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LEVELS
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2003

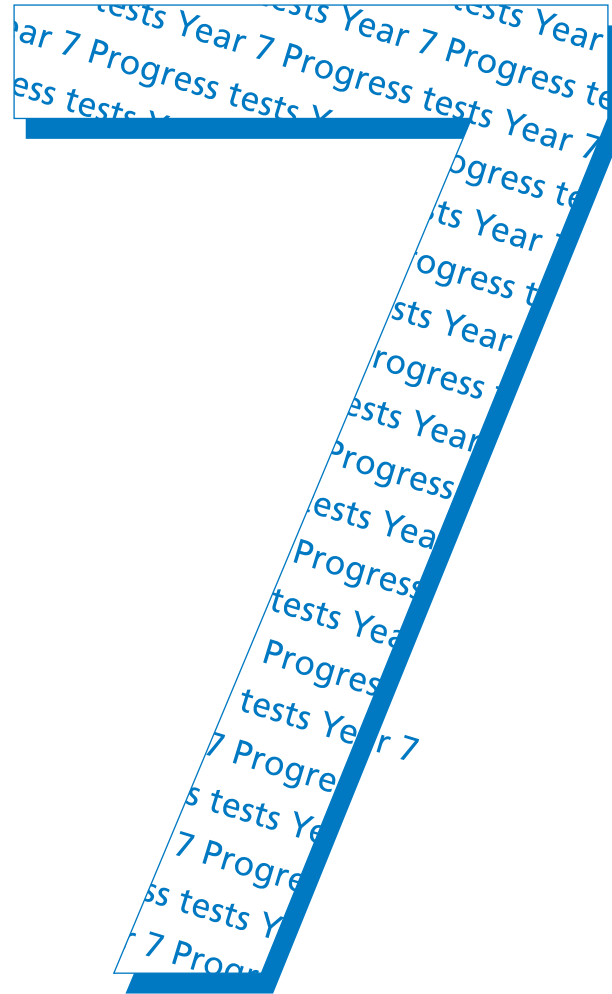
The question-specific information in the teacher's guide must be treated as **CONFIDENTIAL** and must not be used to inform the preparation of pupils before the tests.

Year 7 progress test in mathematics

Teacher's guide

This booklet is provided for teachers who will be supervising the administration of the written mathematics and mental mathematics tests.

2003



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Introduction

These notes are written for teachers who are supervising the administration of the 2003 year 7 progress written mathematics and mental mathematics tests. Part A (pages 2–8) applies to the written tests only, that is Papers 1 and 2. Part B (pages 9–11) applies to the mental mathematics test only.

Part A: written papers

The notes on the written papers are given in two sections.

Section 1 provides general and subject-specific information on supervising the tests and giving guidance to pupils. Section 2 deals with special arrangements, and therefore only needs to be read, (in addition to Section 1), by teachers who will be providing support of this kind.

Section 1

Supervising the tests

Teachers should:

- maintain appropriate test conditions by ensuring that pupils are able to work individually, undisturbed and without access to any unauthorised material;
- ensure that pupils have been given the correct test paper;
- ensure that pupils have the equipment listed on the front cover of the relevant test (a calculator **must not** be used for any question in Paper 1, but is required for some questions in Paper 2);
- ensure that pupils write their name and the name of their school in the spaces provided on the front cover of their test paper;
- draw pupils' attention to the 'Remember' section on the front cover of the test paper and to the instructions on page 2;
- help pupils who need assistance during the tests, according to the guidance given in this document;
- give appropriate time reminders, for example halfway through the test and again ten minutes before the end;
- collect all test papers from pupils at the end of the test;
- refer to the *Schools' guide* booklet, sent by the External Marking Agency, for detailed guidance on completing marksheets and dispatching scripts for external marking.

Helping pupils during the tests

Teachers should ensure that pupils are clear about what they have to do but must not provide help with the mathematics being tested.

Teachers may answer questions such as ‘*Am I supposed to write it here?*’ and ‘*Do I have to do all of the questions?*’ or clarify the meaning of instructions given in the test papers.

If a pupil asks the teacher to clarify the wording of a particular question, the teacher may do this so long as no help with the substance of the question is provided and the general principles given in these notes are followed. The teacher must **not** help by explaining specific mathematical terms such as *line of symmetry* or *area*. Similarly, the teacher must **not** help by interpreting graphs or mathematical tables or diagrams.

In cases where a pupil asks for clarification of the mathematical symbols or notation used in a question, the teacher may read these to the pupil but should **not** indicate the operation or process involved. For example:

% per cent (**not** out of every hundred)

Further guidance on specific questions is given on the following pages. Each table indicates, in *italics*, some words or phrases pupils may ask about. Words or phrases that may be explained are indicated with a ✓, and, where appropriate, some paraphrases are suggested in brackets. Words or phrases that must **not** be explained are indicated with a ✘. If a point raised by a pupil is not in these notes, clarification may be given; however, **the general principle is that teachers should not help with the mathematics being tested and should not indicate the process or operation to be carried out. If in doubt, do not provide clarification to the pupil.**

The shaded areas in the tables give details of special arrangements that may be made. Further information about special arrangements is given in Section 2 of this booklet.

Separate tables are given for Papers 1 and 2. To help with identifying questions, a name has been printed at the top right of each question on the test papers. Each table identifies questions by name and question number.

Paper 1 questions		Notes for teachers on specific questions
Olympic Games	1	<ul style="list-style-type: none"> ✓ <i>table, bar chart</i> (point to the table or bar chart), but ✗ do not interpret the table or bar chart
What number?	2	<ul style="list-style-type: none"> ✓ <i>calculation</i> (point to each calculation)
Morning	3	<ul style="list-style-type: none"> ✗ do not explain <i>half an hour</i> <p style="text-align: center;">Special arrangements: <i>pupils may be shown a picture of a digital clock, but they must not be allowed to experiment with it.</i></p>
Euro	4	<ul style="list-style-type: none"> ✓ <i>euro banknotes, euros</i> (money) ✓ <i>value</i> (how much each note is worth) ✓ <i>total</i> (altogether) ✓ Teachers may clarify that some but not all of Anna's banknotes may be the same as Marco's <p style="text-align: center;">Special arrangements: <i>pupils may be shown real euro banknotes.</i></p>
Using grids	5	<ul style="list-style-type: none"> ✓ <i>grid</i> (point to the grid), but ✗ do not interpret the grid
Calculations	6	<ul style="list-style-type: none"> ✓ <i>calculation</i> (point to each calculation)
Drawing lines	7	<ul style="list-style-type: none"> ✓ Teachers may clarify how, in the example, the straight line makes two different shapes, but they ✗ must not explain <i>square, rectangle, triangle</i> or <i>quadrilateral</i>
Saving	8	<p style="text-align: center;">Special arrangements: <i>pupils may be shown a 50p coin, a 20p coin and a £5 note.</i></p>
Using decimals	9	<ul style="list-style-type: none"> ✓ <i>total length</i> (how long altogether) ✓ <i>van</i> (type of vehicle)
Number line	10	<ul style="list-style-type: none"> ✓ <i>number line</i> (point to the number line), but ✗ do not interpret the diagram ✗ do not explain <i>less than</i>
Calendar	11	<ul style="list-style-type: none"> ✓ <i>calendar</i> (point to the calendar)
Percentages	12	<ul style="list-style-type: none"> ✓ <i>square grid</i> (point to the square grid), but ✗ do not explain <i>50%, 20%</i>
How many pupils?	13	<ul style="list-style-type: none"> ✓ <i>graph</i> (point to the graph), but ✗ do not interpret the graph
Track	14	<ul style="list-style-type: none"> ✓ <i>continues</i> (carries on) ✓ <i>pattern</i> (point to the pattern), but ✗ do not explain the pattern
Spinner	15	<ul style="list-style-type: none"> ✓ <i>spinner</i> (point to the spinner) ✗ do not explain <i>more likely</i>
Metric	17	<ul style="list-style-type: none"> ✓ Teachers may explain the diagram, but they ✗ must not give examples
Five tiles	18	<ul style="list-style-type: none"> ✓ <i>square grid</i> (point to the square grid) ✓ <i>shaded</i> (coloured in) ✓ Teachers may clarify that the different shape should have exactly five squares, but they ✗ must not explain <i>line of symmetry</i>

Paper 2 questions		Notes for teachers on specific questions
Right or left-handed	1	✓ <i>table</i> (point to the table), but ✗ do not interpret the table
Mirror line	2	✓ <i>shade</i> (colour in), but ✗ do not explain <i>triangles, line of symmetry, mirror line</i>
Theatre	3	✓ <i>theatre</i> (where you go to see a play) ✓ <i>programme</i> (gives information about the play)
Names	4	✓ <i>clues</i> (information) ✓ <i>same position</i> (same place)
Temperature	5	✓ <i>thermometer</i> (point to the thermometer)
Climbing	6	✗ do not explain <i>fraction</i>
Measure	8	✓ <i>triangle</i> (point to the diagram), but ✗ do not explain <i>perimeter</i>
Safari	9	✓ <i>Africa</i> (a continent) ✓ <i>pictogram, key</i> (point to the pictogram or key), but ✗ do not interpret the pictogram or key ✓ <i>represents</i> (stands for) ✓ <i>lion, zebra, elephant</i> (types of animal)
Printing	10	✓ <i>photo</i> (picture), but ✗ do not explain <i>50%, 100%, percentage</i>
Squares	11	✗ do not explain <i>square, sides, angles</i>
Area	12	✓ <i>centimetre square grid</i> (point to the centimetre square grid) ✓ <i>estimate</i> (about how much), but ✗ do not explain <i>area</i>
Four cubes	13	✓ <i>cubes</i> (point to the diagram) ✓ Teachers may clarify the meaning of ' <i>L-shape</i> ', but they ✗ must not indicate where on the diagram the extra cube should be added
Counters	14	✗ do not explain <i>probability</i>
Square grid	15	✓ <i>square grid</i> (point to the square grid), but ✗ do not explain <i>fraction, quarter turn clockwise</i>
Nursery school	16	✓ <i>pie chart</i> (point to the pie chart), but ✗ do not interpret the pie chart ✓ <i>nursery school</i> (a school for young children)
What numbers?	17	✓ <i>equation</i> (point to the equations) ✓ <i>value of m</i> (how much <i>m</i> is worth)
Measuring jug	18	✗ do not explain <i>volume</i>
Square number	19	✗ do not explain <i>square number</i>
Consecutive	20	✗ do not explain <i>even number</i>
		Special arrangements: <i>pupils may be shown a number line.</i>

Section 2

This section provides further specific guidance for teachers and support staff who will be supervising the mathematics tests with pupils who have special educational needs.

Permission is required for early opening of a test paper for any pupil, regardless of that pupil's stage on the SEN Code of Practice, for whom you wish to make special arrangements.

Special arrangements

The tests have been designed to be accessible to pupils who did not achieve level 4 at the end of key stage 2 and who are assessed by their teacher to be working at level 3 or 4 during year 7. Braille, modified large print and enlarged versions of the tests have been made available. Additional guidance notes for teachers administering braille and modified tests will have been sent to schools that have ordered braille or modified papers.

Guidance on special arrangements for the tests is given in the 2003 *Guidance on administering the years 7 and 8 tests* booklet, sent to schools in autumn 2002.

The section 'Special arrangements for the tests' (pages 29–44) gives details about the use of readers, communicators, signers, amanuenses, transcripts, school-based adaptations to the tests, and other special arrangements such as allowing additional time for the modified large print or braille papers. It also provides guidance on the administration of the mental mathematics test with pupils for whom English is an additional language.

School-based adaptations to the tests

School-based adaptations to the tests may include taping, photocopying onto coloured paper or use of coloured overlays, or limited changes to the presentation of diagrams or to the size of the text, but must not involve rewording of questions. Details of real objects that may be used as prompts are shown in the shaded areas of the 'Notes for teachers on specific questions' column in the tables on pages 4 and 5 of this booklet.

Schools may order modified enlarged papers for pupils needing large print versions of the tests. Alternatively, schools may enlarge individual questions, or parts of questions, to meet the specific needs of individual pupils. However, the following questions must not be enlarged because enlargement would affect the accuracy of pupils' responses:

Paper 2

- Climbing (question 6);
- Measure (question 8);
- Area (question 12);

Mental mathematics test

- question 17.

Teachers should refer to pages 36–37 of the 2003 *Guidance on administering the years 7 and 8 tests* booklet for further details of specific arrangements and to pages 30–31 for information about early opening arrangements.

The language of the tests

Schools may provide translations of words or phrases in the test papers that are likely to prove difficult for pupils for whom English is an additional language and also for some pupils who use British Sign Language or other sign-supported communication, if this is usual practice for the pupil.

General guidance for signers

These notes should be read in conjunction with those given in Section 1 and 'Notes for signers on specific questions' on page 8 of this booklet. Any special arrangements described there may be made, and suggested rephrasing of words and sentences may be signed.

- When supporting pupils' understanding of the requirements of the tests, care must be taken to ensure that the signed question does not give an indication of the correct answer, eg when signing 'isosceles triangle' care must be taken not to indicate any of the properties.
- Some subject-specific words do not have a clear or meaningful sign. Teachers often develop their own signs for these words. All staff supporting pupils should be aware of these signs and use them with the pupils during the tests (see specific guidance on page 8).
- Pupils may be confused by unfamiliar proper nouns. If a name is likely to confuse a pupil, it may be clarified by a general sign, such as 'a girl', 'a boy', 'a man', 'a woman', 'a place'.
- Some questions refer to past or future events, or to words or diagrams used earlier in the questions. Pupils may be given reminders, including the repetition of parts of a question.
- Real objects may be used as prompts in line with the guidance given earlier in Section 1.
- Pupils may sign their responses to teachers or support staff who should note these as precisely as possible on the test paper, without inferring any meaning that was not clear in the signed responses. A note that this has occurred should be written on the front of the test paper.
- Pupils must not be in a position to see other pupils' signed responses.
- The sign for 'write' may be substituted for the instructions 'fill in', 'give', 'complete' or 'say'.
- Some mathematical concepts, such as likelihood, are difficult to sign. If particular questions involving such concepts cause difficulties in understanding then they may be left until later in the test, allowing pupils to gain confidence on more accessible questions.

Paper 1 questions		Notes for signers on specific questions
Using decimals	9	<i>Total length may be signed as: Altogether, how long?</i>
Calendar	11	When signing <i>April 12th</i> , signers should take care not to indicate the position of the date on the calendar.

Paper 2 questions		Notes for signers on specific questions
Right or left-handed	1	When signing <i>right-handed girl</i> and <i>left-handed boy</i> , signers should take care not to point at the table.
Temperature	5	<i>The temperature was -10°C. It went up by 15°C. What is the new temperature?</i> may be signed as: <i>-10°C, up 15°C, new temperature, what?</i>

The following subject-specific words, symbols or expressions may appear in Paper 1 and/or Paper 2 of the tests. Any familiar signs may be used for these words.

%, $^{\circ}\text{C}$	half / halfway	position
add	key	probability
angle	length	quadrilateral
area	less than	quarter
bar chart	litres (l)	rectangle / rectangular
calculation(s)	metre (m)	seconds
centimetre (cm)	millimetre (mm)	shape
clockwise	minutes	square
consecutive	mirror line	square number
cube	more likely	straight line / straight side
equation	number	symmetry / line of symmetry
estimate (noun)	number line	table
even	pattern	total
fraction	percentage	triangle
gram (g)	perimeter	value
graph	pictogram	volume
grid	pie chart	weight

Part B: mental mathematics test

Introduction

See separate *Notes for teachers* for specific special arrangements which may be made for the administration of the modified versions of the test for pupils with visual and/or hearing impairments.

In 2003 the audiotape is coloured dark blue.

The notes in Part B are for teachers who are supervising the administration of the mental mathematics test. The administration of the modified versions of the test, provided for pupils with visual and/or hearing impairments, is covered in separate, specific *Notes for teachers* which will accompany schools' orders of these modified test materials.

The mental mathematics test is a taped test, consisting of 20 questions, with a running time of approximately 20 minutes. The tape includes both instructions to pupils and the questions. There will be two opportunities for you to stop the tape. These will be indicated by a bleep. **You should not stop the tape at any other point, or add any additional instructions of your own.** The first pause comes at the beginning of the tape, once the instructions have been given. This will allow clarification of any of the instructions not understood by the pupils. The second pause is after the practice question. **After this second pause, the tape should be allowed to play without interruption.** The full text of the instructions and the practice question is provided in this booklet.

Administering the mental mathematics test

1. Pupils should have only pens or pencils. They should not have rubbers, rulers, calculators or any other mathematical equipment. Access to paper for working out answers is **not allowed**.
2. Ensure that each pupil has an answer sheet. Tell pupils to write their name and school in the box at the top of the answer sheet.
3. Ensure the pupils understand that:
 - they must complete the test on their own without copying or discussing questions with other pupils;
 - they will be told how long they have to answer each question and that the time given will increase from 5, to 10, to 15 seconds, as the test progresses through three sections;
 - for some of the questions, the information they will need is included in, above or beside the answer box on the pupil answer sheet;
 - they are not allowed to use a calculator or any other mathematical equipment;
 - if they want to change their answer, they should put a cross through their first answer. They are not allowed to rub out any answers;
 - they should answer as many questions as they can. If they find a question too difficult, they should put a cross in the answer box and wait for the next question;

The working order of audio cassette equipment should be checked carefully in advance of the test, using the 2002 taped test or other suitable tape.

- they will not be allowed to ask any questions once the test has started;
 - the small box to the right of each answer box is for the marker's use only.
4. Start the tape – instructions will be given to the pupils. The tape will indicate, with a bleep, where you should stop and answer any questions.
 5. When the bleep is heard, stop the tape and answer any questions that the pupils may have, to ensure that the instructions are clearly understood.
 6. Start the tape – the pupils will be asked a practice question. After a five-second pause for the pupils to answer, a bleep will sound indicating that you should stop the tape again, to answer any questions.
 7. Stop the tape when the bleep is heard – ensure that the pupils have correctly placed their answers to the practice question on the answer sheet and ensure that pupils are aware of the information provided in, above or beside the answer box, for some questions. When they are ready to begin the test, tell the pupils that you will **not** be able to stop the tape again, or answer any further questions, once the tape has restarted.
 8. Start the tape – the test will begin. At the end of the test, the pupils will be told to put down their pens or pencils and you should switch off the tape and collect the answer sheets.

The following transcript is the introduction to the test which is included at the beginning of the tape, before the questions.

Listen carefully to the instructions I am going to give you. When I have finished, your teacher will stop the tape and will answer any questions. However, you will not be able to ask any questions once the test has begun.

I will start with a practice question. Then I am going to ask you 20 questions for the test. On your sheet there is an answer box for each question, where you should write the answer to the question and nothing else. You should work out the answer to each question in your head, but you may jot things down outside the answer box if this helps you. Do not try to write down your calculations, because this will waste time and you may miss the next question. For some of the questions, important information is already written down for you on the sheet.

I will read out each question twice. Listen carefully both times. You will then have time to work out your answer. If you cannot work out an answer, put a cross in the answer box. If you make a mistake, cross out the wrong answer and write the correct answer next to it. There are some easy and some harder questions, so don't be put off if you cannot answer a question.

Your teacher will now stop the tape and answer any questions you might have.

(BLEEP)

Here is the practice question to show you what to do. I will read the question twice, and you will have five seconds to work out the answer and write it in the answer box.

What is half of sixty?

{The question is repeated}

What is half of sixty?

{Five-second pause}

(BLEEP)

(The 20 questions then follow on the audiotape)

Emergency use of transcripts

In a genuine emergency situation only, for example when equipment or the tape malfunctions on the day of the test and no alternative provision can be made, the test will need to be read to the pupils. **All possible steps must be taken to ensure that equipment is checked in advance of the test so that the taped version can be provided for pupils.**

In the event that it proves necessary for a teacher to read the test, the 2003 *Mental mathematics audiotape transcript* should be read to the pupils.

The questions must be read out exactly as written in the transcript. The teacher should start by stating the question number, and then read out each question twice before leaving the 5-, 10- or 15-second response time. **These timings must be accurate.**

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