Transcription of the Braille Version

2017 national curriculum tests
Key stage 2
Mathematics
Braille
Paper 1: arithmetic

[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 30 minutes for this test, plus your additional time allowance.

Work as quickly and as carefully as you can.

All answers should be given as a single value.

For questions expressed as common fractions or mixed numbers, you should give your answers as common fractions or mixed numbers.

_____ has been used in some questions to indicate a missing number.

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.

[braille page 2]

Marks

In this test, long division and long multiplication questions are worth two marks each. You will be awarded two marks for a correct answer.

You may get one mark for showing your method.

All other questions are worth one mark each.

[Note to test administrator

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

:···········:

[braille page 3]

1. 40 + 1000 = _____

....

2. 707 + 1818 = _____

....

3. $\frac{4}{6} + \frac{3}{6}$ = _____

....

4. 505 ÷ 1 = _____

....

5. 345 − 60 = _____

....

6. 2.7 + 3.014 = _____

....

7. _____ = 4500 + 600

....

8. 8 × 33 = _____

....

[braille page 4]

9. $72 \div 9 = \underline{\quad}$

....

10. $167 \times 4 = \underline{\quad}$

....

11. $4912 - 824 = \underline{\quad}$

....

12. $\dfrac{62}{100} - \dfrac{38}{100} = \underline{\quad}$

....

13. $\underline{\quad} - 100 = 1059$

....

14. $50 + (36 \div 6) = \underline{\quad}$

....

15. $\dfrac{4}{6} \times \dfrac{3}{5} = \underline{\quad}$

....

16. $30 \times 40 = \underline{\quad}$

....

17. $581 \div 7 =$ ____

....

18. $0.04 \div 10 =$ ____

....

19. $2345 \times 1000 =$ ____

....

20.   Work out
       $714 \div 17 =$ ____
       Show your method.

....

21. $9 - 3.45 =$ ____

....

22.   Work out
       $4781 \times 23 =$ ____
       Show your method.

....

23. $\frac{3}{4} - \frac{3}{8} =$ ____

....

[braille page 6]

24. Work out
    418 × 46 = _____
    Show your method.

....

25. 37.8 − 14.671 = _____

....

26. $\frac{1}{4} + \frac{1}{5} + \frac{1}{10}$ = _____

....

27. $\frac{4}{5} \div 4$ = _____

....

28. $\frac{5}{8} \div 2$ = _____

....

29. 45% of 460 = _____

....

30. $2\frac{1}{3} + \frac{5}{6}$ = _____

....

31. 7% of 500 = _____

....

32. $\dfrac{2}{6} - \dfrac{1}{8} =$ _____

.... p7

33. $0.9 \times 200 =$ _____

....

34. $15\% \times 1000 =$ _____

....

35. $1\dfrac{1}{2} \times 57 =$ _____

....

36. Work out
    $2242 \div 59 =$ _____
    Show your method.

....

::::::::::::
END OF TEST

Key stage 2

Mathematics

Administering the braille (UEB) version of the key stage 2 mathematics test Paper 1: arithmetic

WEDNESDAY 10 MAY 2017

CONFIDENTIAL: This pack must be kept secure and unopened until the start of the test on **Wednesday 10 May 2017**.

Early opening, up to 1 hour before the test starts, is permissible only if access to the contents is needed to make adaptations to meet individual pupils' needs.

Please ensure you have read and understood the 2017 modified test administration guidance before opening this pack.

Pack contents:

- An overview of the braille (UEB) version of the key stage 2 mathematics test Paper 1: arithmetic (overleaf)

- 1 copy of the braille tactile version of the key stage 2 mathematics test Paper 1: arithmetic in braille (UEB)

- 1 copy of the printed transcript of the braille (UEB) version of the key stage 2 mathematics test Paper 1: arithmetic

For test administration

2017 Key stage 2 mathematics test

The key stage 2 mathematics test consists of 3 papers. The papers must be administered in order. Pupils can have a break between the papers. However, test packs for each test must not be opened until the pupils are in the test room ready to complete the test.

The scheduled day for the administration of Papers 1 and 2 is Wednesday 10 May. The scheduled day for the administration of Paper 3 is Thursday 11 May.

Paper 1: arithmetic

The following information explains how to administer the braille (UEB) version of the key stage 2 mathematics test Paper 1: arithmetic. There is additional information on GOV.UK about administering braille tests to pupils. If you have any questions, you should check with your headteacher or key stage 2 test co-ordinator before you administer the test.

Please make sure you follow these instructions correctly to ensure the test is properly administered. Failure to administer the test correctly could result in a maladministration investigation at the school.

Format

- This component of the test consists of a single test booklet in braille (UEB).
- There is a printed transcript of the braille (UEB) booklet to help administrators.
- Pupils will have 30 minutes to complete the test, plus up to 100% additional time.
- You should refer to the printed transcript rather than the standard test questions when administering this test.

Equipment

Pupils will need the equipment specified below:

- a suitable way of recording their answers, such as a brailler, blue / black pen, dark pencil or word processor (i.e. the usual way they write in class)
- braille paper (if the pupil is brailling their responses)
- ruler.

Pupils may use the following equipment, if this is normal classroom practice:

- technological and electronic aids, including low-vision aids such as closed-circuit television or JOCR scanners.

Pupils are not allowed:

- calculators
- tracing paper
- other mathematical equipment, such as angle measurers or mirrors.

Assistance

- You must ensure nothing you say or do during a test could be interpreted as giving pupils an advantage, e.g. indicating an answer is correct or incorrect, or suggesting the pupil looks at an answer again.
- If a pupil requests it, a question may be read to the pupil on a one-to-one basis.
- If reading to a pupil, you can only read words and numbers but not mathematical symbols. This is to ensure pupils are not given an unfair advantage by having the function inadvertently explained by reading its name.

The example below illustrates how to deal with a common situation.

Q. Do I need to multiply when I calculate 95% of 240?
A. I can't tell you, but think hard and try to remember. We can talk about it after the test.

Guidance for specific questions

No additional guidance is needed to administer the braille (UEB) version of Paper 1: arithmetic.

Before the test begins

Review the list of pupils with any particular individual needs, e.g. pupils who are allowed additional time or who may need a transcript made at the end of the test.

Ensure you know how to administer any access arrangements correctly. Please refer to the 2017 key stage 2 access arrangements guidance.

It is important that the pupils' names on their tests match the names on the test attendance register. Check with your test co-ordinator whether any pupil in your group is known by a different name in school, or has changed their name since pupil registration. This is so you can write the correct name on their test paper.

Check there are enough administrators to maintain adequate supervision for the test. You should consider the possibility of at least one test administrator needing to leave the room with a pupil.

Ensure you understand how to deal with issues during the tests.

How to deal with issues during the test

It is impossible to plan for every scenario. Whatever action you take, pupil safety must always be your first consideration.

In the following circumstances you will need to stop the test either for an individual pupil or for the whole cohort:

- test papers are incorrectly collated or the print is illegible
- an incorrect test has been administered
- a fire alarm goes off
- a pupil is unwell
- a pupil needs to leave the test room during the tests
- a pupil is caught cheating.

If you need to stop the test:

- make a note of the time
- make sure pupils are kept under test conditions and that they are supervised
- if pupils have to leave the room, ensure they don't talk about the test
- speak to your test co-ordinator or a senior member of staff for advice on what to do next
- consider contacting the national curriculum assessments helpline on 0300 303 3013 for advice.

You should brief your headteacher on how the incident was dealt with, once the test is over.

What to do at the start of the test

Check that pupils don't have any materials or equipment that may give them extra help.

Check that pupils don't have mobile phones or other disruptive items.

Ensure each pupil that needs it has a braille (UEB) copy of mathematics Paper 1: arithmetic.

Ensure the following is written on the cover of the pupil's paper (or on every page of braille paper used if this is how the pupil is answering): pupil's name provided during pupil registration, your school's name and DfE number.

Tell the pupils the duration of the test.

What to say at the start of the test

It is important to brief pupils fully at the start of each test. You should use this script to introduce mathematics Paper 1: arithmetic.

This is the key stage 2 mathematics Paper 1: arithmetic.

Open your test to page 1. I will read the instructions to you. (Read the instructions for braille pages 1 and 2 from the transcript to the pupils.)

*You must **not** use a calculator to answer any questions in this test.*

You have 30 minutes for this test, plus your additional time allowance.

Work as quickly and as carefully as you can.

All answers should be given as a single value.

For questions expressed as common fractions or mixed numbers, you should give your answers as common fractions or mixed numbers.

___ has been used in some questions to indicate a missing number.

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.

Now turn to page 2.

In this test, long division and long multiplication questions are worth 2 marks each. You will be awarded 2 marks for a correct answer. You may get 1 mark for showing your method.

All other questions are worth 1 mark each.

If you want to change your answer, put a line through the response you don't want the marker to read or use a series of 'for' signs (full 6 dot cells) with your brailler.

Remember to check your work carefully.

If you have any questions during the test, you should put your hand up and wait for someone to come to you. Remember, I can't help you answer any of the test questions.

You must not talk to each other.

Are there any questions you want to ask me now?

I will tell you when you have 5 minutes left. I will tell you when the test is over and to stop working.

You may now start the test.

What to do at the end of the test

If any pupil needs a transcript, complete it with the pupil at the end of the test under test conditions. Particular care should be taken to ensure accurate transcriptions are made and that pupils' answers are not corrected or amended. Pupils' brailled answers should not be transcribed onto the standard version of the test.

Ensure you inform your senior member of staff / test co-ordinator if you have made a transcript, or if a pupil has used a scribe, word processor or other electronic or technical device. This is so that they can complete the appropriate online notification.

Make sure you have collected every test paper. Return them immediately to the senior member of staff who is responsible for collating the tests.

Do not look at, review or amend pupils' answers in any way (unless it is necessary to make a transcript). If you tamper with or make changes to pupils' answers, it will be considered maladministration and results could be annulled.

Do not keep or photocopy test papers for any reason.

Transcription of the Braille Version
2017 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.

:············:

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.

Diagram for question 1

Key:
■ walk to school
☐ don't walk to school

Number of children (y-axis: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100)

Year 2   Year 6
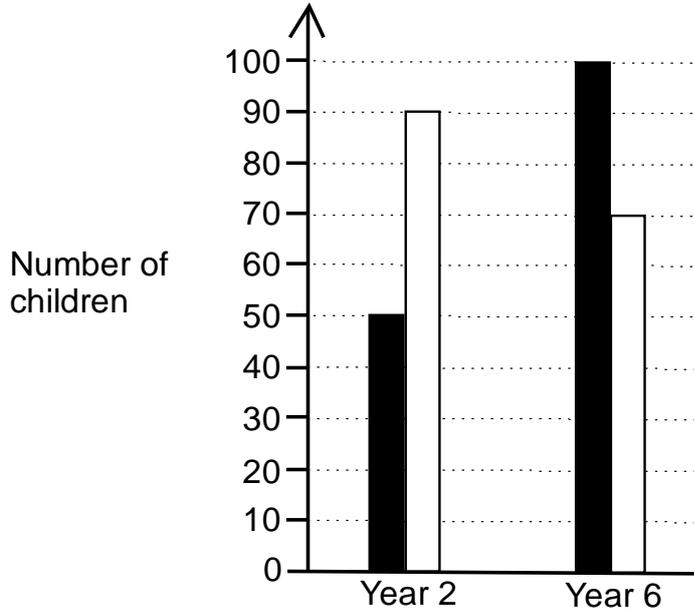
[braille page 3]
1. William asks the children in Year 2 and Year 6 if they walk to school.
   The graph on the opposite page shows the results.

   a) Altogether, how many children don't walk to school?

   b) How many more Year 6 children than Year 2 children walk to school?
   ....

2. Look at the five numbers below.
   9700 907 9007 970 9070
   Write the number that is 10 times greater than nine hundred and seven.
   ....

3. a) $9 \times$ ____ $= 63$
   Write the missing number.

   b) ____ $\times 8 = 48$
   Write the missing number.
   ....

Test administration guidance

1. Ensure the pupil finds the graph on the facing page.
    Encourage the pupil to braille a) before the answer to part a and b) before the answer to part b.

3. Encourage the pupil to braille a) before the answer to part a and b) before the answer to part b.

[braille page 4]

4.   The table below shows the heights of three mountains.

Mountain   Height in metres
Mount Everest 8848
Mount Kilimanjaro 5895
Ben Nevis 1344

,,,,,,,,,,,,,
      How much higher is Mount Everest than the combined height of the other two mountains?
      Show your method.
      _____ m

....

[braille page 5]

5.   Look at the table below.

Number   1000 more
3500 4500
85 .... p
q 9099
r 15250

,,,,,,,,,,,,
      Complete the table by writing the values of p q and r
      p = _____
      q = _____
      r = _____

....

6.   Look at the four numbers below.
      1.9 0.96 1.253 0.328
      Write these numbers in order of size, starting with the smallest.
      smallest _____

                    _____

                    _____

                    _____

....

[braille page 6]

7.   a) 60 months = _____ years
      Write the missing number.

      b) 72 hours = _____ days
      Write the missing number.

      c) 84 days = _____ weeks
      Write the missing number.

....

Test administration guidance

7. 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.

8. At the start of June, there were 1793 toy cars in the shop.
    During June,
    8728 more toy cars were delivered
    9473 toy cars were sold.
   How many toy cars were left in the shop at the end of June?
    Show your method.

....

[braille page 7, facing page 8]
Diagram for question 9

P
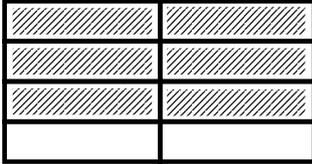
Q
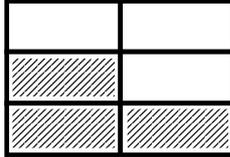
R
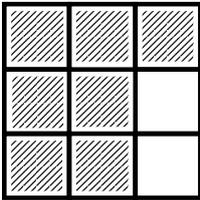
S
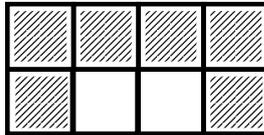
[braille page 8]
9. Look at the four shapes on the opposite page.
    They are labelled P Q R and S

    Write the letters of the TWO shapes that have $\frac{3}{4}$ shaded.

....

10. a) Round 84516 to the nearest 10

    b) Round 84516 to the nearest 100

    c) Round 84516 to the nearest 1000

....

Test administration guidance

9. Ensure the pupil finds the four shapes on the facing page.

10. 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.

11. The rule below shows the time it takes to cook a chicken.

    Cooking time = 20 minutes plus an extra 40 minutes for each kilogram

    a) How many minutes will it take to cook a 3 kg chicken?
    _____ minutes

    b) What is the mass of a chicken that takes 100 minutes to cook?
    _____ kg
....

12. You have a hexagonal prism for this question.

    a) How many faces does it have?

    b) How many vertices does it have?
....
13. Ally and Jack buy some stickers.
    Ally buys a pack of 12 stickers for £10.49
    Jack buys 12 single stickers for 99p each.
    How much more does Jack pay than Ally?
    Show your method.
    £ _____
....

14. Amina planted some seeds.
    For every 3 seeds Amina planted, only 2 seeds grew.
    Altogether 12 seeds grew.
    How many seeds did Amina plant?
....

15. The year below is written in Roman numerals.
    MMVI
    Write the year in figures.
....
16. How many degrees are there in one and a half turns?
    _____ °
....

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

12. Provide the pupil with the solid shape 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 17
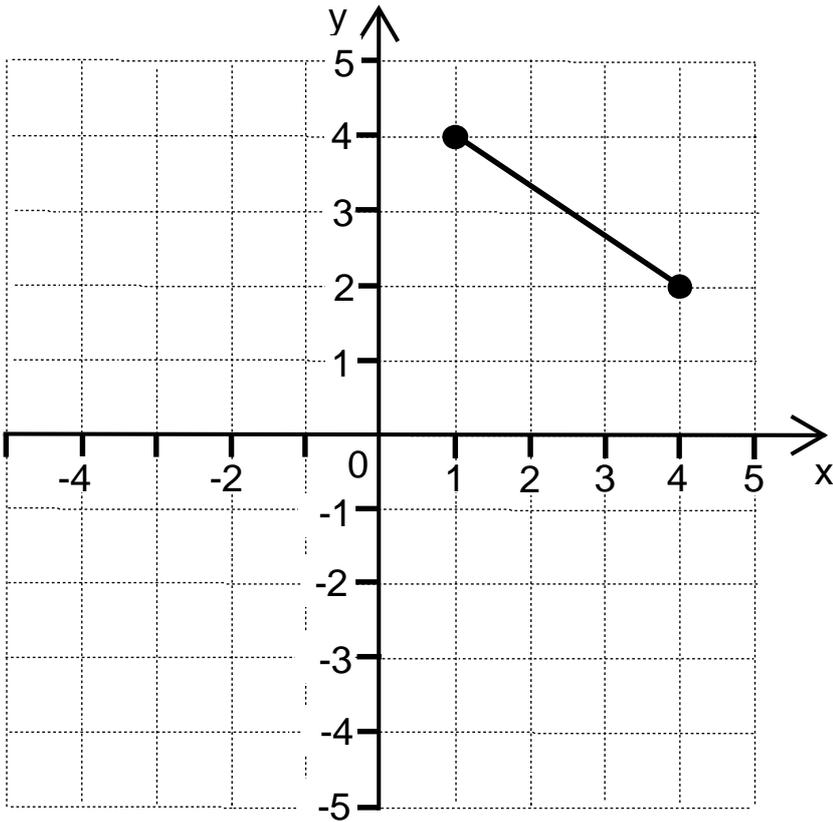
17. Look at the diagram on the opposite page.
    It shows a line joining two points on a coordinate grid.
    The vertices of a quadrilateral have these coordinates.
    (1, 4) (4, 2) (2, −3) (−2, 4)
    One side of the quadrilateral has been drawn on the grid.
    Complete the quadrilateral.
    Use the separate copy of the diagram.
    Use a ruler.

....

18. A cat sleeps for 12 hours each day.
    50% of its life is spent asleep.
    A koala sleeps for 18 hours each day.
    What percentage of the koala's life is spent asleep?
    _____ %

....

17. 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 (ie 'blobs', bluetack, wikkisticks) should be sent with the pupil's braille script.

19. Amina posts three large letters.
    The postage costs the same for each letter.
    She pays with a £20 note.
    Her change is £14.96
    What is the cost of posting ONE letter?
    Show your method.
    £ _____

....

20. Adam says that 0.25 is smaller than $\frac{2}{5}$

    Explain why he is correct.

....

21. On a map, 1 cm represents 20 km.
    The distance between two cities is 250 km.
    On the map, what is the distance between the two cities?
    Show your method.
    _____ cm

....

Diagram for question 22
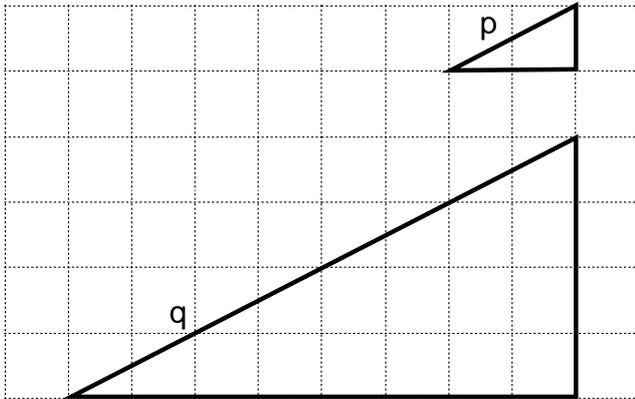
22. Look at the diagram on the opposite page.
    Two triangles are shown on a square grid.
    The triangles are similar and right-angled.
    Write the ratio of side p to side q
    p : q = _____ : _____

....

Test administration guidance

22. Ensure the pupil finds the two shapes in the diagram on the facing page.
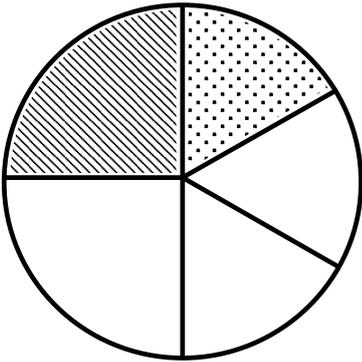
23. Look at the circle on the opposite page.

In the circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.

What fraction of the whole circle is NOT shaded?
Show your method.

....…..............

END OF TEST

One braillon copy and film copies of diagram for question 17
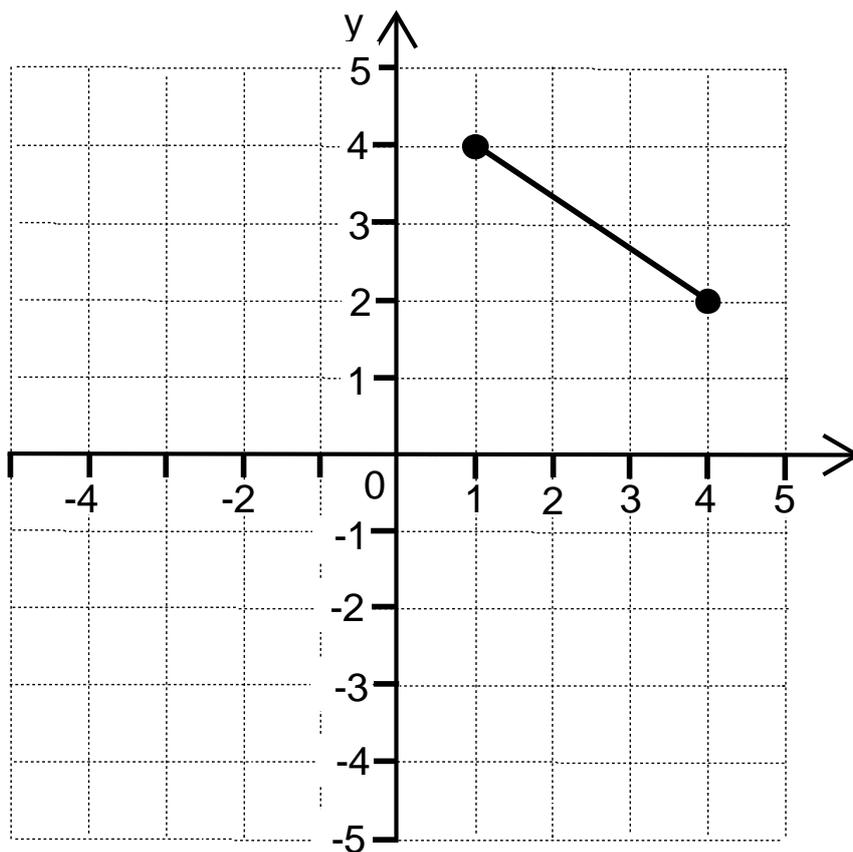
Test administration guidance

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

Blank page

Blank page

Key stage 2

Mathematics

Administering the braille (UEB) version
of the key stage 2 mathematics test
Paper 2: reasoning

WEDNESDAY 10 MAY 2017

CONFIDENTIAL: This pack must be kept secure and unopened
until the start of the test on **Wednesday 10 May 2017**.
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only if access to the contents is needed to make adaptations to
meet individual pupils' needs.
Please ensure you have read and understood the 2017 modified
test administration guidance before opening this pack.

Pack contents:

- An overview of the braille (UEB) version of the key stage 2 mathematics test
  Paper 2: reasoning (overleaf)

- 1 copy of the tactile version of braille (UEB) version of the key stage 2 mathematics test
  Paper 2: reasoning

- 1 copy of the printed transcript of the braille (UEB) version of the key stage 2 mathematics test
  Paper 2: reasoning

- 1 model pack

For test administration

2017 Key stage 2 mathematics test

The key stage 2 mathematics test consists of 3 papers. The papers must be administered in order. Pupils can have a break between the papers. However, test packs for each test must not be opened until the pupils are in the test room ready to complete the test.

The scheduled day for the administration of Papers 1 and 2 is Wednesday 10 May.
The scheduled day for the administration of Paper 3 is Thursday 11 May.

Paper 2: reasoning

The following information explains how to administer the braille (UEB) version of the key stage 2 mathematics test Paper 2: reasoning. There is additional information on GOV.UK about administering braille tests to pupils. If you have any questions, you should check with your headteacher or key stage 2 test co-ordinator before you administer the test.

Please make sure you follow these instructions correctly to ensure the test is properly administered. Failure to administer the test correctly could result in a maladministration investigation at the school.

Format

- This component of the test consists of a single test booklet in braille (UEB).
- There are copies of a diagram at the back of the booklet.
- There is a printed transcript of the braille booklet to help administrators.
- Pupils will have 40 minutes to complete the test, plus up to 100% additional time.
- You should refer to the printed transcript rather than the standard test questions when administering this test.

Equipment

Pupils will need the equipment specified below:

- a suitable way of recording their answers, such as a brailler, blue / black pen, dark pencil or word processor (i.e. the usual way they write in class)
- braille paper (if the pupil is brailling their responses)
- a suitable tactile ruler to measure centimetres
- a suitable tactile protractor or angle measurer.

The pupil may use the following, if this is normal classroom practice:

- pins and bands to help record responses on diagrams
- stylus and floppy mat to help with drawing on plastic film.

Pupils may use the following equipment, if this is normal classroom practice, provided they only give word-for-word translations:

- bilingual dictionaries or electronic translators
- bilingual word lists
- monolingual English electronic spell checkers
- technological and electronic aids, including low-vision aids such as closed-circuit television or JOCR scanners.

Pupils are not allowed:

- calculators
- tracing paper.

Assistance

- You must ensure nothing you say or do during a test could be interpreted as giving pupils an advantage, e.g. indicating an answer is correct or incorrect, or suggesting the pupil reviews an answer again.
- If the pupil requests it, a question may be read to the pupil on a one-to-one basis.
- If reading to a pupil, you can read words and numbers but not mathematical symbols. This is to ensure pupils are not given an unfair advantage by having the function inadvertently explained by reading its name.
- At a pupil's request, you may point to parts of the test paper such as charts, diagrams, statements and equations, but you must not explain the information or help the pupil by interpreting it.

The examples below illustrate how to deal with some common situations.

Q. What does 'quadrilateral' or '>' or '<' mean?
A. I can't tell you, but think hard and try to remember. We can talk about it after the test.

Q. What is '0.6'?
A. That's nought point six.

If any everyday context or words related to a question are unfamiliar to a pupil, you may show them related objects, or describe the related context.

Guidance for specific questions

Q12. There is a model that should be provided to pupils for this question.

Before the test begins

Have the model needed for question 12 to hand.

Detach the copies of the diagram from the back of the booklet so they are to hand when the pupils get to question 17.

Review the list of pupils with any particular individual needs, e.g. pupils who are allowed additional time or who may need a transcript made at the end of the test.

Ensure you know how to administer any access arrangements correctly. Please refer to the 2017 key stage 2 access arrangements guidance.

It is important that the pupils' names on their tests match the names on the test attendance register. Check with your test co-ordinator whether any pupil in your group is known by a different name in school, or has changed their name since pupil registration. This is so you can write the correct name on their test paper.

Check there are enough administrators to maintain adequate supervision for the test. You should consider the possibility of at least one test administrator needing to leave the room with a pupil.

Ensure you understand how to deal with issues during the tests.

How to deal with issues during the test

It is impossible to plan for every scenario. Whatever action you take, pupil safety must always be your first consideration.

In the following circumstances you will need to stop the test either for an individual pupil or for the whole cohort:

- test papers are incorrectly collated or the print is illegible
- an incorrect test has been administered
- a fire alarm goes off
- a pupil is unwell
- a pupil needs to leave the test room during the tests
- a pupil is caught cheating.

If you need to stop the test:

- make a note of the time
- make sure pupils are kept under test conditions and that they are supervised
- if pupils have to leave the room, ensure they don't talk about the test
- speak to your test co-ordinator or a senior member of staff for advice on what to do next
- consider contacting the national curriculum assessments helpline on 0300 303 3013 for advice.

You should brief your headteacher on how the incident was dealt with, once the test is over.

What to do at the start of the test

Check that pupils don't have any materials or equipment that may give them extra help.

Check that pupils don't have mobile phones or other disruptive items.

Ensure each pupil who needs it has a braille (UEB) copy of mathematics Paper 2: reasoning.

Ensure the following is written on the cover of the pupil's paper (or on every page of braille paper used if this is how the pupil is answering): pupil's name provided during pupil registration, your school's name and DfE number.

Tell the pupils the duration of the test.

What to say at the start of the test

It is important to brief pupils fully at the start of each test. You should use this script to introduce mathematics Paper 2: reasoning.

This is the key stage 2 mathematics Paper 2: reasoning.

Open your test booklet to page 1. I will read the instructions to you. (Read the instructions from braille page 1 of the transcript of the test paper to the pupils.)

*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 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.

If you want to change your answer, put a line through the response you don't want the marker to read or use a series of 'for' signs (full 6 dot cells) with your brailler.

Remember to check your work carefully.

If you have any questions during the test, you should put your hand up and wait for someone to come to you. Remember, I can't help you answer any of the test questions.

You must not talk to each other.

Are there any questions you want to ask me now?

I will tell you when you have 5 minutes left. I will tell you when the test is over and to stop working.

You may now start the test.

What to do at the end of the test

If any pupil needs a transcript, complete it with the pupil at the end of the test under test conditions. Particular care should be taken to ensure accurate transcriptions are made and that pupils' answers are not corrected or amended. Pupils' brailled answers should not be transcribed onto the standard version of the test.

Ensure you inform your senior member of staff / test co-ordinator if you have made a transcript, or if a pupil has used a scribe, word processor or other electronic or technical device. This is so they can complete the appropriate online notification.

Make sure you have collected every test paper. Return them immediately to the senior member of staff who is responsible for collating the tests.

Do not look at, review or amend pupils' answers in any way (unless it is necessary to make a transcript). If you tamper with or make changes to pupils' answers, it will be considered maladministration and results could be annulled.

Do not keep or photocopy test papers for any reason.

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OGL

Transcription of the Braille Version

2017 national curriculum tests
Key stage 2
Mathematics
Braille
Paper 3: 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.

:::::::::::

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

1. Write the missing number to make the division below correct.
    $75 ÷ \_\_\_\_ = 7.5$

···

2. A group of friends earns £80 by washing cars.
    They share the money equally.
    They get £16 each.
    How many friends are in the group?

···

3. In this question -- stands for a 2-digit number.
    - stands for a 1-digit number.
    Chen uses the digits 5 and 6 and 9
    She uses each digit only once.
    She makes a 2-digit number and a 1-digit number.
    She multiplies them together.
    Her answer is a multiple of 10
    What could Chen's multiplication be?
    -- ✕ -

···

Test administration guidance

There is no specific guidance for questions 1 – 3.

Diagram for question 4
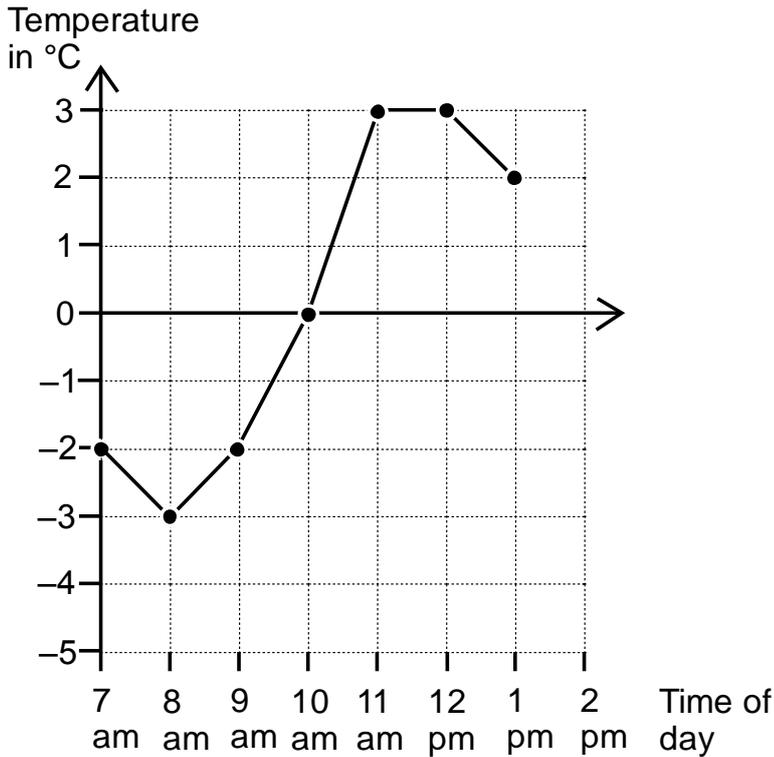
Temperature
in °C

4. Look at the graph on the opposite page.
    The graph shows the temperature in °C from 7 am to 1 pm on a cold day.

    a) How many degrees warmer was it at 1 pm than at 7 am?
    _____ °C

    b) At 2 pm the temperature was 4 degrees lower than at 1 pm.
    What was the temperature at 2 pm?
    _____ °C

....

5. The children at Farmfield School are collecting money for charity.
    Their target is to collect £360
    So far they have collected £57.73
    How much more money do they need to reach their target?
    £ _____

....

Test administration guidance

4. Ensure the pupil finds the graph on the facing page.
    Encourage the pupil to braille a) before the answer to part a and b) before the answer to part b.

6.   The timetable below is for train journeys from London to Paris.

Leaves London   Arrives Paris
12:01 .... 15:22
12:25 .... 15:56
14:01 .... 17:26
14:31 .... 17:53
15:31 .... 18:53

,,,,,,,,,,,,,
        William wants to travel to Paris by train.
        He needs to arrive in Paris by 5:30 pm.
        Write the latest time that William can leave London.
        _____ : _____

....
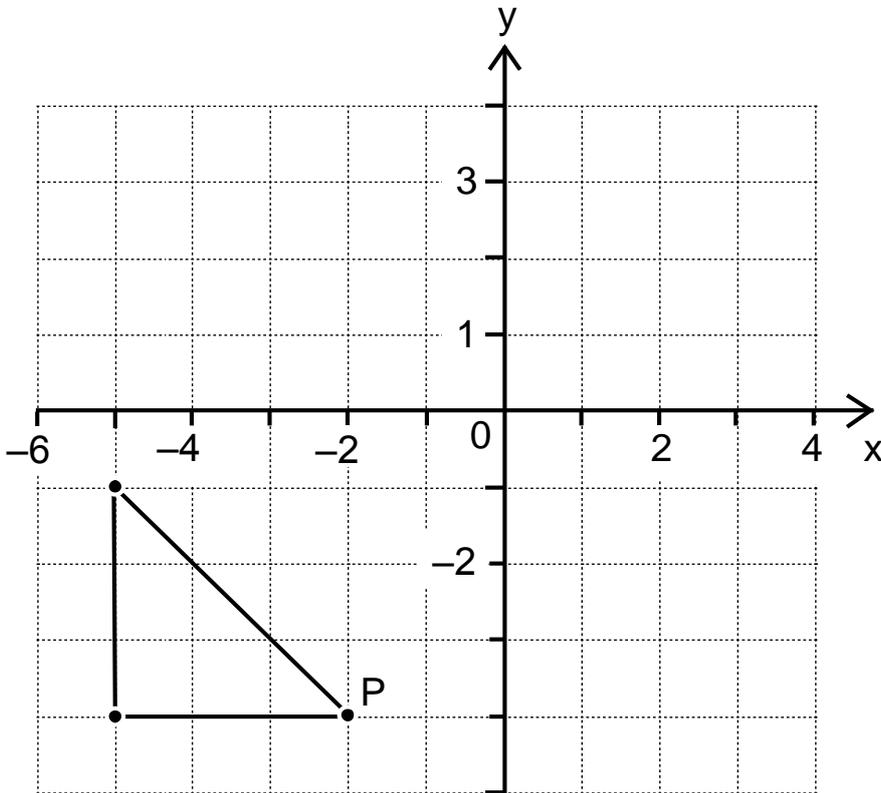
Diagram for question 7

7.   Look at the diagram on the opposite page.
        A triangle is drawn on a coordinate grid.
        The triangle is translated 6 right and 5 up.
        Mark the new position of the point labelled P
        Use the separate copy of the diagram.

....

Test administration guidance

7. Teachers may mount the separate diagram on a board so that the pupil can use a pin or any other tactile aid to mark the new position of P or the new position of P can be marked on a film copy of the diagram.

    Teachers should then transcribe pupil's mark on the diagram.

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

8.   Write three factors of 30 that are NOT factors of 15

      ____

      ____

      ____
....

[braille page 8]

9.   Look at the morning timetable below for Chen's class this week.

Time   09:00-   10:30-   11:00-
            10:30   11:00   12:00
Mon .... Maths .... Break ..... English
Tue .... English ..... Break ..... Maths
Wed ...... Maths .... Break ..... Science
Thur ...... English ..... Break ..... Maths
Fri .... Maths .... Break ..... English

                                    ,,,,,,,,,,,,
      What is the total number of hours for English on this timetable?
      ____ hours
....

10.   A bottle contains 568 millilitres of milk.
      Jack pours out half a litre.
      How much milk is left?
....

[braille page 9]

11.   A bicycle wheel has a diameter of 64 cm.
      What is the radius of the bicycle wheel?
      ____ cm
....

12.   White balloons are sold in bags of 24
      Red balloons are sold in bags of 12
      Adam buys 6 bags of white balloons.
      Chen buys 3 bags of red balloons.
      Adam says that he has four times as many balloons as Chen.
      Explain why Adam is correct.
....

Test administration guidance

There is no specific guidance for questions 8 – 12.

Diagram for question 13

P

Q

R

S
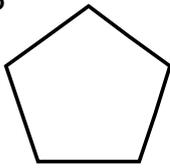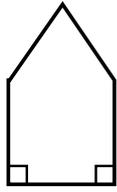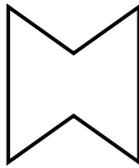
13. Look at the four shapes on the opposite page.
    They are labelled P Q R and S
    Write the letter of the PENTAGON with exactly four acute angles.
....

14. 3 pineapples cost the same as 2 mangoes.
    pineapple pineapple pineapple
    mango mango
    One mango costs £1.35
    How much does one pineapple cost?
    Show your method.
    £ _____
....

Test administration guidance

13. Ensure the pupil finds the four shapes on the facing page.

[braille page 12, facing page 13]
Diagram for question 15

Shape 1 ◯

Shape 2
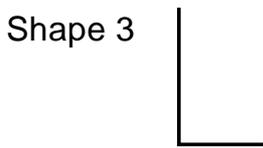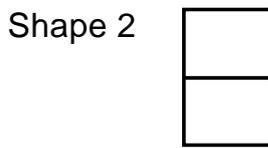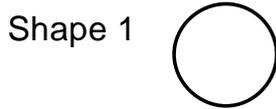
Shape 3

Shape 4

[braille page 13]
15. Look at the shapes on the opposite page.
     Write the number of the shape that has both parallel and perpendicular lines.
     Shape _____

....

16. There are 2400 leaflets in a box.
     William and Ally take 450 leaflets each.
     Adam and Chen share the rest of the leaflets equally.
     How many leaflets does Adam get?
     Show your method.

....
[braille page 14]
17. Look at the four pairs of numbers below.

     a) $1\frac{1}{2}$ 1.2

     b) $1\frac{1}{4}$ 1.3

     c) $1\frac{5}{100}$ 1.4

     d) $1\frac{3}{5}$ 1.5

     For each pair write the number that is greater.

....

Test administration guidance

15. Ensure the pupil finds the four shapes on the facing page.

17. Encourage the pupils 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.

18. A square number and a prime number have a total of 22

a) What is the square number?

b) What is the prime number?

....

[braille page 15]

19. Dev thinks of a whole number.
He multiplies it by 4
He rounds his answer to the nearest 10
The result is 50
Write all the possible numbers that Dev could have started with.

....

[braille page 16, facing page 17]

Diagram for question 20
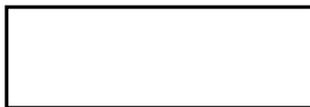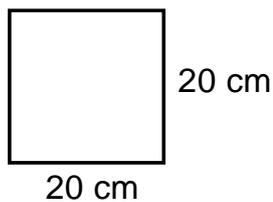
20 cm

20 cm

[braille page 17]

20. A square tile measures 20 cm by 20 cm.
A rectangular tile is 3 cm longer and 2 cm narrower than the square tile.
A square and a rectangle are shown on the opposite page.
They are not actual size.
What is the difference in area between the two tiles?
Show your method.
____ cm^2

....

21. The numbers in the sequence below increase by the same amount each time.

____ 1 $1\frac{5}{8}$ $2\frac{1}{4}$ ____

Write the two missing numbers.

....

Test administration guidance

18. Encourage the pupil to braille a) before the answer to part a and b) before the answer to part b.

20. Ensure the pupil finds the two shapes on the facing page.

Diagram for question 22

Not to scale

< w >< ─────── 34 cm ─────── >

< w >< ──── >< ── 18 cm ── >< w >
9 cm
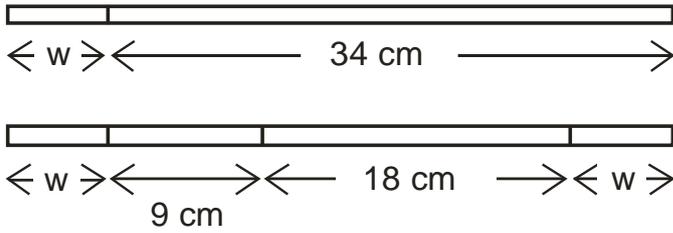
22.   Look at the diagram on the opposite page.
       It shows two sticks, made of different lengths.
       Each stick has the same total length. Each length w is the same.
       Calculate the length w
       _____ cm
....

23.   The table below shows a pattern of number pairs.

a   b
1 9
2 19
3 29
4 39

                                        ,,,,,,,,,,,,,
       Complete the rule for the number pattern.
       b = _____ × a − _____
....
24.   The volume of a cuboid is 216 cubic centimetres.
       It is 4 cm high.
       It is 6 cm wide.
       What is its length?
       Show your method.
       _____ cm
....
                              END OF TEST

Test administration guidance

22.   Ensure the pupil finds the two diagrams on the facing page.

One braillon copy and film copies of diagram for question 7
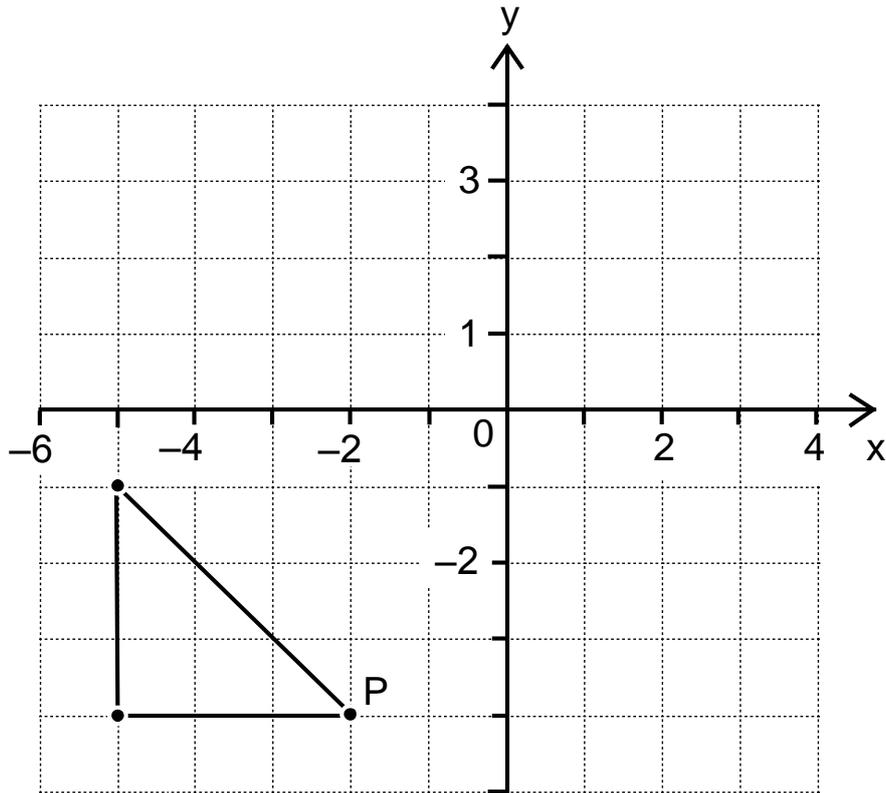
Key stage 2

Mathematics

Administering the braille (UEB) version
of the key stage 2 mathematics test
Paper 3: reasoning

THURSDAY 11 MAY 2017

CONFIDENTIAL: This pack must be kept secure and unopened
until the start of the test on **Thursday 11 May 2017**.

Early opening, up to 1 hour before the test starts, is permissible
only if access to the contents is needed to make adaptations to
meet individual pupils' needs.

Please ensure you have read and understood the 2017 modified
test administration guidance before opening this pack.

Pack contents:

- An overview of the braille (UEB) version of the key stage 2 mathematics test
  Paper 3: reasoning (overleaf)

- 1 copy of the braille (UEB) tactile version of the key stage 2 mathematics test
  Paper 3: reasoning in braille (UEB)

- 1 copy of the printed transcript of the braille (UEB) version of the key stage 2
  mathematics test Paper 3: reasoning

For test administration

2017 Key stage 2 mathematics test

The key stage 2 mathematics test consists of 3 papers. The papers must be administered in order. Pupils can have a break between the papers. However, test packs for each test must not be opened until the pupils are in the test room ready to complete the test.

The scheduled day for the administration of Paper 3 is Thursday 11 May.

Paper 3: reasoning

The following information explains how to administer the braille (UEB) version of the key stage 2 mathematics test Paper 3: reasoning. There is additional information on GOV.UK about administering braille tests to pupils. If you have any questions, you should check with your headteacher or key stage 2 test co-ordinator before you administer the test.

Please make sure you follow these instructions correctly to ensure the test is properly administered. Failure to administer the test correctly could result in a maladministration investigation at the school.

Format

- This component of the test consists of a single test booklet in braille (UEB).
- There are copies of a diagram at the back of the booklet.
- There is a printed transcript of the braille booklet to help administrators.
- Pupils will have 40 minutes to complete the test, plus up to 100% additional time.
- You should refer to the printed transcript rather than the standard test questions when administering this test.

Equipment

Pupils will need the equipment specified below:

- a suitable way of recording their answers, such as a brailler, blue / black pen, dark pencil or word processor (i.e. the usual way they write in class)
- braille paper (if the pupil is brailling their responses)
- a suitable tactile ruler to measure centimetres
- a suitable tactile protractor or angle measurer.

The pupil may use the following, if this is normal classroom practice:

- pins and bands to help record responses on diagrams
- stylus and floppy mat to help with drawing on plastic film.

Pupils may use the following equipment, if this is normal classroom practice, provided they only give word-for-word translations:

- bilingual dictionaries or electronic translators
- bilingual word lists
- monolingual English electronic spell checkers
- technological and electronic aids, including low-vision aids such as closed-circuit television or JOCR scanners.

Pupils are not allowed:

- calculators
- tracing paper.

Assistance

- You must ensure nothing you say or do during a test could be interpreted as giving pupils an advantage, e.g. indicating an answer is correct or incorrect, or suggesting the pupil reviews an answer again.
- If the pupil requests it, a question may be read to the pupil on a one-to-one basis.
- If reading to a pupil, you can read words and numbers but not mathematical symbols. This is to ensure pupils are not given an unfair advantage by having the function inadvertently explained by reading its name.
- At a pupil's request, you may point to parts of the test paper such as charts, diagrams, statements and equations, but you must not explain the information or help the pupil by interpreting it.

The examples below illustrate how to deal with some common situations.

Q. What does 'quadrilateral' or '>' or '<' mean?
A. I can't tell you, but think hard and try to remember. We can talk about it after the test.

Q. What is '0.6'?
A. That's nought point six.

If any everyday context or words related to a question are unfamiliar to a pupil, you may show them related objects or describe the related context.

Guidance for specific questions

No additional guidance is needed to administer the braille (UEB) version of Paper 3: reasoning.

Before the test begins

Detach the copies of the diagram from the back of the booklet so they are to hand when the pupils get to question 7.

Review the list of pupils with any particular individual needs, e.g. pupils who are allowed additional time or who may need a transcript made at the end of the test.

Ensure that you know how to administer any access arrangments correctly. Please refer to the 2017 key stage 2 access arrangements guidance.

It is important that the pupils' names on their tests match the names on the test attendance register. Check with your test co-ordinator whether any pupil in your group is known by a different name in school, or has changed their name since pupil registration. This is so you can write the correct name on their test paper.

Check there are enough administrators to maintain adequate supervision for the test. You should consider the possibility of at least one test administrator needing to leave the room with a pupil.

Ensure you understand how to deal with issues during the tests.

How to deal with issues during the test

It is impossible to plan for every scenario. Whatever action you take, pupil safety must always be your first consideration.

In the following circumstances, you will need to stop the test either for an individual pupil or for the whole cohort:

- test papers are incorrectly collated or the print is illegible
- an incorrect test has been administered
- a fire alarm goes off
- a pupil is unwell
- a pupil needs to leave the test room during the test
- a pupil is caught cheating.

If you need to stop the test:

- make a note of the time
- make sure pupils are kept under test conditions and that they are supervised
- if pupils have to leave the room, ensure they don't talk about the test
- speak to your test co-ordinator or a senior member of staff for advice on what to do next
- consider contacting the national curriculum assessments helpline on 0300 303 3013 for advice.

You should brief your headteacher on how the incident was dealt with, once the test is over.

What to do at the start of the test

Check that pupils don't have any materials or equipment that may give them extra help.

Check that pupils don't have mobile phones or other disruptive items.

Ensure each pupil that needs it has a braille copy (UEB) of mathematics Paper 3: reasoning.

Ensure the following is written on the cover of the pupil's paper (or on every page of braille paper used if this is how the pupil is answering): pupil's name provided during pupil registration, your school's name and DfE number.

Tell the pupils the duration of the test.

What to say at the start of the test

It is important to brief pupils fully at the start of each test. You should use this script to introduce mathematics Paper 3: reasoning.

This is the key stage 2 mathematics Paper 3: reasoning.

Open your test booklet to page 1. I will read the instructions to you. (Read the instructions from braille page 1 of the transcript of the test paper to the pupils.)

*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.

If you want to change your answer, put a line through the response you don't want the marker to read or use a series of 'for' signs (full 6 dot cells) with your brailler.

Remember to check your work carefully.

If you have any questions during the test, you should put your hand up and wait for someone to come to you. Remember, I can't help you answer any of the test questions.

You must not talk to each other.

Are there any questions you want to ask me now?

I will tell you when you have 5 minutes left. I will tell you when the test is over and to stop working.

You may now start the test.

What to do at the end of the test

If any pupil needs a transcript, complete it with the pupil at the end of the test, under test conditions. Particular care should be taken to ensure accurate transcriptions are made and that pupils' answers are not corrected or amended. Pupils' brailled answers should not be transcribed onto the standard version of the test.

Ensure you inform your senior member of staff / test co-ordinator if you have made a transcript, or if a pupil has used a scribe, or word processor or other electronic or technical device. This is so they can complete the appropriate online notification.

Make sure you have collected every test paper. Return them immediately to the senior members of staff who are responsible for collating the tests.

Do not look at, review or amend pupils' answers in any way (unless it is necessary to make a transcript). If you tamper with or make changes to pupils' answers, it will be considered maladministration and results could be annulled.

Do not keep or photocopy test papers for any reason.

Standards
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Agency

2017 national curriculum tests
Key stage 2

**Mathematics
Amendments to the mark schemes (AMS)**

Braille

Standards
& Testing
Agency

Introduction

This guidance details the amendments made to the mark schemes for questions which have been adapted, or replaced, in the braille version of the key stage 2 mathematics test materials.

This guidance must be used in conjunction with the standard version of the key stage 2 mathematics mark schemes. Refer to the standard mark schemes when marking the braille test papers unless an alternative is given in this guidance.

Amendments to the mark scheme

Amendments to the standard test mark schemes are only provided where amendments to a question are such that the question cannot be marked using the standard test mark scheme.

Amendments to the mark schemes are not provided where the only change has been to further divide the question into subsections or where the layout of the question is different.

The mark schemes have been amended in some respects for the following questions:

Paper 1	20, 22, 24 and 36.
Paper 2	1, 3, 5, 6, 7, 9, 10, 12 and 17.
Paper 3	4, 6, 7, 13, 15, 17, 18, 21 and 24.

General guidance to be applied throughout the braille papers

- You should make every effort to understand what the pupil has written in an answer, without reading into the answer anything that the pupil did not intend.

- Some pupils with visual impairment find it difficult to get their answers across clearly. It may take you longer to read their answers. Apply the mark schemes, but be sympathetic to their difficulties.

- Pupils with visual impairment find it difficult to draw accurately. Often thick pens or pencils are used by these pupils. You should make every effort to be fair in marking these questions and take into account what appears to be the pupil's intention.

- Unless otherwise indicated in this document, there should be an increased tolerance level for all drawing and measuring. In general, pupils will only be expected to measure lengths to the nearest 0.5cm and angles to the nearest 5°.

- Any unambiguous indication of the correct answer should be credited.

- Some braille questions are asked differently to the standard version, but the differences are sufficiently small that you should still be able to apply the standard mark scheme, for example, pupils are asked to write rather than circle the answer.

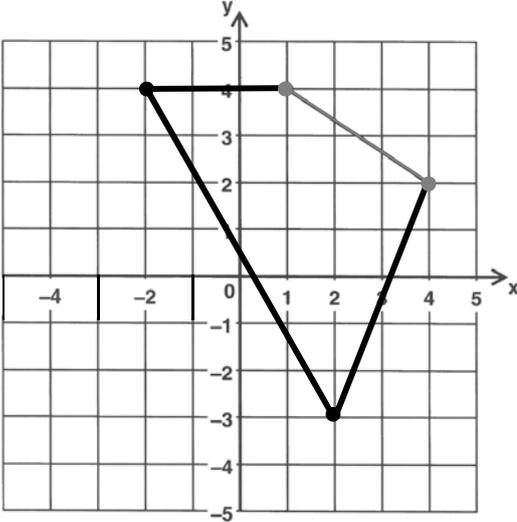## Amendments to mark schemes for Paper 1: arithmetic

Please use the standard mark schemes to mark Paper 1: arithmetic.

For questions 20, 22, 24 and 36 the standard mark schemes expect a 'formal method' for long multiplication or long division. If the answer is incorrect, visually impaired pupils should be credited the method mark if they have used **any** appropriate method with no more than **ONE** arithmetic error; a formal method is not required. Working must be carried through to reach a final answer for the award of **ONE** mark.

Amendments to mark schemes for Paper 2: reasoning

Qu.	Requirement	Mark	Additional guidance
1a	160	**1m**	
1b	50	**1m**	
3a	7	**1m**	Both parts must be answered correctly for the award of **ONE** mark.
3b	6		
5	Award **TWO** marks for p, q, and r correct: p = 1,085 q = 8,099 r = 14,250 If the answer is incorrect, award **ONE** mark for two correct values.	**Up to 2m**	
6	Numbers in order as shown: 0.328 0.96 1.253 1.9	**1m**	Ignore any additional numbers, provided the given numbers are correctly ordered.

Qu.	Requirement	Mark	Additional guidance
7a	Award **TWO** marks for three values correct: 5	Up to 2m	
7b	3		
7c	12 If the answer is incorrect, award **ONE** mark for two correct values.		
9	P **AND** S	1m	Letters may be given in either order.
10a	Award **TWO** marks for three values correct as shown: 84,520	Up to 2m	
10b	84,500		
10c	85,000 If the answer is incorrect, award **ONE** mark for two correct values.		
12a	8	1m	
12b	12	1m	

Qu.	Requirement	Mark	Additional guidance
17	Quadrilateral completed as shown:	**1m**	Accept inaccuracies in drawing provided the intention is clear. Accept points correctly plotted, without connecting lines drawn.

Amendments to mark schemes for Paper 3: reasoning

Qu.	Requirement	Mark	Additional guidance
4a	4	**1m**	Do **not** accept -4 or 4-
4b	-2	**1m**	Do **not** accept 2-
6	14:01	**1m**	Accept 14:01 **AND** 17:26 both written provided no other times are also written. **Do not** accept only the arrival time 17:26 written.
7	Point (4, 1) marked	**1m**	Accept slight inaccuracies in drawing provided the intention is clear. Accept triangle drawn and/or three vertices correctly marked at (1, 1), (1, 4) and (4, 1) provided no other vertices are marked.
13	R	**1m**	Accept alternative unambiguous positive indications, e.g. shape R marked on tactile diagram.

Qu.	Requirement	Mark	Additional guidance
15	(Shape) 2	**1m**	Accept alternative unambiguous positive indications, e.g. E marked on tactile diagram.
	Award **TWO** marks for all four parts answered correctly as shown:	**Up to 2m**	
17a	$1\frac{1}{2}$		Accept equivalent decimal numbers e.g. 1.5
17b	1.3		Accept equivalent fractions, e.g. $1\frac{3}{10}$
17c	1.4		Accept equivalent fractions, e.g. $1\frac{4}{10}$
17d	$1\frac{3}{5}$		Accept equivalent decimals, e.g. 1.6
	If the answer is incorrect, award **ONE** mark for any three parts answered correctly.		
18a	9	**1m**	Do **not** accept 3^2
18b	13		
21a	$\frac{3}{8}$	**1m**	Accept equivalent fractions or an **exact** decimal equivalent, e.g. 21a) 0.375 for $\frac{3}{8}$
21b	$2\frac{7}{8}$ or $\frac{23}{8}$	**1m**	21b) 2.875 for $2\frac{7}{8}$

Qu.	Requirement	Mark	Additional guidance
24	Award **TWO** marks for the correct answer of 9 If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g. • 216 = 4 × 6 × ? **OR** • 216 ÷ 6 = 36 • 36 ÷ 4	**Up to 2m**	Answer need not be obtained for the award of **ONE** mark.

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If you have any queries regarding these test materials contact the national curriculum assessment helpline on 0300 303 3013 or email assessments@education.gov.uk