diagram may be mounted on a board. Pins or other tactile marks may be used to mark the points. You can then use a pen to transcribe the pupil's answer on the diagram.
No tactile aids (i.e. 'blobs', bluetack, wikkisticks) should be sent with the pupil's braille script.
A separate copy of the diagram on thermoform and two film copies are provided.

Braille transcript

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