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KEY STAGE

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LEVELS

2&3

2004

Level 2 and level 3

Mathematics tests

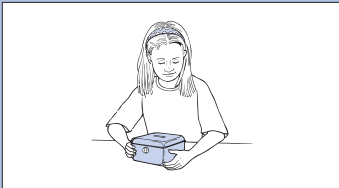
Teacher's guide

Level 2

Key stage 1
Mathematics booklet
2004

Name

Score Level and grade



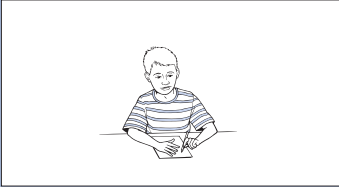
Level 2

Level 3

Key stage 1
Mathematics booklet
2004

Name

Score Level



Level 3

department for

education and skills

creating opportunity, releasing potential, achieving excellence

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Assistance for the written questions

This guidance is provided in a separate booklet.

Background information

Children to be tested

The level 2 test

The level 2 test should be used with all children judged by the teacher to have attained level 2 in mathematics through teacher assessment. In addition, you may wish to administer the test to those children who achieved very highly on all parts of the level 1 task.

You may also choose to use the level 2 test with children judged to be working at level 3, before they take the level 3 test. Trials of the tests in 2002 with a nationally representative sample of approximately 2,500 children showed that children who completed the level 2 test before completing the level 3 test were likely to achieve more marks on the level 3 test than children of similar ability who did not complete the level 2 test first.

The level 3 test

The level 3 test is for children who are judged to be working at or above level 3 in mathematics through teacher assessment. Children who attain level 2A on the level 2 test may be entered for the level 3 test. You should use your judgement to decide whether it is appropriate to enter children who have only just been awarded level 2A for the level 3 test. Children who are entered directly for the level 3 test, but do not achieve level 3, should subsequently be assessed using the level 2 test.

Structure of the tests

The materials include:

- a level 2 test booklet;
- a level 3 test booklet;
- administration and marking instructions contained within this *Teacher's guide*;
- *Assistance for the written questions* booklet; and
- grids providing curriculum references for optional analysis of performance.

Each test includes material drawn from the key stage 1 programme of study both for *Number* and for *Shape, space and measures* in the 2000 national curriculum order. The tests also include questions that assess *Using and applying mathematics*. These questions will require children to apply their problem-solving skills, to communicate mathematically and to reason. Questions assessing *Using and applying mathematics* are identified within the mark scheme for each test.

There are two parts to each test. The first part comprises five questions (and one practice question), which total five marks. These questions are to be read aloud to the children by the teacher. The second part comprises up to 23 written questions (and one practice question), which total 25 marks.

The questions in each test have been ordered approximately by their degree of difficulty, as informed by outcomes of the trials of the tests. Each test was developed in consultation with groups of year 2 classroom teachers, and was subjected to three types of trial with a nationally representative sample including over 3,000 children. Children in one particular class or school may find the tests easier or harder than this sample.

It is important that all children are given an opportunity to attempt as many questions as they can in the written part of the tests. An evaluation study of the performance of a group of children who just attained level 2 in an earlier test showed that each of the more difficult questions, towards the end of the test, was answered correctly by at least one child in this group. If a child is unable to cope with one written question, he or she should be encouraged to move on to the next question.

Timing

Both tests should be carried out and completed during the month of May 2004. **It should not be necessary for either test to be completed in more than two sessions.** These sessions should normally take place on the same day or on consecutive days. If they take place on the same day, children may benefit from a break after about 30 minutes.

There is no time limit for any part of the tests. Trialling has shown that most children demonstrate what they can do in about 45 minutes, after a short introduction. You should use your discretion to give the children as much time as they need to finish all the oral and written questions they can do.

Grouping children for the test

It is anticipated that the level 2 test and the level 3 test will be administered on separate occasions. Both the oral and written parts of each test can be administered to all the children at the appropriate levels together, in small groups or individually. For the written part of the tests, you may give help with reading (see the booklet *Assistance for the written questions*). You may also read all the questions to groups or individuals. Your decision about grouping, therefore, should reflect the needs of the children in your class and their ability to work independently. Further guidance on grouping for and reading the tests is included on the next page.

It is possible, but not recommended, that the level 2 test and the level 3 test be administered to different groups of children simultaneously. If this method of administration is chosen, the children taking either test will need to complete separately the oral questions and the practice written question for their test before completing the written questions simultaneously. The oral questions should be completed before starting the written questions. Children taking the level 3 test should not have access to structured apparatus during any part of the test.

Assistance

The tests do not require the use of staff beyond those normally available in the classroom. However, they may be administered, under the direction of the teacher, by any competent or informed person such as a language support teacher, a teaching assistant or special educational needs support staff. These staff should have a copy of *Assistance for the written questions*. The teacher, however, remains responsible for the assessments. Parents of children in the class should not administer the tests.

Detailed guidance on supporting the children during the level 2 test is provided on pages 12–13 for the oral questions and pages 16–17 for the written questions. Guidance for the level 3 test is provided on pages 29–30 for the oral questions and pages 34–35 for the written questions. Further guidance for each test is provided in *Assistance for the written questions*. **Any person** administering the test should be familiar with this guidance and have it to hand during any administration of the tests.

Reading the test

If you judge it appropriate, you may go through a whole test, reading out each question to a group and waiting for the children to write their answers before continuing (the ‘look and listen’ method). This is a legitimate way to administer the tests to children who would otherwise have difficulties in accessing the tests. **It is, however, unlikely to be the best method for whole-class administration, as the tests would then need to be read out to suit the pace of the slowest child.** This would mean that children who wanted to work more quickly could become bored with waiting and possibly not demonstrate their best attainment. Research by QCA has shown that fluent readers can sometimes perform better if helped by the ‘look and listen’ technique, as they can otherwise skim-read questions and misread what needs to be done. However, QCA feels that, in general, children who read fluently can be helped by the teacher stressing how important it is that the children:

- ask for help to read unfamiliar text;
- check that they have read questions correctly; and
- check their working out and answers.

Nevertheless, QCA recognises that teachers are in the best position to judge whether fluent readers would benefit or not from ‘look and listen’.

Age standardised scores

The tables of age standardised scores for the tests are contained within this *Teacher’s guide*. The use of these tables remains optional.

Optional grids for test analysis

Also provided are grids giving the curriculum references for each question in the tests, which will allow teachers, if they wish, to analyse the performance of children in their class.

Specific guidance

You can be flexible in your arrangements for the tests **as long as any adaptations do not invalidate the assessments**. The range of children's needs is such that it is neither sensible nor possible to provide detailed advice to cover every individual circumstance. You should use your professional judgement and your knowledge of individual children to decide how best to make the tests accessible to all children while maintaining the rigour of the assessment.

Examples of permissible adaptations include:

- using tactile shapes and number cards;
- photocopying onto coloured paper;
- enhancing shading, and/or emboldening lines on diagrams, charts and graphs;
- cutting out, enlarging, embossing or mounting diagrams;
- using adhesive to attach materials to a table;
- using mechanical and technological aids, eg computers but not calculators;
- rephrasing parts of the written questions as indicated in *Assistance for the written questions*.

There may be some children who have difficulty with the test layout and procedures. These children may be willing to ask for help, and you will be able to ensure they receive the support they need. However, other children may be reluctant to ask. As well as offering reassurance to the whole group, you may need to be active in watching for children who are having problems with reading or with writing responses.

Children's responses

Children may convey what they know or understand by any appropriate means: talk, sign, writing, gesture, pictures, models, mime or any combination of these. A wide variety of forms of communication is acceptable.

Children learning English as an additional language

Children who are learning English as an additional language may be given access to the tests in any way that is usual for them. If language support is available, the questions may be translated and children may respond in a language other than English. It is not intended that children are provided with a comprehensive written translation of the papers. As with all children, you may read the questions aloud in English. You may also give a fuller explanation of the context of the questions, **but it is important to ensure that you do not give any additional interpretation of the mathematics or mathematical vocabulary in doing this**.

It is particularly important when assessing children for whom English is an additional language that sufficient time is given for the children to show their best attainment without pressure.

Special educational needs

These tests are designed to be used with all children at the appropriate level, but additional consideration should be given to children with special educational needs. **Usually, the most appropriate conditions for testing will be those in which the children normally work well.**

- You can administer the tests to smaller groups of children or on an individual basis and adopt any strategies suggested in this guide.
- You may describe the pictures to the children or provide them with any objects that convey to them what is in the pictures.
- You may use overhead projector transparencies of any parts of the tests to direct children's attention to what they have to do.

Children with hearing impairments

Children who have hearing impairments may need particular help with reading. The questions may be presented to the child in sign. A variety of forms of communication can be used for presentation and response, including British Sign Language (BSL), Sign Supported English (SSE) and Makaton Vocabulary. For children who sign, use should be made of a skilled adult signer who is familiar to the child. Since this person may not be the teacher, there is a need for the teacher and the signer to be clear about how the test will be presented.

The nature of BSL and some other signed languages may demand that some questions are restructured. In restructuring, take care that the signs used neither give clues to the answer or the mathematics to be used nor cause confusion, and that the questions are restructured only where the sign language itself necessitates it. You may also give a fuller explanation of the context of the questions, but it is important to ensure that you do not give any additional interpretation of the mathematics and mathematical vocabulary in doing this. If the child responds orally, the person administering the tests will need to be familiar with the hearing-impaired child's voice to ensure responses are understood accurately. You should ensure that children with hearing impairments understand the contributions made and questions raised by other children prior to the start of the tests.

The oral questions – additional guidance for teachers of children with hearing impairments

There are five questions (and one practice question) which are to be read aloud to the children by the teacher. These questions come at the beginning of each test but they may be administered to children with hearing impairments during a separate session or at the end of the tests. The oral questions should be administered by a familiar adult whom the child is used to lip-reading or signing with; this could be the child's special support assistant or communicator.

The questions should be administered at an appropriate pace so that children with hearing impairments have enough time to lip-read the question, process the information and find the appropriate part of the page to write the answer. Each question may be signed or written out as a flash card or projected as an overhead projector transparency if this will make it more accessible for these children. Teachers of hearing-impaired children may reword questions using more familiar syntax if necessary. However, considerable care should be taken to avoid altering the nature of the assessment within any question.

Possible amendments for children with hearing impairments

Level 2 practice and question 1	You may wish to consider whether a clap to indicate the missing number in the sequence is the most appropriate signal for a particular child.
Level 2 question 2	You may use a flash card or an overhead transparency with <i>99p</i> written on it.
Level 3 question 1	Use <i>a girl</i> instead of <i>Emma</i> .
Level 3 question 3	You may use a flash card or an overhead transparency with <i>19</i> written on it, to avoid confusion with <i>90</i> .
Level 3 question 5	You must not sign <i>pentagon</i> , instead you may use a flash card or an overhead projector transparency with the word <i>pentagon</i> written on it, as such syllabic words can be difficult to lip-read and an iconographic sign may convey the answer.

Children with visual impairments

Children with visual impairments may have the test presented to them, and make their responses in any way that is usual for them, but care should be taken to avoid altering the nature of the questions. All usual low-vision aids may be used, and real objects may be used where appropriate. Materials may be enlarged, reduced, cut up, brailled, etc, to increase accessibility for individual children, and children may handwrite their answers, use computer facilities, braille or dictate answers to an adult scribe. Help may be given to interpret pictures and diagrams, as long as this does not invalidate the assessment being made.

Minor changes have been made to the text in the braille version. A print version of the modified text for braillists is included with the braille materials. Additional teacher's notes for the braille test will also be included with the materials. You should have ordered these test materials by photocopying the order form on page 46 in the 2004 *Assessment and reporting arrangements* booklet for key stage 1. Additional teacher's notes will be included with the modified large print materials.

Braille

The level 2 and level 3 mathematics tests will be available in grade 2 braille, free of charge, from:

Pia, Victoria Street, Cwmbrân, NP44 3YT
Tel: 0870 321 6727, Fax: 0870 321 6429

Modified large print

Teachers of children with special educational needs should be aware of modified large print versions of the tests. Although designed for children with visual impairments, these modified large print papers may be used by other children who have special educational needs. For example, some children with particular physical difficulties may find them more accessible than the unmodified papers. The modified large print papers are produced on A4 size paper in black and white using bold print, simplified diagrams and illustrations with all extraneous information removed. Copies of the modified large print tests are available free of charge. Examples can be seen on the QCA website at www.qca.org.uk/ca/tests/modified_tests.

Time for the modified tests

Children using braille or modified large print tests are likely to need more time to complete the tests than fully sighted children to take account of their slower reading speeds. You will wish to make this clear to children and to organise the classroom as appropriate. You may find it helpful to administer the tests in more than one session, or use rest breaks as appropriate, particularly for children using the braille tests.

Guidance notes

Additional teacher notes have been produced to accompany modified large print and braille versions of the tests. You should refer to these notes before administering and marking the tests.

Children with physical disabilities

Children with physical disabilities may have the tests presented to them, and make their responses, in any way that is usual for them, for example the teacher scribing dictated answers, the use of enlarged form or the use of a computer.

Children with emotional and behavioural difficulties

Children with emotional and behavioural difficulties may have problems maintaining their attention for extended periods of time. For this reason, the tests could be administered to this group of children in smaller parts, over a number of sessions, rather than the recommended two sessions.

Administering the level 2 test

Resources

This test is designed for children working at level 2.

For both the oral and written questions, each child will need:

- a copy of the level 2 test booklet;
- a pen or pencil;
- a centimetre ruler with which they are familiar; and
- a rubber (optional). You may obtain more useful diagnostic information if you encourage your children to leave their working out on the page and to cross out their mistakes rather than rubbing them out. If rubbers are not provided:
 - you should tell children that they may cross out any answers they wish to change;
 - you should keep a rubber in readiness for children who wish to change answers they have drawn (such as lines or shapes) where changes may be clearer by rubbing than by crossing out.

You should also provide:

- structured apparatus consisting of tens and units for each group working at the same table. This must be available in sufficient quantity to allow children to select as much or as little as they wish.

Please note:

No other support materials should be given to the children, for example clocks or clock faces, number lines or squares, addition squares, multiplication squares, calculators or any representation of money (toy or real).

Wall displays such as tables charts, number lines or number squares should be covered or removed. However, it is not necessary to remove wall clocks.

Advance preparation

To help children with the reading, you may write words on the board and briefly check that children can recognise them, but you should not explain their meaning. For this test these words may include: *altogether*, *scooters*, *squares of chocolate*, *centimetres*, *counters*, *fruit*, *octagon*, *cherries*, *litres*. Remind the children that you (the teacher) may help them with reading during the test.

Number apparatus must be structured into tens and units (interlocking cubes in sticks of tens and ones, Dienes tens and ones, etc) to discourage unhelpful counting in ones rather than use of tens where appropriate. If interlocking cubes are used, each rod of ten cubes should be made up of one colour only. At least two different colours of rods should be provided. In this way, children can identify a group of ten easily as they calculate. However, you should not intervene if a child dismantles the structured tens when working.

Administering the test fairly

In order to ensure that the test is administered fairly in different classrooms, it is important that all teachers behave in a similar way while the test is in progress.

THEREFORE YOU MUST:

- ensure that children can work undisturbed, individually and without access to materials that could give them an unfair advantage. Changes to the usual classroom layout may be necessary. It is important that you decide on seating arrangements before the start of the test, in order to ensure that children cannot see each other's work;
- ensure that the children work on their own and do not discuss questions or copy answers. Some teachers have found one or more of the following strategies helpful to ensure that children cannot see each other's work: seating children at the ends of tables; seating children individually in a larger space; providing a blank sheet of paper to cover completed work on the open page; using large picture books, etc, to create table screening between children;
- observe the children throughout the test to ensure that they do not copy or distract each other;
- encourage the children to stay on task and to work at an appropriate pace, moving on to the next question promptly when it is clear that they cannot spend any more time productively on the question they are working on; and
- encourage children to check their work carefully when they have finished.

DO NOT:

- give help with the mathematics as this will invalidate the assessment;
- re-present questions on addition or subtraction vertically when they are presented horizontally in the test booklet;
- suggest to the children the mathematical operation to use;
- give clues which help the children to interpret what any question requires them to do;
- rephrase, or rewrite, any questions except where indicated in *Assistance for the written questions*;
- prompt children to confirm or change answers by pointing, frowning, smiling, head shaking or nodding, offering rubbers, or asking leading questions.

Teachers of children learning English as an additional language or with special educational needs should refer to the further guidance on pages 6–9 of this guide.

Starting the test

Give each child a level 2 test booklet and make sure they have the resources they need. Ask the children to write their name in the space provided on the front of the booklet and introduce the test in your own words, making sure you cover the points outlined in ‘Introducing the characters in the booklet’ and ‘Introducing the level 2 oral questions’ (below) then in ‘Introducing the level 2 written questions’ (page 16) at the appropriate times. To ensure that the testing is carried out in a standard way in all schools, it is important that your introduction does not exceed this information.

Introducing the characters in the booklet

The two characters remove the need for children to read a variety of unfamiliar names in the test.

Ask the children to open their booklet. Introduce the characters in the test booklet to the children. Read the names with the children to ensure that they will recognise them when they meet them in the booklet.

Explain that some other children may also be mentioned in the test.

Ask the children to close their booklets while you introduce the level 2 oral questions.

Introducing the level 2 oral questions

These questions will be read aloud by you. Guidance on what to say to the children is given opposite.

The first question is a practice question. It is not part of the assessment so you may help the children to understand the format, what they should do and where they should write their answer.

Children are allowed to use space on the test paper for working out their answers if necessary.

There is no time limit on each question, so the length of time taken will depend on the speed of the children. Proceed from one question to the next when you feel that all the children have had ample opportunity to work out the answer.

The text to be read aloud is shown in italics in the next section, ‘Working through the level 2 oral questions’. The questions themselves are shown in bold italics. The language highlighted in bold text is part of the assessment, and **you should not rephrase it or give explanations of terms used.**

Tell the children:

- *I will read aloud some questions for you to answer.*
- *I will read each question twice, leaving a short gap in between.*
- *If you want to hear the question a third time, put up your hand.*
- *You must listen very carefully when I read the questions.*
- *The first question is a practice question which we will all do together.*
- *I will explain how to write answers to each question.*
- *You will have plenty of time to work out the answers.*
- *You must work on your own and you must not call out the answers.*
- *If you make a mistake, cross it out/rub it out* neatly and write the answer clearly (*as appropriate).*
- *When you have finished answering a question, look up so that I know you have finished.*

Working through the level 2 oral questions

Ask the children to open their booklet.

Explain:

- *the boxes are for you to write your answers in;*
- *the letters below each box show you which box to use for each question;*
- *you can do any working out in the white spaces around the boxes, if you need to.*

Where necessary, you can show the children how to draw a tick, cross, etc.

Remember to repeat the question.
Repeat the **bold text** only.

Practice question

Teacher:

This is a practice question for us to do together.

Find box a.

[Help with locating the box where necessary.]

Listen to this sequence.

I will clap where a number is missing.

10 20 30 [one clap] 50 60

Write the missing number in box a.

Afterwards, ensure that children know the number they should have written, and discuss methods the children used to work out the answer. Allow any children to change their answers by crossing out or rubbing out, to make sure they know the way to correct errors.

Question 1

Teacher:

Find box b.

Listen to this sequence.

I will clap where a number is missing.

12 22 32 42 [one clap] 62

Write the missing number in box b.

Practice question



Question 2

Teacher:

Turn over to the next page.

Find box c.

Ella has a one pound coin.

She spends ninety-nine pence.

How much has she left?

Write your answer in box c.

Question 3

Teacher:

Look at the names of the shapes in box d.

They say:

pentagon, square, triangle, hexagon, rectangle.

Tick the names of the shapes which have four sides.

Question 4

Teacher:

Look at the next page.

Find box e.

Write the same number in each triangle to make the multiplication correct.

Question 5

Teacher:

Here is a picture of a shape.

The shape has been folded in half along the dotted line.

Imagine opening it up.

How many sides does the opened shape have?

Write your answer in box f.

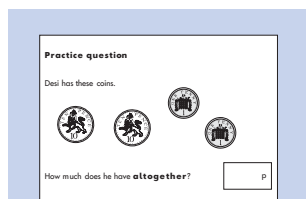
Introducing the level 2 written questions

Ask the children to close their booklets and to listen carefully while you introduce the written questions.

Tell the children:

- *I will do one practice question with all of you, and then you will go on by yourselves.*
- *Read each question, work out the answer and then write it in the space provided in the booklet.*
- *Always read what you are asked to do. Don't guess.*
- *You can have as much help as you need with reading words in the questions, but can't have help with reading numbers or working out answers. If you need help with reading, put up your hand but don't call out.*
- (Optional) *These are some of the harder words in the test. We will read them together now. [You may read any of the words on display as detailed on page 10 but do not explain these words in any way. You may read them again for any child as necessary during the test.]*
- *There is plenty of space in the booklet, which you can use for working out, writing or drawing your answers.*
- *If you are asked to show how you work something out, write or draw how you got your answer since you can get a mark for doing that.*
- *You may use the apparatus that I have provided (see page 10). [If rods of ten interlocking cubes are provided, you may remind children that they are rods of ten.]*
- *If you make a mistake, you should change your answer by crossing/rubbing* it out (*as appropriate).*
- *Some questions are harder than others; if you cannot do one question, go on to the next one which might be easier; go back to the harder ones later if you wish; you may not be able to complete all the questions, but do as many as you can.*
- *Take as long as you need to finish all the questions you can do.*
- *When you have done all you can, check your answers.*
- *Don't discuss the questions with anyone or copy answers.*

Working through the level 2 written questions



- Ask the children to turn to page 6 of their booklet and find the practice question.
- Help the children to work through the practice question. Allow them to answer the question before you discuss it.
- The practice question is not part of the test, and you can spend as much time as you like helping the children to understand the format, what they should do and where they should write their answers.
- Ask the children to start working on their own from question 6, unless you are reading the questions with the children.
- You can stop the testing whenever you judge it necessary, for example if you feel a child is becoming too unsettled or has done as much as possible.

Assisting children with the written questions

Reading the written questions

You may read the test to groups of children, using the ‘look and listen’ method, as outlined on page 5.

If you choose for children to work independently through the test, you should give help with reading words as necessary. In general, you should not read numbers or symbols in the test booklet. You should not explain the wording of the questions in any way except to rephrase as permitted in *Assistance for the written questions*. In these circumstances, you may need to be aware of more fluent readers who do not ask for the help they need to read unfamiliar words.

Rephrasing the written questions

There should be no written adaptations of the text. However, some words in the test may be rephrased, or explained, if these are not familiar to the children where these are not mathematical terms and therefore not part of what is being tested. **It is very important not to exceed the permissible support.**

Other assistance

Apart from the guidance given above, and in *Assistance for the written questions*, no other assistance is allowed.

Marking the level 2 test

General guidance

When the children have completed the test, mark each answer right or wrong. The mark scheme helps you to identify the appropriate answers and tells you how many marks to allocate to each answer. Mark boxes have been provided in the margin of the test booklet, beside each question. For consistency, it is recommended that you enter 1 (mark awarded), 0 (question attempted but mark not awarded) or ‘–’ (question not attempted) in each mark box. These codes correspond with those used on the optional grid for test analysis. In addition, a box has been provided at the bottom right-hand side of each double-page spread to enter the total marks the child obtains for the set of questions that appear on the two pages. This is to help you to be accurate and efficient when totalling marks, but its use is optional.

The symbol ‘◆’ is used in the *Additional guidance* column in the mark scheme on pages 20–23 to indicate where you should pay particular attention to the mark scheme. Responses indicated in this way are those which were most likely to be marked incorrectly during trials of the tests.

Questions with a *Using and applying mathematics* element are identified in the mark scheme by an encircled U with a number that indicates the significance of using and applying mathematics in answering the question. For example, in a question with two marks, U2 would indicate great significance, while U1 would indicate some significance. The ‘U number’ for a two-mark question might be U1 or U2. A one-mark question might also have U1.

If a child has altered an answer or the answer is not clear, try to establish his or her final intention. You may occasionally need to talk with children individually to check this. Be sure to use open questions that do not suggest the required answer.


Any numerical answer is acceptable in word or number form unless otherwise stated.

Possible issues when marking

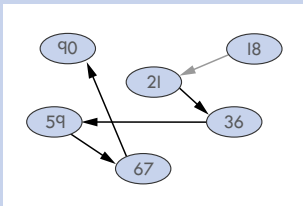
The child reverses a digit when recording	A reversed digit is acceptable if it is clearly recognisable as the digit intended; for example, a reversed 2 must clearly show the characteristics of a 2 rather than a 5.
The child writes a transposed number as the answer	Transposed numbers should not be awarded the mark: for example, an answer of '16' when the correct answer is '61' should not be marked as correct.
The child's response is numerically equivalent to the answer in the mark scheme	The mark scheme will generally specify which equivalent responses are allowed. If this is not the case, award the mark unless the mark scheme states otherwise.
The child's answer is correct but the wrong working is shown	Always award the mark(s) for a correct response unless the mark scheme states otherwise.
The correct response has been crossed (or rubbed) out and not replaced	Mark any legible crossed-out work that has not been replaced according to the mark scheme. If the work has been replaced, then do not consider the crossed-out work.
The child has worked out the answer correctly and then written an incorrect answer in the answer box	Give precedence to the answer given in the answer box over any other workings. However, there may be cases where the incorrect answer is due to a transcription error, in which case you may check the child's intention and decide whether to award the mark.
More than one answer is given	If all answers given are correct (or a range of answers is given, all of which are correct), award the mark unless the mark scheme states otherwise. If both correct and incorrect responses are given, do not award the mark unless the mark scheme states otherwise.
The child's response does not match closely any of the examples given in the mark scheme	Judge whether the response corresponds with the requirements in the <i>Answer</i> column of the mark scheme. Refer also to the <i>Additional guidance</i> column and to the <i>Examples of responses</i> (where appropriate).
There appears to be a misread of numbers affecting the working	In general, the mark should not be awarded. However, in two-mark questions that have a working mark, award one mark if the working is applied correctly using the misread numbers, provided that the misread numbers are comparable in difficulty to the original numbers. For example, if '243' is misread as '234', both numbers may be regarded as comparable in difficulty.
No answer is given in the expected place, but the correct answer is given elsewhere	Where a child has shown understanding of the question, award the mark. In particular, where a word or number response is expected, a child may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.
The child's answer correctly follows through from earlier incorrect work	'Follow through' marks may be awarded only when specifically stated in the mark scheme.

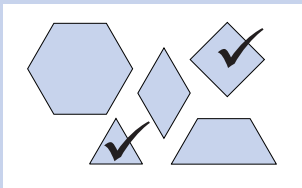

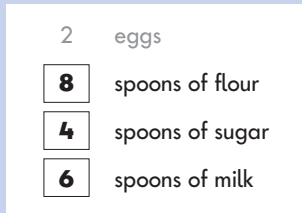
Mark scheme for the level 2 test

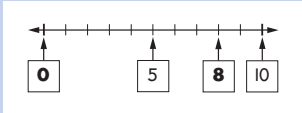
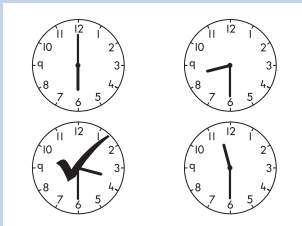
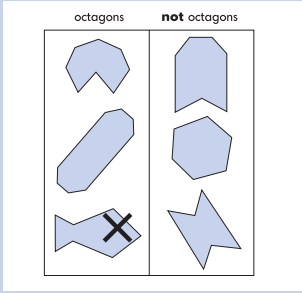
Oral


Question	Answer	Mark	Additional guidance
Practice	40	none	
1	52	1	
2	1 (p)	1	
3	Tick by square and rectangle.	1	Accept any other clear way of indicating the correct shapes. Do not award the mark if extra shapes are indicated unless it is clear that the square and rectangle are the child's final choice.
4	Writes 10 in each triangle as shown: 	1	Do not award the mark for other pairs of numbers that multiply to give 100.
5	6 (sides)	1	

Written

Question	Answer	Mark	Additional guidance
Practice	22 (p)	none	
6	30 (p)	1	
7	Arrows drawn joining the numbers in order from 21 to 36 to 59 to 67 to 90 as shown: 	1	Accept any other clear way of indicating the correct order. The arrowheads do not need to be correctly positioned or present for the award of the mark. ♦ Do not award the mark if any number is linked to additional numbers or not all the numbers are linked in the correct order, eg 90 joined to 21.

Question	Answer	Mark	Additional guidance
8	20	1	
9	December or 57 written instead of December.	1	Accept any reasonable spelling. Accept any other clear way of indicating December, eg ticking it on the table, or writing 'D' in the answer box.
10	Ticks the triangle and the square as shown: 	1	Accept any other clear way of indicating the triangle and the square, eg joining them with a line. Do not award the mark if extra shapes are ticked unless it is clear that the triangle and the square are the child's final choice.
11 (U1)	Tick by $6 + 2 + 8 = 16$	1	Accept any other clear way of indicating the correct response. Do not award the mark if more than one addition is ticked unless it is clear that the correct one is the child's final choice.
12	Writes: 15 in the first box and 8 in the second box, ie 	1	
13	Draws a straight line between 11.7cm and 12.3cm inclusive.	1	◆ Only award the mark for lines within the given tolerance.
14a	4	1	◆ Do not award either mark if the answers to Q14a and Q14b are given in the wrong order.
14b (U1)	3	1	
15	Writes: 	1	All numbers must be correct for the award of the mark.

Question	Answer	Mark	Additional guidance
16	Crosses on 15 and 7 and 9	1	Accept any other clear way of indicating the correct response. Do not award the mark if extra numbers are crossed unless it is clear that the correct ones are the child's final choice.
17	43	1	
18	3 (children)	1	
19	Writes both missing numbers as shown: 	1	◆ Both numbers must be correct for the award of the mark.
20	70	1	
21	Clock on bottom left ticked as shown: 	1	Accept any other clear way of indicating the correct response. Do not award the mark if extra clocks are ticked unless it is clear that the correct one is the child's final choice.
22 (U1)	Writes: 742, 247, 274, 427 and 472 in any order.	1	◆ All five numbers must be given for the award of the mark. If all five numbers listed in the answer column are given, then you may disregard any duplicates.
23	Cross drawn on shape as shown: 	1	Accept any other clear way of indicating the correct response. Do not award the mark if extra shapes are crossed unless it is clear that the correct one is the child's final choice.

Question	Answer	Mark	Additional guidance
24	<p>Completes the tally for 13 children as shown:</p> 	1	<p>Accept also the tally drawn in a different place on the page.</p> <p>◆ Do not accept an arrangement of six lines for a group of five. The group of three lines must be presented as three vertical lines.</p>
25	20 (cherries)	1	
26	29	1	
27	15 (years)	1	
28 (U1)	<p>60 (litres)</p> <p>This mark may be awarded for children who have the wrong answer but a complete and correct method that is communicated clearly.</p> <p>Use the acceptable and unacceptable responses given on pages 24 and 25 to help make your decision.</p>	<p>2</p> <p>OR</p> <p>1</p>	<p>Award both marks for the correct answer by entering 1 in each mark box.</p> <p>◆ A child with a correct answer can be awarded two marks even if they have failed to record a correct method or any method at all, since it can be assumed that they used a correct mental method to reach their answer.</p> <p>If mark awarded, enter 1 then 0 in the mark boxes.</p> <p>One mark may be awarded to children who have failed to record the correct answer, provided they have demonstrated a complete and correct method for identifying 12 lots of five. (This method might be numerals, signs, words or diagrams or any mixture of these.)</p>

Maximum marks: 30

Examples of responses from question 28

1 mark

0 marks

Children are not required to give an answer to their calculation, provided they describe a complete and correct method. Sarah has not given an answer for her calculation. However, she can be awarded the mark since she described a complete and correct method. Jenny also described a correct method. However, her method is not complete since she has not recorded which part of the five times table she used. Jenny cannot be awarded any marks.

12×5

litres

Sarah

1

0

I did my 5-times table

65 litres

Jenny

0

0

Children who give a written description of what they do must describe a complete and correct method. Bradley has described a complete and correct method. He has made an error in his calculation of 12 fives. However, he can be awarded the mark since his method is complete and correct. However, Roza's method is not complete since she has not demonstrated that she intended to count on 12 lots of five. Therefore Roza cannot be awarded the mark.

I counted in fives until I got 12 fives

65 litres

Bradley

1

0

I started at 5 and I
finished at 55
I counted on five

55 litres

Roza

0

0

Children must record a correct method for the award of the mark. Hannah and Arun have both used number lines to help them answer the question; this is an efficient method. Hannah's number line starts at 0 and includes 12 jumps of five. She made one error in recording her 12 jumps. However, she used a correct method and can therefore be awarded one mark. Arun's number line also includes 12 jumps of five. However, Arun has not realised that his number line should start at 0. Therefore Arun's method is incorrect and cannot be awarded a mark.

55 litres

Hannah

1

0

65 litres

Arun

0

0

Examples of responses from question 28 – continued

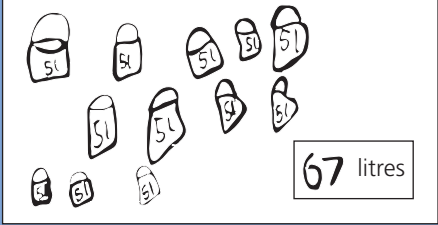
1 mark

0 marks

Children who use a counting method must record a complete method and display evidence of interpreting it correctly.

Chi has drawn 12 buckets, each labelled with five litres. However, he made an error when adding the fives to reach an answer of 67. Chi can be awarded a mark since he displayed the intention to count 12 lots of five; a complete and correct method.

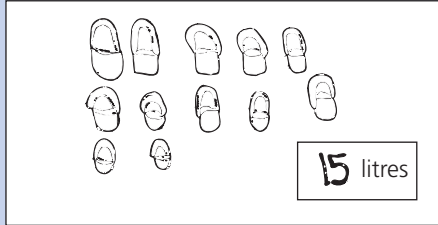
Omar has also drawn 12 buckets. However, his answer of 15 does not suggest that he has attempted to treat each bucket as representing a five. Therefore his method is not complete and cannot be awarded a mark.



Chi

1

0

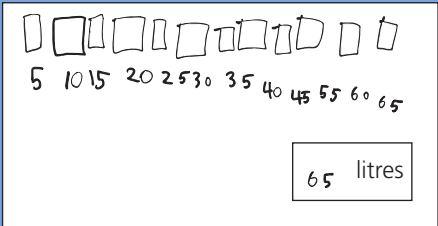


Omar

0

0

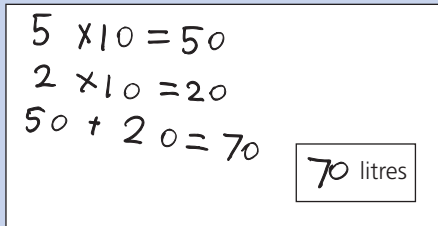
Children must record a complete and correct method. Louise has drawn 12 buckets, she has then counted up in fives to match the buckets. However, she has missed one number out. Despite this error her method is complete and correct so she can be awarded the mark. Kishan has attempted to use a multiplication method involving partitioning. However, he has not partitioned correctly. Kishan cannot be awarded the mark since his method is incorrect.



Louise

1

0

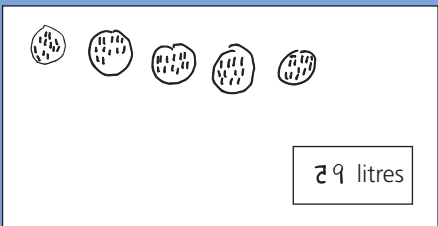


Kishan

0

0

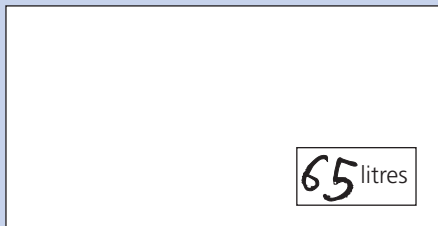
Children must record a complete and correct method for the award of the mark. Kirski has drawn five groups of 12. She has made an error in counting to reach an incorrect total. However, she can be awarded the mark since her method is both complete and correct. Craig has recorded a value that is close to the correct answer of 60. However, since he has not recorded his method we cannot assume that his method was complete or correct. Therefore Craig cannot be awarded any marks.



Kirski

1

0



Craig

0

0

Finding the level

Add up each child's total score for the test out of the maximum of 30 marks (not including the practice questions), and write this total in the box marked 'Score' on the front of the child's test booklet. Then refer to the table below to find the level and grade, and enter this on the front of the booklet in the box marked 'Level and grade'. This information will then be available to transfer onto any recording or reporting document.

Evidence shows that it is easy to make careless slips in adding up total scores, and these slips could disadvantage the child. Particular attention should be paid to two-mark questions and those instances where two marks should be awarded for recording a correct answer only. **Thorough checking and rechecking are, therefore, strongly recommended.**

If a child achieves level 2A on this test, you may enter him or her for the level 3 test. You should use your judgement to decide whether it is appropriate to enter children who have only just been awarded level 2A for the level 3 test.

Number of marks	0–4	5–6	7–12	13–18	19–30
Level	No level achieved	Level 1 achieved	Level 2C achieved	Level 2B achieved	Level 2A achieved

Administering the level 3 test

Resources

This test is designed for children working at level 3.

For both the oral and written questions, each child will need:

- a copy of the level 3 test booklet;
- a pen or pencil;
- a ruler with which they are familiar. It is assumed that children working at level 3 will have experience of rulers graduated in half centimetres;
- a mirror; and
- a rubber (optional). You may obtain more useful diagnostic information if you encourage your children to leave their working out on the page and to cross out their mistakes rather than rubbing them out. If rubbers are not provided:
 - you should tell children that they may cross out any answers they wish to change;
 - you should keep a rubber in readiness for children who wish to change answers they have drawn (such as lines or shapes) where changes may be clearer by rubbing than by crossing out.

Please note:

Number apparatus is **not** allowed for use with this test.

No other support materials should be given to the children taking the level 3 test, for example structured apparatus consisting of tens and units, clocks or clock faces, number lines or squares, addition squares, multiplication squares, calculators or any representation of money (toy or real).

Wall displays such as tables charts, number lines or number squares should be covered or removed. However, it is not necessary to remove wall clocks.

Advance preparation

To help children with the reading, you may write words on the board and briefly check that children can recognise them, but you should not explain their meaning. For this test these words may include: *addition, multiplication, hexagon, symmetry, bounces, correct, diagram, sequence, equal* and *halfway*. Remind the children that you (the teacher) may help them with reading during the test.

Administering the test fairly

In order to ensure that the test is administered fairly in different classrooms, it is important that all teachers behave in a similar way while the test is in progress.

THEREFORE YOU MUST:

- ensure that children can work undisturbed, individually and without access to materials that could give them an unfair advantage. Changes to the usual classroom layout may be necessary. It is important that you decide on seating arrangements before the start of the test, in order to ensure that children cannot see each other's work;
- ensure that the children work on their own and do not discuss questions or copy answers. Some teachers have found one or more of the following strategies helpful to ensure that children cannot see each other's work: seating children at the ends of tables; seating children individually in a larger space; providing a blank sheet of paper to cover completed work on the open page; using large picture books, etc, to create table screening between children;
- observe the children throughout the test to ensure that they do not copy or distract each other;
- encourage the children to stay on task and to work at an appropriate pace, moving on to the next question promptly when it is clear that they cannot spend any more time productively on the question they are working on; and
- encourage children to check their work carefully when they have finished.

DO NOT:

- give help with the mathematics as this will invalidate the assessment;
- re-present questions on addition or subtraction vertically when they are presented horizontally in the test booklet;
- suggest to the children the mathematical operation to use;
- give clues which help the children to interpret what any question requires them to do;
- rephrase, or rewrite, any questions except where indicated in *Assistance for the written questions*;
- prompt children to confirm or change answers by pointing, frowning, smiling, head shaking or nodding, offering rubbers, or asking leading questions.

Teachers of children learning English as an additional language or with special educational needs should refer to the further guidance on pages 6–9 of this guide.

Starting the test

Give each child a level 3 test booklet, and make sure they have the resources they need. Ask the children to write their name in the space provided on the front of the booklet and introduce the test in your own words, making sure you cover the points outlined in ‘Introducing the characters in the booklet’ and ‘Introducing the level 3 oral questions’ (below) then in ‘Introducing the level 3 written questions’ (page 34) at the appropriate times. To ensure that the testing is carried out in a standard way in all schools, it is important that your introduction does not exceed this information.

Introducing the characters in the booklet

The two characters remove the need for children to read a variety of unfamiliar names in the test.

Ask the children to open their booklet. Introduce the characters in the test booklet to the children. Read the names with the children to ensure that they will recognise them when they meet them in the booklet.

Explain that some other children may also be mentioned in the test.

Ask the children to close their booklets while you introduce the level 3 oral questions.

Introducing the level 3 oral questions

These questions will be read aloud by you. Guidance on what to say to the children is given overleaf.

The first question is a practice question. It is not part of the assessment so you may help the children to understand the format, what they should do and where they should write their answer.

Children are allowed to use space on the test paper for working out their answers if necessary.

There is no time limit on each question, so the length of time taken will depend on the speed of the children. Proceed from one question to the next when you feel that all the children have had ample opportunity to work out the answer.

The text to be read aloud is shown in italics in the next section, ‘Working through the level 3 oral questions’. The questions themselves are shown in bold italics. The language highlighted in bold text is part of the assessment, and **you should not rephrase it or give explanations of terms used.**

Tell the children:

- *I will read aloud some questions for you to answer.*
- *I will read each question twice, leaving a short gap in between.*
- *If you want to hear the question a third time, put up your hand.*
- *You must listen very carefully when I read the questions.*
- *The first question is a practice question which we will all do together.*
- *I will explain how to write answers to each question.*
- *You will have plenty of time to work out the answers.*
- *You must work on your own and you must not call out the answers.*
- *If you make a mistake, cross it out/rub it out* neatly and write the answer clearly (*as appropriate).*
- *When you have finished answering a question, look up so that I know you have finished.*

Working through the level 3 oral questions

Ask the children to open their booklet.

Explain:

- *the boxes are for you to write your answers in;*
- *the letters below each box show you which box to use for each question;*
- *you can do any working out in the white spaces around the boxes, if you need to.*

Where necessary, you can show the children how to draw a tick, cross, etc.

Remember to repeat the question.
Repeat the **bold text** only.

Practice question

Teacher:

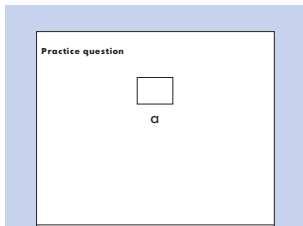
This is a practice question for us to do together.

Find box a.

[Help with locating the box where necessary.]

Add 23 and 20.

Write your answer in box a.



Afterwards, ensure that children know the number they should have written, and discuss methods the children used to work out the answer. Allow any children to change their answers by crossing out or rubbing out, to make sure they know the way to correct errors.

Question 1

Teacher:

Find box b.

Emma is 21 years old today.

Her father is 24 years older.

How old is Emma's father?

Write your answer in box b.

Question 2

Teacher:

Turn over the page.

Look at the map.

Go to start.

Follow this route, from there.

Go to the end of Park Street.

Turn left.

Go to the fourth house on the right.

Draw a ring around it.

Question 3

Teacher:

Find box c.

There are 52 children on the bus.

19 get off.

[Stress the 'teen' in 19 to avoid confusion with 90.]

How many children are left on the bus?

Write your answer in box c.

Question 4

Teacher:

Look at the next page.

Find box d.

Harry multiplied two numbers together.

His answer was 120.

Which two numbers could he have multiplied together?

Write your answer in box d.

Question 5

Teacher:

Look at the shapes.

One shape is a pentagon and has a right angle.

Tick the correct shape.

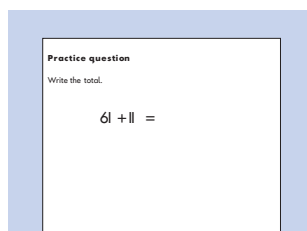
Introducing the level 3 written questions

Ask the children to close their booklets and to listen carefully while you introduce the written questions.

Tell the children:

- *I will do one practice question with all of you, and then you will go on by yourselves.*
- *Read each question, work out the answer and then write it in the space provided in the booklet.*
- *Always read what you are asked to do. Don't guess.*
- *You can have as much help as you need with reading words in the questions, but you can't have help with reading numbers or working out answers. If you need help with reading, put up your hand but don't call out.*
- *(Optional) These are some of the harder words in the test. We will read them together now. [You may read any of the words on display as detailed on page 27 but do not explain these words in any way. You may read them again for any child as necessary during the test.]*
- *There is plenty of space in the booklet, which you can use for working out, writing or drawing your answers.*
- *If you are asked to show how you work something out, write or draw how you got your answer since you can get a mark for doing that.*
- *You may use the ruler and mirror that I have provided (see page 27).*
- *If you make a mistake, you should change your answer by crossing/rubbing* it out (*as appropriate).*
- *Some questions are harder than others; if you cannot do one question, go on to the next one which might be easier; go back to the harder ones later if you wish; you may not be able to complete all the questions, but do as many as you can.*
- *Take as long as you need to finish all the questions you can do.*
- *When you have done all you can, check your answers.*
- *Don't discuss the questions with anyone or copy answers.*

Working through the level 3 written questions



- Ask the children to turn to page 6 of their booklet and find the practice question.
- Help the children to work through the practice question. Allow them to answer the question before you discuss it.
- The practice question is not part of the test, and you can spend as much time as you like helping the children to understand the format, what they should do and where they should write their answers.
- Ask the children to start working on their own from question 6, unless you are reading the questions with the children.
- You can stop the testing whenever you judge it necessary, for example if you feel a child is becoming too unsettled or has done as much as possible.

Assisting children with the written questions

Reading the written questions

You may read the test to groups of children, using the ‘look and listen’ method, as outlined on page 5.

If you choose for children to work independently through the test, you should give help with reading words as necessary. In general, you should not read numbers or symbols in the test booklet. You should not explain the wording of the questions in any way except to rephrase as permitted in *Assistance for the written questions*. In these circumstances, you may need to be aware of more fluent readers who do not ask for the help they need to read unfamiliar words.

Rephrasing the written questions

There should be no written adaptations of the text. However, some words in the test may be rephrased, or explained, if these are not familiar to the children where these are not mathematical terms and therefore not part of what is being tested. **It is very important not to exceed the permissible support.**

Other assistance

Apart from the guidance given above, and in *Assistance for the written questions*, no other assistance is allowed.

Marking the level 3 test

General guidance

When the children have completed the test, mark each answer right or wrong. The mark scheme helps you to identify the appropriate answers and tells you how many marks to allocate to each answer. Mark boxes have been provided in the margin of the test booklet, beside each question. For consistency, it is recommended that you enter 1 (mark awarded), 0 (question attempted but mark not awarded) or ‘–’ (question not attempted) in each mark box. These codes correspond with those used on the optional grid for test analysis. In addition, a box has been provided at the bottom right-hand side of each double-page spread to enter the total marks the child obtains for the set of questions that appear on the two pages. This is to help you to be accurate and efficient when totalling marks but its use is optional.

The symbol ‘◆’ is used in the *Additional guidance* column in the mark scheme on pages 39–43 to indicate where you should pay particular attention to the mark scheme. Responses indicated in this way are those which were most likely to be marked incorrectly during trials of the tests.

Questions with a *Using and applying mathematics* element are identified in the mark scheme by an encircled U with a number that indicates the significance of using and applying mathematics in answering the question. For example, in a question with two marks, U2 would indicate great significance, while U1 would indicate some significance. The ‘U number’ for a two-mark question might be U1 or U2. A one-mark question might also have U1.

If a child has altered an answer or the answer is not clear, try to establish his or her final intention. You may occasionally need to talk with children individually to check this. Be sure to use open questions that do not suggest the required answer.

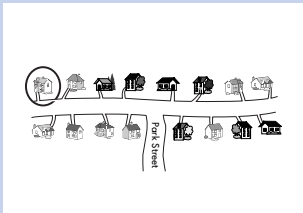
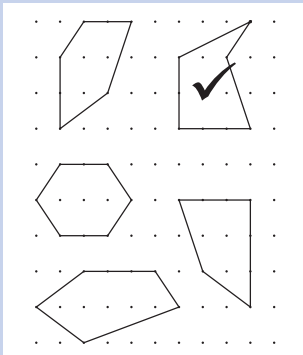
Any numerical answer is acceptable in word or number form unless otherwise stated.

Possible issues when marking

The child reverses a digit when recording	A reversed digit is acceptable if it is clearly recognisable as the digit intended; for example, a reversed 2 must clearly show the characteristics of a 2 rather than a 5.
The child writes a transposed number as the answer	Transposed numbers should not be awarded the mark: for example, an answer of '16' when the correct answer is '61' should not be marked as correct.
The child's response is numerically equivalent to the answer in the mark scheme	The mark scheme will generally specify which equivalent responses are allowed. If this is not the case, award the mark unless the mark scheme states otherwise.
The child's answer is correct but the wrong working is shown	Always award the mark(s) for a correct response unless the mark scheme states otherwise.
The correct response has been crossed (or rubbed) out and not replaced	Mark any legible crossed-out work that has not been replaced according to the mark scheme. If the work has been replaced, then do not consider the crossed-out work.
The child has worked out the answer correctly and then written an incorrect answer in the answer box	Give precedence to the answer given in the answer box over any other workings. However, there may be cases where the incorrect answer is due to a transcription error, in which case you may check the child's intention and decide whether to award the mark.
More than one answer is given	If all answers given are correct (or a range of answers is given, all of which are correct), award the mark unless the mark scheme states otherwise. If both correct and incorrect responses are given, do not award the mark unless the mark scheme states otherwise.
The child's response does not match closely any of the examples given in the mark scheme	Judge whether the response corresponds with the requirements in the <i>Answer</i> column of the mark scheme. Refer also to the <i>Additional guidance</i> column and to the <i>Examples of responses</i> (where appropriate).
There appears to be a misread of numbers affecting the working	In general, the mark should not be awarded. However, in two-mark questions that have a working mark, award one mark if the working is applied correctly using the misread numbers, provided that the misread numbers are comparable in difficulty to the original numbers. For example, if '243' is misread as '234', both numbers may be regarded as comparable in difficulty.
No answer is given in the expected place, but the correct answer is given elsewhere	Where a child has shown understanding of the question, award the mark. In particular, where a word or number response is expected, a child may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.
The child's answer correctly follows through from earlier incorrect work	'Follow through' marks may be awarded only when specifically stated in the mark scheme.

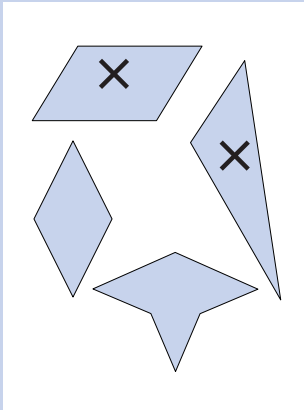
Mark scheme for the level 3 test

Oral

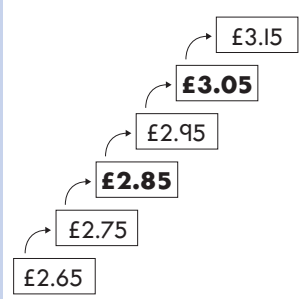
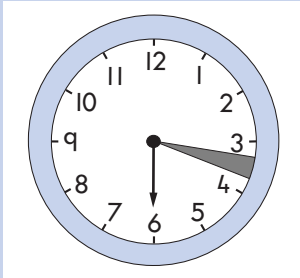
Question	Answer	Mark	Additional guidance
Practice	43	none	
1	45 (years)	1	
2	<p>Ring drawn around house as shown:</p> 	1	<p>Accept any other clear way of indicating the correct house, eg line drawn from the start to the correct house.</p> <p>Do not award the mark if more than one house is indicated unless it is clear that the correct house is the child's final choice.</p>
3	33 (children)	1	
4	<p>Writes any one of these factor pairs, in either order:</p> <p>1 and 120; 2 and 60; 4 and 30; 5 and 24; 6 and 20; 8 and 15; 10 and 12.</p>	1	<p>Accept also any correct answer that uses fractions, eg $240 \times \frac{1}{2}$</p> <p>Accept more than one pair, provided all the given pairs are correct.</p>
5	<p>Shape on top right ticked as shown:</p> 	1	<p>Accept any other clear way of indicating the correct response.</p> <p>Do not award the mark if extra shapes are indicated unless it is clear that the correct one is the child's final choice.</p>

Written

Question	Answer	Mark	Additional guidance
Practice	72	none	
6	247	1	
7	<p>Matches each addition to the correct multiplication as shown:</p> <div><div><div>4+4+4+4+4</div><div>3+3+3</div><div>6+6+6+6+6</div><div>6+6+6</div></div><div><div>3 × 4</div><div>6 × 5</div><div>3 × 3</div><div>6 × 4</div><div>4 × 5</div><div>6 × 3</div></div></div> <p>Matches two of the additions to the correct multiplication.</p>	2 	

Question	Answer	Mark	Additional guidance
<p>12</p> <p>U1</p>	<p>16 (coins)</p> <p>This mark may be awarded for children who have a wrong answer between 13 and 19 inclusive and a complete and correct method that is communicated clearly.</p> <p>Use the acceptable and unacceptable responses given on pages 44 and 45 to help make your decision.</p>	<p>2</p> <p>OR</p> <p>1</p>	<p>Award both marks for the correct answer by entering 1 in each mark box.</p> <p>◆ A child with a correct answer can be awarded two marks even if they have failed to record an appropriate method or any method at all, since it can be assumed that they used a correct mental method to reach their answer.</p> <p>If mark awarded, enter a 1 then 0 in the mark boxes.</p> <p>One mark may be awarded to children who have failed to record the correct answer, provided they have demonstrated a complete and correct method for identifying the number of 20p coins needed to make £3.20 and have given an answer between 13 and 19 inclusive. (This method might be numerals, signs, words or diagrams or any mixture of these.)</p>
<p>13</p>	<p>Top two shapes crossed as shown:</p> 	<p>1</p>	<p>Accept any other clear way of indicating the correct shapes, eg ticks rather than crosses on the correct shapes.</p> <p>◆ Do not award the mark if the bottom two shapes are ticked and there are no crosses on the top two shapes.</p> <p>Do not award the mark if extra shapes are indicated unless it is clear that the correct shapes are the child's final choice.</p>

Question	Answer	Mark	Additional guidance				
14a	Jo and Yin in either order.	1	Accept any reasonable spelling. Accept also 'J' or 'Y' written in the boxes instead of Jo and Yin.				
14b	36 or 37 (times)	1					
15	37	1					
16	239	1					
17	<div>U1</div> <p>This mark may be awarded for children who have a method that communicates clearly how 16×5 could have been calculated.</p> <div>Use the acceptable and unacceptable responses given on pages 46 and 47 to help make your decision.</div>	1	<p>Award the mark if the method they communicate clearly indicates that they have attempted to record 16 lots of five or five lots of 16 using a complete and correct method. (This method might be numerals, signs, words or diagrams or any mixture of these.)</p> <p>Do not accept $80 \div 5 = 16$ or $80 \div 16 = 5$ since this is not a method for working out $16 \times 5 = 80$</p>				
18	<p>Writes Sita's and Harry's names as shown:</p> <table><tr><td></td><td>Sita</td></tr><tr><td>Harry</td><td></td></tr></table>		Sita	Harry		1	<p>Accept any reasonable spelling. Accept also 'S' or 'H' written in the boxes instead of Sita and Harry.</p> <p>Both names must be correctly positioned for the award of the mark.</p> <p>Do not award the mark if either name is given in more than one box.</p>
	Sita						
Harry							

Question	Answer	Mark	Additional guidance
19	<p>Writes £2.85 and £3.05 in the correct boxes as shown:</p> 	1	<p>Accept £2.85p, £2-85p, £2:85p, £2 85 (with a clear space between the 2 and 8) or £3.05p, £3-05p, £3:05p, £3 05 (with a clear space between the 3 and 0).</p> <p>Do not accept £285p or £305p or £3.5p</p>
20	<p>One hand points at 6 and one hand points between 3 and 4:</p> 	1	<p>◆ Do not award the mark if the hour hand points directly at the 3 or 4.</p> <p>Accept hands of any length on the clock face provided that one hand points to 6 and the other hand points anywhere within the shaded sector on the clock.</p> <p>Accept slight inaccuracies in drawing provided that the child's intention is clear.</p>
21a U1	<p>Writes: 83 + 65 or 65 + 83 or 85 + 63 or 63 + 85</p>	1	
21b	<p>148 or correctly adds the pair of numbers given for Q21a even if Q21a was not correctly answered, eg $86 + 53 = 139$</p>	1	<p>◆ Accept the correct total for the pair of numbers given for Q21a.</p>
22	1 (m) 20 (cm)	1	
23	12	1	
24	70 (minutes)	1	Accept 1hr 10 minutes
25	370	1	
26	857	1	

Maximum marks: 30

Examples of responses from question 12

1 or 2 marks

0 marks

Children who record a correct answer should automatically be awarded two marks. Adam can be awarded two marks for reaching the correct answer even though his method is not described clearly. Victoria has recorded a value that is close to the correct answer of 16. However, since she has not recorded her method we cannot assume that it was either correct or complete. Therefore Victoria cannot be awarded any marks.

I worked it out on my fingers.

16 coins

7 coins

Children must record a complete and correct method for the award of the mark *and* indicate an answer between 13 and 19 inclusive. Holly has clearly recorded the number of 20p coins needed to make £3.20. She has made an error in counting to reach an answer of 19. Holly can be awarded the mark since, despite the counting error, her method is correct and complete and her answer is in the given range. Jordan has recorded one way to reach £3.20 and has recorded an answer in the given range. However, his method is not worth any marks since he has not recorded a strategy for counting the 20p coins needed.

[illegible]

4 of 40 = 80 + 20 = £1
and another 2 + 20 = £3 20

13 coins

Children must record a complete and correct method for the award of the mark *and* indicate an answer between 13 and 19 inclusive. Steven has drawn the correct number of coins needed to make £3.20. Since he has recorded a complete and correct method he may be awarded the mark, because although his answer is incorrect it is in the given range. Parveen has recorded three hundreds plus more coins. However, her method is incomplete since she has not demonstrated how she would work out the number of 20p coins needed. Parveen cannot be awarded any marks.

The diagram illustrates the exchange of 10 coins for 100 coins. It consists of three rows of boxes. The top row has five boxes, each containing '20'. The middle row has five boxes, each containing '20'. The bottom row has four boxes, each containing '20', and one box below them containing '100'. To the right of these rows is a box containing the text '14 coins'.

A hand-drawn diagram illustrating a sequence of operations. A speech bubble contains four boxes: the first three contain the number '100' and the fourth contains a coin icon. Below the speech bubble is a box labeled '170 coins'.

Examples of responses from question 12 – continued

1 or 2 marks

0 marks

Children are required to give a correct answer between 13 and 19, along with a complete and correct method. Sanjay has counted up in twenties until he reached 320. Although he has made an error in numbering each 20, he can be awarded the mark for a complete and correct method within the correct range. Louisa has also recorded an answer in the correct range. However, her method is not complete since although it is clear what each five represents in her addition it is not clear what the two represents. Louisa cannot be awarded the mark.

Sanjay

1 coin 2 coins 3 coins 4 coins 5 coins
 20 40 60 80 100 120
 6 coins 7 coins 8 coins 9 coins
 140 160 180 200
 10 coins 11 coins 12 coins
 220 240 260
 13 coins 14 coins 15 coins
 280 300 320

15 coins

1
0

Louisa

$5 + 5 + 5 + 2 = 17$

17 coins

0
0

Children must record a complete and correct method, along with an answer between 13 and 19. Alice has recorded the correct number of 20p coins in groups of £1. However, she has made an error in counting these coins to reach the answer 15. Alice can be awarded the mark, despite this error, since her method is complete and correct. Freddie has repeatedly added 20p coins. However, his method is less systematic. He stops recording before he reaches £3.20, therefore his method is not complete. He cannot be awarded the mark even though his answer is in the correct range.

Alice

$20 + 20 = 40$ $40 + 20 + 20 = 80$
 $+ 20$
 $\frac{5}{20} 20 + 20 + 20 + 20 + 20 = 100$
 $\frac{5}{20} 20 + 20 + 20 + 20 + 20 + 20 = 120$

15 coins

1
0

Freddie

20, 40, 60, 80
 £1.00 £1.20 £1.40 £1.60 £1.80
 £2.00 £2.20 £2.40 £2.60
 £2.80

15 coins

0
0

Children who give a written description of what they do must describe a complete and correct method, along with an answer between 13 and 19. Tonya has shown that five 20p coins make £1, and that three lots of five and one more coin make £3.20. Tonya's method is complete and correct, but with an arithmetic error in the calculation. Therefore she can be awarded the mark since her answer is in the given range. Harvey has said that he counted in twenties. However, he has not recorded how he counted in twenties or that he counted until he reached £3.20. Even though Harvey has recorded an answer in the given range, he cannot be awarded the mark since his method is not complete.

Tonya

I already know that 5 twentys make a pound so I worked out 5×3 and added on another 20

13 coins

1
0

Harvey

I counted in 20s and I got up to 15 20ps

15 coins

0
0

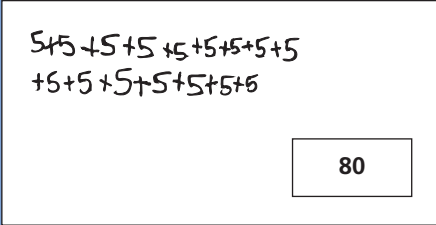
Examples of responses from question 17

1 mark

0 marks

Children must record a complete and correct method for the award of the mark. Nasreen has recorded an addition involving 16 lots of five. Nasreen can therefore be awarded the mark since her method is complete and correct. Robert has described counting in fives. However, he has not demonstrated the intention to count 16 lots of five. Robert's method is not complete so he cannot be awarded the mark. If Robert's description had referred to counting 16 fives, or counting in fives to 80, he could have been awarded the mark.

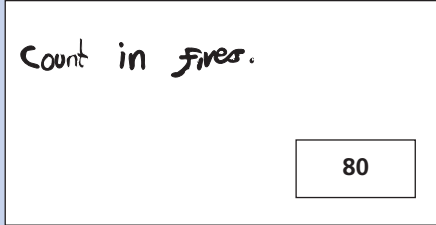
Nasreen



80

1

Robert

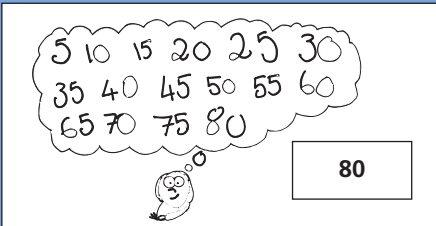


80

0

Children must record a complete and correct method for the award of the mark. Thomas used a repeated addition method to add 16 fives to reach 80. He can be awarded the mark for a complete and correct method. Chloe has also counted up in fives. However, her method is not correct since she used the 16 given in the question incorrectly as her starting number. Chloe cannot be awarded the mark.

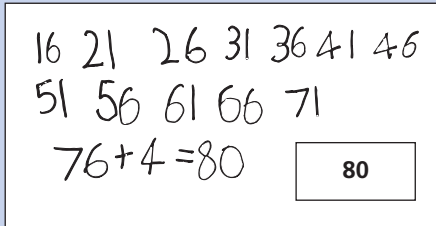
Thomas



80

1

Chloe

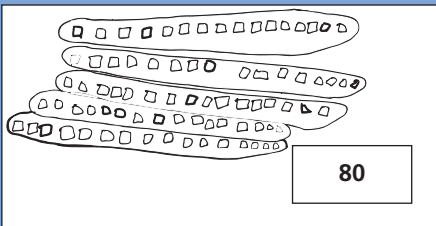


80

0

Children must record a complete and correct method for the award of the mark. Ryan has used a pictorial method to record five groups of 16. This is a complete and correct method that can be awarded the mark. Raj has recorded a correct number fact. However, the calculation he recorded is not a method for working out the answer, since it is the inverse operation only and a possible checking strategy. Therefore Raj cannot be awarded the mark.

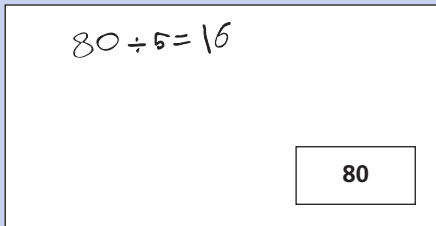
Ryan



80

1

Raj



80

0

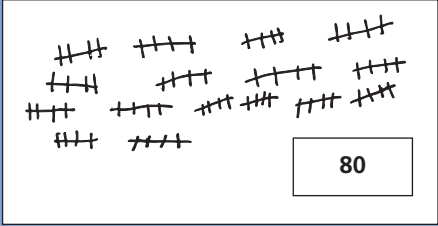
Examples of responses from question 17 – continued

1 mark

0 marks

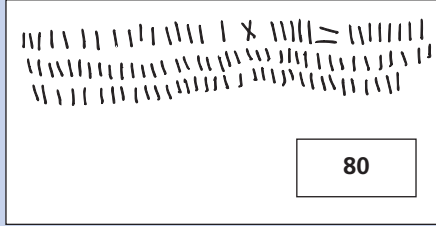
Children must record a complete and correct method for the award of the mark. Callum has used tally marks to record 16 groups of five. This is a complete and correct method that can be awarded the mark. Rebecca has restated the problem using tally marks. However, she has not shown how the 80 tallies could be grouped in fives or sixteens. Rebecca cannot be awarded the mark since her method is not complete.

Callum



80 1

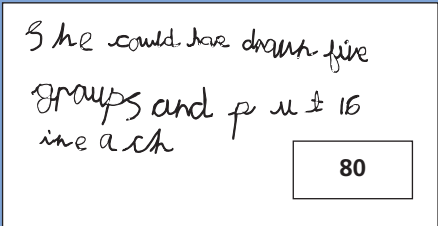
Rebecca



80 0

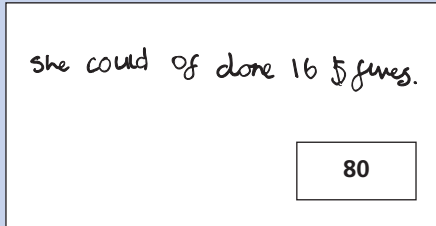
Children must record a complete and correct method for the award of the mark. Many children drew 16 sets of five tallies or wrote the number 16 five times; Amir has described this process in words. Amir has described a complete method and can therefore be awarded the mark. Scott has written something similar but in fact has only interpreted 16×5 as 16 fives. He has not gone on to describe a method so cannot be awarded the mark.

Amir



80 1

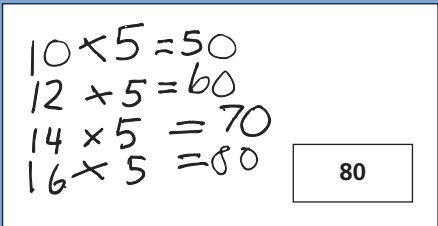
Scott



80 0

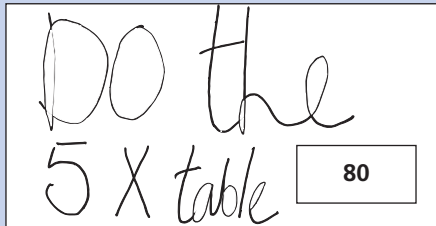
Children must record a complete and correct method for the award of the mark. Adam has built on his understanding that $10 \times 5 = 50$ to demonstrate that $16 \times 5 = 80$. His method is complete and correct so he can be awarded the mark. Jessica has also recognised a need to use the $\times 5$ multiplication table. However, she has not demonstrated how this could be used. Therefore her method is not complete so she cannot be awarded a mark.

Adam



80 1

Jessica



80 0

Finding the level

Add up each child's total score for the test out of the maximum of 30 marks (not including the practice questions), and write this total in the box marked 'Score' on the front of the child's test booklet. Then refer to the table below to find whether the level was achieved, and enter this on the front of the booklet in the box marked 'Level'. This information will then be available to transfer onto any recording or reporting document.

Evidence shows that it is easy to make careless slips in adding up total scores, and these slips could disadvantage the child. Particular attention should be paid to two-mark questions and those instances where two marks should be awarded for recording a correct answer only. **Thorough checking and rechecking are, therefore, strongly recommended.**

If a child does not achieve level 3 in this test, and has not already been assessed at level 2, you must enter him or her for the level 2 test.

If a child scores very highly on this test (at or near 100 per cent), you should consider whether further assessment, using one of the following options, is appropriate:

- the optional tasks to support teacher assessment for more able children. These tasks are available on QCA's website at www.qca.org.uk/ca/tests with exemplar material and commentaries from teachers to support the level awarded for the task;
- taking an optional end-of-year test early, eg year 3 or year 4; or
- early entry for the end of key stage 2 tests if the child has completed the programmes of study for key stage 2 and is about to move into the programmes of study for key stage 3.

Number of marks	0–10	11–30
Level	Level 3 not achieved	Level 3 achieved

Age standardised scores

This section provides age standardised scores from the 2004 key stage 1 mathematics tests. The scores are for **optional** use, and you need only refer to this section if you wish. The purpose of the information set out here is to allow you to convert the child's actual score in the tests – the 'raw score' – to an age standardised score. Age standardised scores take into account the child's age in years and months, so you have an indication of how each child is performing relative to other children of the same age. However, age standardised scores will not affect the child's level of achievement in the national curriculum as awarded by the outcome of the tests.

The tables were calculated from the results of standardisation trials of each test with over 2,000 children in a nationally representative sample of schools. The information in the tables is specific to each test and cannot be used for any others.

Calculating age standardised scores

You will need each child's test score and age at the time of testing, in years and *completed* months. For example, a child born on 30 March 1997 and tested on 15 May 2004 would be 7 years and 1 month old.

Using the tables on pages 51 and 52, you can convert the raw test score into an age standardised score by:

- locating the child's age in years and completed months at the time the test was taken, along the top of the table;
- locating the child's raw test score down the left side of the table;
- reading off the standardised score from where the row and column meet.

The average standardised score is 100. A higher score is above average and a lower score is below average. About two-thirds of the children will have standardised scores of between 85 and 115. Almost all children fall within the range 70 to 130, so scores outside this range can be regarded as exceptional.

Making use of age standardised scores

If you choose to work out age standardised scores, you may use this additional information about the children's performance in various ways. For example:

- Age standardised scores could be averaged across a group, for example a class or year group. In the average school, year group or class, the mean score should be close to 100; if it is much above or below this, the performance of your class or school varies from the national 'average'.
- You may include it as part of the information to parents, eg *an age standardised score of 112 shows us that the test performance was above average for his or her age.*

- You may be able to identify patterns and results which indicate teaching and learning issues to be addressed, eg *the difference in older/younger children's performance*.
- Similarly, age standardised scores can be used to consider differences in performance between boys and girls, or children who have English as an additional language and those who do not. In order to provide useful information, these groups need to be reasonably large; small groups will not provide reliable information.
- The progress made by an individual, a class or a school can be monitored from one year to the next. Age standardised scores can be calculated and reported for individual children. However, because of the nature of the scores and the fact that they are a statistical estimate (see 'Confidence bands' below), the scores are much more reliable when calculated for groups of children. In addition, if reported to parents, the fact that a child who is making typical progress from year to year will remain on a similar age standardised score will need to be explained.

National comparisons – using the shaded bands

The table of standardised scores for the level 2 test is divided into five shaded bands. These bands give an indication of how the scores relate to the national population. The band nearest the top of a table contains the scores that correspond to the lowest fifth of the population; the next band, the next fifth; and so on. If a child has a score in the final band, you know that his or her score is in the top 20 per cent nationally, once age has been taken into account. The level 3 test provides bands for the top three fifths of the population only.

For both the level 2 and the level 3 age standardised scores tables, very low and very high scores are printed in the table as ***. This means that they would be below the lowest score in the table or above the highest, but cannot be calculated with the necessary degree of statistical reliability. If an exact score is needed, for example to calculate an average for the class on the level 2 paper, the next score below (69) or above (121) should be used as appropriate for these children.

Confidence bands

Any scores derived from a short test are subject to some margin of error. A margin of error does not mean children have been assessed incorrectly. It is simply a statistical estimate, based on the fact that tests can only sample the particular area of learning which they assess. To indicate how wide this margin of error is likely to be, a '90 per cent confidence band' has been calculated. This means that you can be 90 per cent sure that the child's true score lies within the confidence band. The 90 per cent confidence band for the level 2 test is plus or minus 8 marks and plus or minus 10 marks for the level 3 test. So, for example, if a child has a standardised score of 110 in the level 2 test, you can be 90 per cent certain that the true score is between 102 and 118.

Mathematics test – level 2

Raw score	Age in years and months																		
	6.05	6.06	6.07	6.08	6.09	6.10	6.11	7.00	7.01	7.02	7.03	7.04	7.05	7.06	7.07	7.08	7.09	7.10	7.11
0	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
3	73	72	71	70	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
4	78	77	76	76	75	74	73	72	71	70	***	***	***	***	***	***	***	***	***
5	81	81	80	79	79	78	77	76	76	75	74	73	72	71	70	***	***	***	***
6	84	83	83	82	82	81	80	80	79	78	77	77	76	75	74	73	72	72	71
7	86	85	85	84	84	83	83	82	81	81	80	79	79	78	77	76	76	75	74
8	87	87	86	86	85	85	84	84	83	83	82	82	81	80	80	79	78	78	77
9	89	89	88	88	87	87	86	85	85	84	84	83	83	82	82	81	80	80	79
10	91	90	90	89	89	88	88	87	86	86	85	85	84	84	83	83	82	82	81
11	92	92	91	91	90	90	89	88	88	87	87	86	86	85	85	84	84	83	83
12	94	93	93	92	91	91	90	90	89	89	88	88	87	87	86	86	85	85	84
13	95	95	94	93	93	92	92	91	91	90	90	89	89	88	88	87	87	86	85
14	96	96	95	95	94	94	93	93	92	92	91	90	90	89	89	88	88	87	87
15	98	97	97	96	96	95	95	94	93	93	92	92	91	91	90	90	89	89	88
16	99	98	98	97	97	96	96	95	95	94	94	93	93	92	92	91	91	90	89
17	100	99	99	98	98	98	97	97	96	96	95	95	94	94	93	92	92	91	91
18	101	100	100	100	99	99	98	98	97	97	96	96	95	95	94	94	93	93	92
19	102	102	101	101	100	100	99	99	99	98	98	97	97	96	96	95	95	94	94
20	103	103	102	102	102	101	101	100	100	99	99	99	98	98	97	97	96	96	95
21	105	104	104	103	103	102	102	101	101	101	100	100	99	99	98	98	98	97	97
22	106	106	105	105	104	104	103	103	102	102	102	101	101	100	100	99	99	99	98
23	108	108	107	107	106	105	105	104	104	103	103	103	102	102	101	101	100	100	100
24	111	110	109	109	108	108	107	106	106	105	105	104	104	103	103	102	102	102	101
25	113	113	112	111	111	110	110	109	108	108	107	107	106	105	105	104	104	103	103
26	117	116	115	115	114	113	113	112	111	111	110	110	109	108	108	107	107	106	105
27	***	120	119	119	118	118	117	116	116	115	114	114	113	112	112	111	110	110	109
28	***	***	***	***	***	***	***	***	***	120	120	119	118	118	117	116	116	115	114
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Very low and very high scores are printed in the table as ***.

This means that they would be below 70 or above 120.

Mathematics test – level 3

Raw score	Age in years and months																		
	6.05	6.06	6.07	6.08	6.09	6.10	6.11	7.00	7.01	7.02	7.03	7.04	7.05	7.06	7.07	7.08	7.09	7.10	7.11
0	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
4	100	99	99	98	97	***	***	***	***	***	***	***	***	***	***	***	***	***	***
5	103	102	102	101	100	99	99	98	97	***	***	***	***	***	***	***	***	***	***
6	105	105	104	103	103	102	101	101	100	99	98	97	***	***	***	***	***	***	***
7	107	106	106	105	105	104	103	103	102	101	101	100	99	98	97	***	***	***	***
8	108	108	107	107	106	106	105	104	104	103	102	102	101	100	100	99	98	97	***
9	110	109	108	108	107	107	106	106	105	105	104	103	103	102	101	101	100	99	98
10	111	110	110	109	109	108	108	107	107	106	105	105	104	104	103	102	102	101	100
11	113	112	111	111	110	109	109	108	108	107	107	106	106	105	104	104	103	103	102
12	114	113	113	112	111	111	110	109	109	108	108	107	107	106	106	105	104	104	103
13	116	115	114	113	113	112	111	111	110	109	109	108	108	107	107	106	106	105	105
14	118	117	116	115	114	113	113	112	111	111	110	109	109	108	108	107	107	106	106
15	120	119	118	117	116	115	114	113	113	112	111	111	110	109	109	108	108	107	107
16	122	121	120	119	118	117	116	115	114	114	113	112	111	111	110	109	109	108	108
17	124	123	122	121	120	119	118	117	116	115	114	114	113	112	111	111	110	110	109
18	126	125	124	123	122	121	120	119	118	117	116	115	114	114	113	112	111	111	110
19	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	114	113	112	112
20	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	116	115	114	113
21	132	131	130	129	128	127	127	126	125	124	123	122	121	120	119	118	117	116	115
22	134	133	132	132	131	130	129	128	127	126	125	124	123	122	121	120	119	118	117
23	136	135	134	134	133	132	131	130	130	129	128	127	126	125	124	123	122	121	120
24	137	137	136	136	135	134	134	133	132	131	130	129	129	128	127	126	125	124	123
25	139	139	138	138	137	137	136	135	135	134	133	132	132	131	130	129	128	127	126
26	***	***	***	139	139	139	138	138	137	137	136	135	135	134	133	132	132	131	130
27	***	***	***	***	***	***	***	***	139	139	139	138	138	137	136	136	135	135	134
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	139	139	138	138
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Very low and very high scores are printed in the table as ***.

This means that they would be below 97 or above 139.

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