

Ma

Level 2 and level 3

KEY STAGE

1

LEVELS

2&3

2003

Mathematics tests

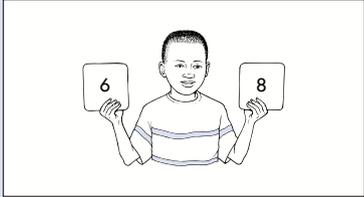
Teacher's guide

Level 2

Key stage 1
Level 2
Mathematics booklet
2003

Name

Score Level and grade



Level 3

Key stage 1
Level 3
Mathematics booklet
2003

Name

Score Level



department for

education and skills

creating opportunity, releasing potential, achieving excellence

2003



Guarding standards

First published in 2003

© Qualifications and Curriculum Authority 2003

Reproduction, storage, adaptation or translation, in any form or by any means, of this publication is prohibited without prior written permission of the publisher, unless within the terms of licences issued by the Copyright Licensing Agency. Excerpts may be reproduced for the purpose of research, private study, criticism or review, or by educational institutions solely for educational purposes, without permission, provided full acknowledgement is given.

Produced in Great Britain by the Qualifications and Curriculum Authority under the authority and superintendence of the Controller of Her Majesty's Stationery Office and Queen's Printer of Acts of Parliament.

The Qualifications and Curriculum Authority is an exempt charity under Schedule 2 of the Charities Act 1993.

Qualifications and Curriculum Authority
83 Piccadilly
London
W1J 8QA
www.qca.org.uk/

Contents

Background information	3
Specific guidance	6
Administering the level 2 test	11
Marking the level 2 test	19
Finding the level	28
Administering the level 3 test	30
Marking the level 3 test	38
Finding the level	48
Age standardised scores	49

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 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 grade A on the level 2 test should normally be entered for the level 3 test, unless you feel that they would be unable to cope with the demand of this 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;
- 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 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 22 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 2003. **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 page 7.

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 13–14 for the oral questions and pages 17–18 for the written questions. Guidance for the level 3 test is provided on pages 32–33 for the oral questions and pages 36–37 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.

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 grid 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 on to 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, including 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 means appropriate to them: 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.**

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. Some research that QCA has carried out 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 best 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;
- 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’.

- 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 test paper 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 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; this could be the child's special support assistant.

Children with hearing impairments should be given 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 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 in order to avoid altering the nature of the assessment within any question. For example:

Level 2 question 2: *Find box c.*

Think of an odd number between 32 and 42.

If the child cannot lip read, use flash cards with 32 and 42 on them.

Write the odd number in box c.

Level 3 question 2: Use *a school* instead of *Park School*.

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 should 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.

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.

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.

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 41 in the 2003 *Assessment and reporting arrangements* booklet for key stage 1.

Additional teacher's notes will be included with the modified large print materials.

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 with reading, you may write the following words from the written part of the test on the board before the test begins: *marbles, space, weather, equally, altogether, sequence, cylinder, halfway, balloons, hexagons*. The meaning of mathematical terms should not be discussed.

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;
- ensure that wall displays, etc in the classroom do not give children an unfair advantage, for example tables charts, number lines or number squares should be covered or removed. However, it is not necessary to remove wall clocks;
- 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;
- 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 7–10 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 17) 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

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 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 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.]

Add four and four.

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 to the correct one by crossing out or rubbing out, to make sure they know the way to correct errors.

Question 1

Teacher: *Find box b.*

Add these three numbers: five and five and five.

Write your answer in box b.

Question 2

Teacher: *Turn over the page.*

Find box c.

Think of an odd number between 32 and 42.

Write the number in box c.

Question 3

Teacher: *Look at the words in box d.*

The words say:

kilograms, metres, hours, centimetres, litres.

One of the words completes this sentence.

Ella is 97 [one clap] tall.

Tick the correct word in box d.

Question 4

Teacher: *Look at the next page.*

How many months are there in one year?

Write your answer in box e.

Question 5

Teacher: *Find box f.*

What number must Desi subtract from 23 to get an answer of 16?

[Stress the 'teen' in 16 to avoid the confusion with 60.]

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 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. [Read the words on display as specified on page 11 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 11). [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 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 questions in any way except to rephrase as permitted in *Assistance for the written questions*. 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 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 numeric answer is acceptable in word or number form unless otherwise stated.

Possible issues when marking

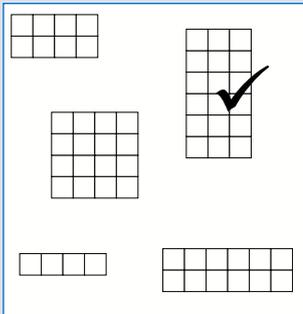
The child reverses a digit when recording	A reversed digit is acceptable if it is clearly recognisable as the digit intended; for example, a reversed 2 must clearly show the characteristics of a 2 rather than a 5.
The child writes a transposed number as the answer	Transposed numbers should not be awarded the mark; for example, an answer of '61' when the correct answer is '16' 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 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.

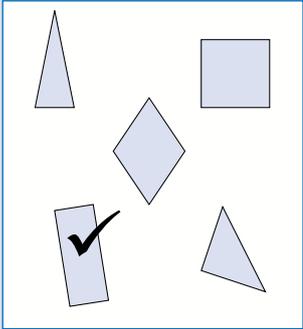
Mark scheme for the level 2 test

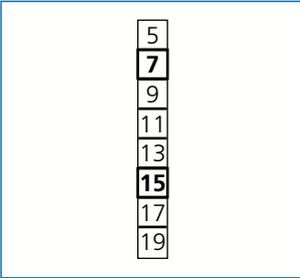
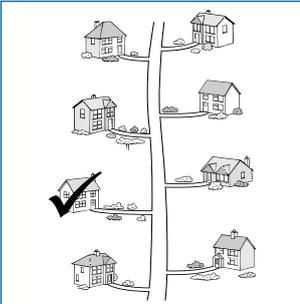
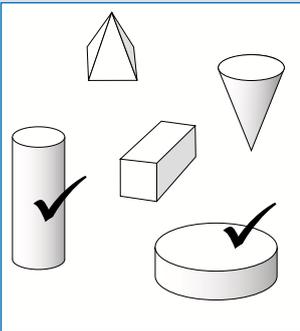
Oral

Question	Answer	Mark	Additional guidance
Practice	8	none	
1	15	1	
2	Any odd number between 33 and 41 inclusive, ie: 33 or 35 or 37 or 39 or 41	1	Accept more than one number given, provided all numbers are correct.
3	Tick by centimetres.	1	Accept any other clear way of indicating the correct answer, eg cm written in the grey box. Do not award the mark if more than one word is indicated unless it is clear that the correct one is the child's final choice.
4	12 (months)	1	
5	7	1	

Written

Question	Answer	Mark	Additional guidance
Practice	15 (birds)	none	
6	Box on top right ticked as shown: 	1	Accept any other clear way of indicating the correct response. Do not award the mark if more than one box is indicated unless it is clear that the correct one is the child's final choice.

Question	Answer	Mark	Additional guidance
7	Rectangle ticked as shown: 	1	Accept any other clear way of indicating the correct response. Do not award the mark if more than one shape is indicated unless it is clear that the correct one is the child's final choice.
8 (U1)	Writes in upper shapes any two numbers that total 17, eg 8 and 9. Writes in lower shapes any two different numbers that total 17, eg 11 and 6.	1 1	 Do not award the second mark if both calculations are identical or if the child uses the same numbers in reverse order, eg writes 5 + 12 for the first total and 12 + 5 for the second total. Accept 0 and 17 written in one of the pairs of shapes.
9	15 (p)	1	Accept 10p and 5p, or a drawing of the two coins, without an answer written in the answer box.
10	60	1	
11	4 (mornings)	1	
12	35 (p)	1	Do not accept an indication of the correct coins unless the correct answer is also written elsewhere in the answer space.
13	Writes numbers in correct order as shown: 28 43 51 64 89	1	Accept any clear way of indicating the correct numbers in the correct order, eg arrows drawn from numbers to boxes. Accept one transcription error, eg 52 written instead of 51. Numbers must be in the same order as in the answer column, even if one is transcribed incorrectly.

Question	Answer	Mark	Additional guidance
14	34 (pencils)	1	
15	15	1	
16	Writes 7 and 15 as shown: 	1	
17	House ticked as shown: 	1	Accept any other clear way of indicating the correct response, eg drawing a line from the start to the house. Do not award the mark if more than one house is ticked unless it is clear that the correct one is the child's final choice.
18	Writes the same number in the two boxes.	1	Accept '0' in the two boxes. Do not award the mark if the number is written in only one of the boxes.
19	19	1	
20a	9 (children)	1	
20b	23 (children) or 14 more than the number given for Q20a even if Q20a was not correctly answered.	1	 Accept a number that is 14 more than the number given for Q20a.
21	Two cylinders ticked as shown: 	1	Accept any other clear way of indicating the two cylinders. Do not award the mark if extra shapes are indicated unless it is clear that the correct two are the child's final choice.

Question	Answer	Mark	Additional guidance
22 (U1)	Writes 1 and 3 in this order: <div style="border: 1px solid black; padding: 5px; display: inline-block;"> $\boxed{10} + \boxed{23} = \boxed{33}$ </div>	1	<p> Both digits must be correct for the award of the mark.</p>
23	Rectangle divided into 4 equal parts, eg <div style="border: 1px solid black; padding: 5px; display: inline-block;"> </div>	1	<p>Accept slight inaccuracies in drawing provided the child's intention is clear, eg</p> <ul style="list-style-type: none"> ■ a child who has not used a ruler must indicate correct start and end points, even if their lines are not quite correct between these; ■ a child who uses a ruler must have a line that is correctly oriented, but the ends of the lines may be slightly off the appropriate points.
24	105	1	
25	4 (packs)	1	Do not accept 3 remainder 3 or similar.
26	Shapes crossed as shown: <div style="border: 1px solid black; padding: 5px; display: inline-block;"> </div>	1	<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 two incorrect shapes are ticked and there are no crosses on the correct two shapes.</p> <p>Do not award the mark if extra shapes are indicated unless it is clear that the correct two are the child's final choice.</p>

Question	Answer	Mark	Additional guidance
<p>27 U1</p>	<p>24 (green sweets)</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> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Use the acceptable and unacceptable responses given on pages 26 and 27 to help make your decision.</p> </div>	<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 subtracting 20 and 16 from 60. (This method might be numerals, signs, words or diagrams or any mixture of these.)</p>

Maximum marks: 30

Examples of responses from question 27

1 or 2 marks

0 marks

Children who record a correct answer should automatically be awarded two marks. Khalilah can be awarded two marks for reaching the correct answer even though she does not describe a complete and correct method. Kennie may have understood what was required. However, we cannot assume from his description that he counted on up to 60 to reach his incorrect answer. Therefore his method is not complete and cannot be awarded the mark.

Khalilah

I counted on my fingers

24 green sweets

1

1

Kennie

I + 20 and 16 and added until I got the answer

21 green sweets

0

0

Children are not required to give an answer to their calculation, provided they describe a complete and correct method. Jasmin has not given an answer to her calculation. However, she can be awarded the mark since she has recorded a complete method. Thomas has recorded a value that is close to the correct answer. However, we cannot assume that he has used a correct method since he has not recorded any workings. Therefore Thomas cannot be awarded a mark.

Jasmin

$60 - 20 - 16 =$

green sweets

1

0

Thomas

25 green sweets

0

0

Children must record a complete method for the award of the mark. Kofi has correctly added 20 and 16, he has then attempted to add a number to 36 to give the answer 60. Despite making an error in his second calculation, Kofi has recorded a complete method and may therefore be awarded a mark. Anita has added 20 and 16, she has then added two tens and a four to reach 60. The method she has recorded does not demonstrate which numbers in her calculations provide the total of green sweets. Therefore Anita's method is not complete and cannot be awarded a mark.

Kofi

$20 + 16 = 36$
 $36 + 26 = 60$

26 green sweets

1

0

Anita

$20 + 16 = 36$
 $36 + 10 = 46$
 $46 + 10 = 56$
 $56 + 4 = 60$

34 green sweets

0

0

Examples of responses from question 27 – continued

1 mark

0 marks

Children must record a complete and correct method for the award of the mark. Joshua recorded an addition to show the final number that he thought would add to 20 and 16 to total 60. This number is incorrect. However, he can be awarded the mark for a complete and correct method. Kathryn used a partitioning method to add 20 and 16. She has then continued by adding 30 and subtracting 6 to reach 60. However, the final mental stage of her method is incorrect so she cannot be awarded the mark.

Joshua

$25 + 20 + 16 = 60$

25 green sweets

1

0

Kathryn

60 Sweets

$20 + 10 = 30$

$30 + 6 = 36$

$36 + 30 = 66$

$66 - 6 = 60$

36 green sweets

0

0

Children who use a counting method should record the number of red and yellow sweets and use a counting method which indicates 60 as the total number of sweets. Jake has counted on from his, incorrect, number of red and yellow sweets to reach a correct total. Since his number of red and yellow sweets was correctly labelled and close to the correct number we can assume that he intended to record 20 and 16. His response therefore demonstrates a correct method and is worth one mark. Rebecca has recorded the correct number of red and yellow sweets, but has only recorded 52 sweets in total. Rebecca's method is incorrect since we cannot assume that she intended to record 60 sweets; she cannot be awarded any marks.

Jake

yellow/red sweets

Green sweets

25 green sweets

1

0

Rebecca

16 green sweets

0

0

Children who give a written description of what they do must describe a complete and correct method. Bethany has described a complete and correct method. She can be awarded the mark, even though she has made a numerical error somewhere in her calculation. Amit has described a complete method. However, his method is not correct since he has added 4 to 30 rather than taking 6 away. Therefore Amit cannot be awarded a mark.

Bethany

60 of the ten blocks took away 20 so that is the red sweets then took away 16 by taking another 10 blocks off and then taking six off and then counting the rest

26 green sweets

1

0

Amit

$30 + 30 = 60$

and there were 36 not green so I thought that 6 and 4 makes ten so that's how I got it.

34 green sweets

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 on to 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; thorough checking and rechecking are, therefore, strongly recommended.

If a child achieves level 2A on this test you should normally enter him or her for the level 3 test.

Number of marks	0–4	5–6	7–13	14–18	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 with reading, you may write the following words from the written part of the test on the board before the test begins: *signs, altogether, amounts, digit, diagram, addition, birthday, seasons, shaded, estimate, pentagon, hexagon, heptagon, octagon, correct*. The meaning of mathematical terms should not be discussed.

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;
- ensure that wall displays, etc in the classroom do not give children an unfair advantage, for example tables charts, number lines or number squares should be covered or removed. However, it is not necessary to remove wall clocks;
- 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;
- 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 7–10 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 36) 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

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 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 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.]

Listen to this sequence.

I will clap where a number is missing.

103 203 303 [one clap] 503 603

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 to the correct one by crossing out or rubbing out, to make sure they know the way to correct errors.

Question 1

Teacher: *Find box b.*

Write the number one thousand and six.

Write the number in box b.

Question 2

Teacher: *Turn over the page.*

Find box c.

Two classes at Park School go on a visit.

Each class has 30 children and 6 grown-ups.

[Pronounce the 'ty' in 30 clearly to avoid confusion with 13.]

How many go on a visit altogether?

Write your answer in box c.

Question 3

Teacher: *Find box d.*

Imagine a cube.

Four faces are yellow, the rest are blue.

How many faces are blue?

Write your answer in box d.

Question 4

Teacher: *Look at the next page.*

Find box e.

Five is a quarter of a number.

What is the number?

Write your answer in box e.

Question 5

Teacher: *Find box f.*

How many grams equal one kilogram?

Write your answer in box f.

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. [Read the words on display as specified on page 30 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 30).*
- *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 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 questions in any way except to rephrase as permitted in *Assistance for the written questions*. 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 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 numeric 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 '61' when the correct answer is '16' 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 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.

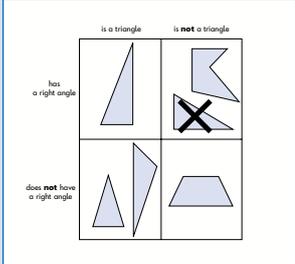
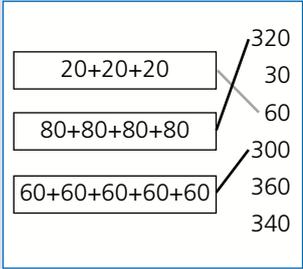
Mark scheme for the level 3 test

Oral

Question	Answer	Mark	Additional guidance
Practice	403	none	
1	1006	1	
2	72	1	
3	2 (faces)	1	
4	20	1	
5	1000 (grams)	1	

Written

Question	Answer	Mark	Additional guidance
Practice	$90 - 70 = 20$ or $90 = 70 + 20$	none	
6	$20 \div 4 = 5$ or $20 = 4 \times 5$	1	
7	7 (teams)	1	
8	300	1	
9	200	1	
10	Writes the amounts in order as shown: <div style="border: 1px solid black; padding: 5px; display: inline-block;"> £7.07 £7.70 £70.07 £70.70 </div>	1	Accept any clear way of indicating the correct order, eg arrows. All four numbers must be in the correct order for the award of the mark. Do not accept transcription errors, eg £7.77 written instead of £7.70 Accept the values given in reverse order.
11	Tom and Vicky in either order or 7.45 am and 8.15 am written instead of Tom and Vicky.	1	Accept any reasonable spelling. Accept any other clear way of indicating Tom and Vicky, eg 'T' and 'V' written in the answer boxes, or names ticked on diagram. Both children must be correct for the award of the mark.

Question	Answer	Mark	Additional guidance
12a (U1)	987	1	
12b (U1)	798	1	<p>☞ Do not award the mark for 789. This is the smallest number, but is not even.</p>
13	Shape crossed as shown: 	1	Accept any other way of indicating the correct response. <p>Do not award the mark if more than one shape is indicated unless it is clear that the correct shape is the child's final choice.</p>
14	20 (minutes)	1	
15	Joins $80+80+80+80$ to 320, as shown below. <p>Joins $60+60+60+60+60$ to 300, as shown below.</p> 	1 1	<p>Do not award a mark if the addition is joined to more than one answer.</p> <p>Ignore any extra lines drawn from $20+20+20$.</p>
16	127	1	
17	123 (cm)	1	Accept 1m 23 (cm).
18a	Autumn and Winter in either order. <p>or</p> 10 and 8 written instead of Autumn and Winter.	1	Accept any reasonable spelling. <p>Accept also 'A' or 'W' written in the boxes instead of Autumn and Winter.</p>
18b	15 (children)	1	

Question	Answer	Mark	Additional guidance
<p>19 U1</p>	<p>9 (cartons)</p> <p>This mark may be awarded for children who:</p> <p>a) have the wrong answer but a complete and correct method that is communicated clearly;</p> <p>or</p> <p>b) have written a number greater than 8 and less than 9, or 8 remainder 2 as evidence of an appropriate method.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Use the acceptable and unacceptable responses given on pages 44 and 45 to help make your decision.</p> </div>	<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 sharing 50 cups into groups of six. (This method might be numerals, signs, words or diagrams or any mixture of these.)</p>
<p>20</p>	<p>Shades 4 more complete squares to bring the total number of shaded squares to 6.</p>	<p>1</p>	<p>Accept any other clear way of indicating the correct answer, eg ticking.</p> <p>Accept part squares shaded provided the shaded parts of the squares are equivalent to 4 whole squares.</p> <p>Do not award the mark if more than 4 extra squares are shaded unless it is clear that the correct number of squares are the child's final choice.</p>
<p>21</p>	<p>Writes any number between 26 and 35 inclusive.</p>	<p>1</p>	

Question	Answer	Mark	Additional guidance
22	£7.65	1	Accept £7.65p, £7-65, £7:65, £7 65 (with a clear space between the 7 and 6). Do not accept £765p or £765
23	Tick by octagon.	1	Accept any other clear way of indicating the correct name. Do not award the mark if more than one name is ticked unless it is clear that the correct one is the child's final choice.
24	<p>This mark may be awarded for children who have a method that communicates clearly how $70 \div 5$ could have been calculated.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Use the acceptable and unacceptable responses given on pages 46 and 47 to help make your decision.</p> </div>	1	Award the mark if the method they communicate clearly indicates that they have attempted to split 70 into groups of five or 14 using a complete and correct method. (This method might be numerals, signs, words or diagrams or any mixture of these.)
25	254	1	
26	<p>Writes any one of these factor pairs, in either order:</p> <p>1 × 150; 2 × 75; 3 × 50; 5 × 30; 6 × 25; 10 × 15.</p>	1	Accept also any correct answer that uses fractions, eg $300 \times \frac{1}{2}$

Maximum marks: 30

Examples of responses from question 19

1 mark

0 marks

A child who gives an answer that is **greater than 8 and less than 9** should be awarded one mark. For this question it is possible for children to identify a correct method and complete their calculation correctly, yet fail to be awarded two marks because they do not interpret their answer in the context of the question. Sunita has not recorded a method. However, she can be awarded one mark because she has given $8\frac{1}{2}$ as her answer. Thomas has given $9\frac{1}{2}$ as his answer, therefore we cannot assume that he used a correct method. Thomas cannot be awarded a mark.

Sunita

$8\frac{1}{2}$ cartons

1
 0

Thomas

$9\frac{1}{2}$ cartons

0
 0

Children who do not give an answer between 8 and 9 must record a complete and correct method for the award of the mark. Chen recognises that $5 \times 6 = 30$, he then builds on this to deduce that $7 \times 6 = 42$ and adds another 6 plus 2.

However, he incorrectly interprets his method to reach an answer of $7\frac{1}{2}$. Chen has recorded a complete and correct method, despite the error in his calculation. Since Chen's method is complete and correct he can be awarded one mark even though his answer is outside the given range. Rachel has recorded correct calculations. However, her method is not complete since she did not take account of all 50 cups. Consequently her answer is outside the allowed range, so she cannot be awarded any marks.

Chen

$$5 \times 6 = 30 + 6 = 36$$

$$6 \times 6 = 36 + 6 = 42$$

$$7 \times 6 = 42 + 6 = 48 + 2 = 50$$

$7\frac{1}{2}$ cartons

1
 0

Rachel

$$12 \times 2 = 24$$

$$24 \times 2 = 48$$

8 cartons

0
 0

Children must record a complete and correct method, if their answer is outside the given range, for the award of the mark. Jenny has recorded an answer outside the given range. However, she can be awarded the mark for a complete and correct method that accounts for 48 cups plus a few more.

Bradley has recorded calculations that involve adding 12, the number of cups that can be filled with two cartons. However, his method is not correct as he does not show any awareness that he should consider adding just one more carton as he nears the told number of cups required. His response could indicate that he has decided that two more cartons were required after 48 cups, rather than two more cups. This takes his answer outside the allowed range, so Bradley cannot be awarded a mark.

Jenny

$$6 + 6 + 6 + 6 + 6 + 6 + 6 = 48$$

$$48 + 2 \frac{1}{2} \text{ pots} = 8$$

8 cartons

1
 0

Bradley

~~12~~

$$12 + 12 = 24 +$$

$$12 = 36 + 12 = 48 + 12 = 60$$

10 cartons

0
 0

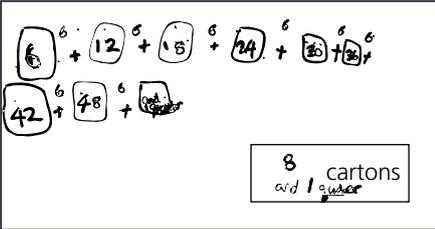
Examples of responses from question 19 – continued

1 mark

0 marks

Children who do not give an answer between 8 and 9 must record a complete and correct method for the award of the mark. James has recorded an answer between 8 and 9 so he can be awarded the mark. However, even if his answer was outside the given range he could be awarded the mark since he has recorded a complete and correct method. Like James, Rifat has drawn cartons to help her solve the problem. However, Rifat has not recorded all 50 cups. Therefore, her method is not complete and she cannot be awarded the mark since her answer is outside the allowed range.

James



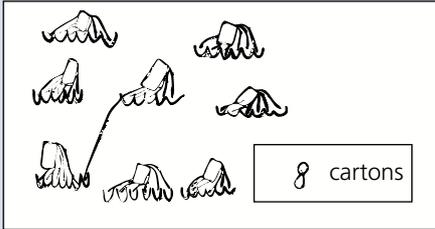
6 + 12 + 18 + 24 + 30 + 36 + 42 + 48 + 

8 cartons and 1 cup

1

0

Rifat



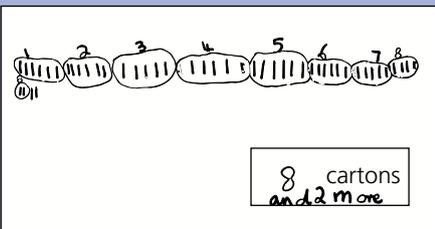
8 cartons

0

0

Children must record a complete and correct method, if their answer is outside the given range, for the award of the mark. Abena has recorded the answer '8 and 2 more'; this can be awarded the mark because it shows a value that is greater than eight and less than nine. However, even if her answer had been outside the range she could be awarded the mark for a complete and correct method. Like Abena, Hasan has drawn cups to help him solve the problem. However, Hasan has only recorded 42 cups and written '+6 more'. He has not taken account of all 50 cups, so his method is not complete and he cannot be awarded the mark since his answer is outside the allowed range.

Abena

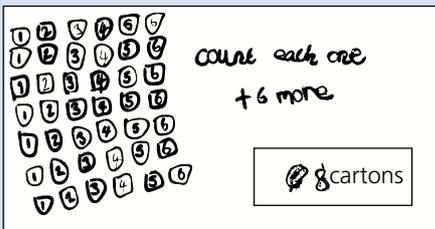


8 cartons and 2 more

1

0

Hasan



count each one +6 more

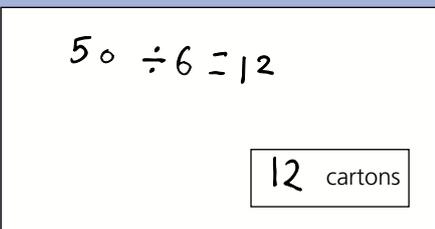
8 cartons

0

0

Children must record a complete and correct method, if their answer is outside the given range, for the award of the mark. Megan has identified a complete and correct method for solving the problem. Even though her answer shows limited understanding of division she may nevertheless be awarded the mark for showing a complete and correct method. Owen has attempted to use a number line method. However, Owen's method is not correct since his number line does not start at zero and he has not counted one carton for the first six cups; he cannot be awarded the mark.

Megan



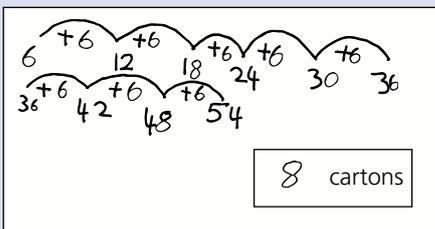
50 ÷ 6 = 12

12 cartons

1

0

Owen



6 +6 12 +6 18 +6 24 +6 30 +6 36 +6 42 +6 48 +6 54

8 cartons

0

0

Examples of responses from question 24

1 mark

0 marks

Children must record a complete and correct method for the award of the mark. Amy has correctly recorded 14 fives; this is a correct strategy for answering $70 \div 5$. We can assume that she mentally counted in fives to 70 and then counted the fives to reach 14. Therefore Amy can be awarded the mark for a complete and correct method. Samuel has described a method involving repeated subtraction of five. However, his method is not complete since he does not tell us either when he stopped or how many fives he subtracted. Samuel cannot be awarded the mark.

Amy

5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5

14

1

Samuel

70 - Lots of 5's

14

0

Children must record a complete and correct method for the award of the mark. Georgia has repeatedly added fives until she reached 70. She added 14 fives so she can be regarded as recording a complete and correct method that is worth the mark. Daniel attempted to use a repeated subtraction method. However, he does not demonstrate how the numbers he subtracts relate to the required calculation. He subtracts amounts to reach 14, rather than subtracting 14 fives to reach zero. Daniel cannot be awarded the mark since his method is both incomplete and incorrect.

Georgia

5 10 15 20 25 30 35 40 45 50
55 60 65 70

14

1

Daniel

70-15=55-15=40-15=25-5=20-5=15-1=14

14

0

Children must record a complete and correct method for the award of the mark. Shaun shared out 70 objects into five groups. Each group contained 14 objects. Shaun's method is both complete and correct, so can be awarded the mark. Jack may also have mentally counted in fives. However, he has provided insufficient information about his method. He cannot be awarded the mark since his method is incomplete.

Shaun

14

1

Jack

tally

|||| HHH IIII = 14

14

0

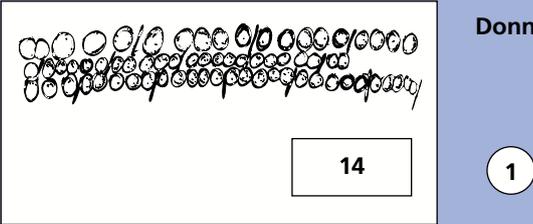
Examples of responses from question 24 – continued

1 mark

0 marks

Children must record a complete and correct method for the award of the mark. Donna has recorded 70 counters grouped into 14 lots of five. Donna's method is both complete and correct and can therefore be awarded the mark. Emma has drawn 70 circles. However, she has shown no evidence of splitting them into groups of five or 14. Emma's method is not complete so she cannot be awarded the mark.

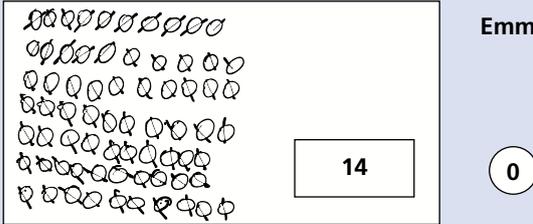
Donna



14

1

Emma

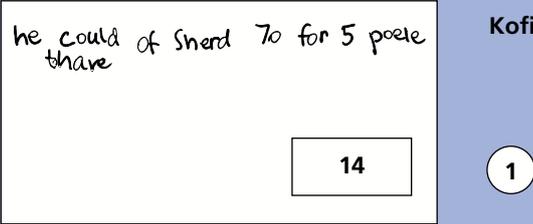


14

0

Children must record a complete and correct method for the award of the mark. Kofi has demonstrated an understanding of the \div sign by using the word *share*, which suggests groups of equal size. His description of sharing 70 between 5 people is a complete and correct method that can be awarded the mark. Sabrina describes a similar method. However, she does not show that she means equal groups so her method is not correct and cannot be awarded the mark.

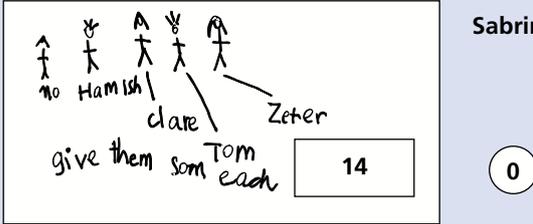
Kofi



14

1

Sabrina

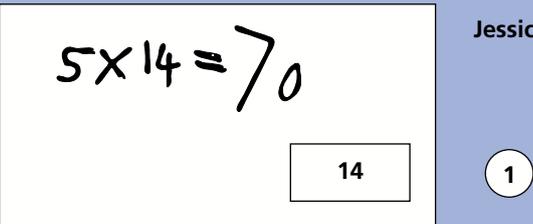


14

0

Children must record a complete and correct method for the award of the mark. Jessica has recorded a multiplication. This is equivalent to recording a repeated addition where 14 fives are added and is therefore acceptable for the award of the mark. Wayne may have intended to share 70 into 5 groups. However, his description is not complete and therefore cannot be awarded the mark.

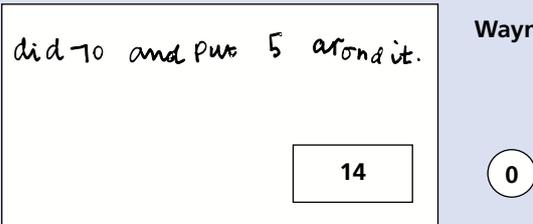
Jessica



14

1

Wayne



14

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 on to 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; 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;
- 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 2003 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.

Working out 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 1996 and tested on 15 May 2003 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 find the standardised scores, you may use this additional information about the children's performance in any way you wish. For example:

- You may decide to inform parents about how a child's performance in the test relates to his or her age at the time the test was taken, eg *a standardised score of 113 shows us that the child's performance was above average for his or her age.*
- You could use the information in planning teaching, for example to identify children whose achievement, although within the expected range, may have been surprising in relation to their age at the time of taking the test, eg *these scores were very good for these children once their age was taken into*

account – perhaps I could be stretching that group with more challenging work.

- You may be able to identify patterns in results, which indicate teaching and learning issues to be addressed, eg *the performance of girls in our middle age group is consistently better than the boys in that group, but this pattern is not repeated in the other two age groups. Why might that be? Is there something we need to think about here?*
- Standardised scores may be averaged across a group, for example the whole class or school. In the ‘average’ class or school, the average 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.
- Similarly, standardised scores could be used to consider differences in performance between boys and girls, or between children who are learning English as an additional language and those who are not, in your school. (This will give you useful information only if the group is reasonably large; the average of just a few children is not a reliable indicator.)

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 (119) 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 9 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	73	73	72	71	70	***	***	***	***	***	***	***	***	***	***
5	81	80	80	79	79	78	77	77	76	75	73	73	73	72	71	70	***	***	***	***
6	83	82	82	81	81	81	80	80	79	78	78	77	76	76	75	73	73	72	71	71
7	84	84	84	83	83	82	82	81	81	81	80	80	79	78	78	77	76	76	75	75
8	86	85	85	85	84	84	83	83	83	82	82	81	81	80	80	79	79	78	77	77
9	87	87	86	86	85	85	85	84	84	83	83	83	82	82	81	81	81	80	79	79
10	89	88	88	87	87	86	86	85	85	85	84	84	84	83	83	82	82	82	81	81
11	90	90	89	89	88	88	87	87	86	86	85	85	85	84	84	84	83	83	82	82
12	92	92	91	90	90	89	89	88	88	87	87	86	86	85	85	85	84	84	83	83
13	94	93	93	92	91	91	90	90	89	89	88	88	87	87	86	86	85	85	85	85
14	95	95	94	94	93	92	92	91	91	90	90	89	88	88	87	87	87	86	86	86
15	97	96	96	95	95	94	93	93	92	92	91	91	90	89	89	88	88	87	87	87
16	98	98	97	97	96	96	95	94	94	93	93	92	92	91	90	90	89	89	88	88
17	100	99	99	98	98	97	97	96	96	95	94	94	93	93	92	91	91	90	90	90
18	101	100	100	100	99	99	98	98	97	97	96	95	95	94	94	93	92	92	91	91
19	102	102	101	101	100	100	99	99	99	98	97	97	96	96	95	95	94	94	93	93
20	103	103	103	102	102	101	101	100	100	99	99	98	98	97	97	96	96	95	95	95
21	105	104	104	103	103	103	102	102	101	101	100	100	100	99	99	98	98	97	96	96
22	106	106	105	105	105	104	104	103	103	102	102	101	101	101	100	100	99	99	98	98
23	108	108	107	107	106	106	105	105	104	104	103	103	103	102	102	101	101	100	100	100
24	111	110	110	109	108	108	107	107	106	106	105	105	104	104	103	103	103	102	102	102
25	114	113	113	112	111	111	110	109	109	108	108	107	107	106	106	105	105	104	104	104
26	117	117	116	115	115	114	113	113	112	111	111	110	110	109	108	108	107	107	106	106
27	***	***	***	***	***	118	118	117	116	116	115	114	114	113	112	112	111	111	110	110
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	118	118	117	116	116	116
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Very low and very high scores are printed in the table as ***.
 This means that they would be below 70 or above 118.

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	99	99	98	97	97	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
5	102	102	101	101	100	99	99	98	98	97	***	***	***	***	***	***	***	***	***	***
6	104	104	103	103	102	102	101	101	100	100	99	99	98	97	97	***	***	***	***	***
7	105	105	105	104	104	104	103	103	102	102	101	101	100	100	99	99	98	97	97	97
8	106	106	106	106	105	105	105	104	104	104	103	103	102	102	101	101	100	100	100	99
9	107	107	107	107	106	106	106	105	105	105	104	104	104	103	103	102	102	101	101	101
10	108	108	108	107	107	107	107	106	106	106	105	105	105	104	104	104	103	103	102	102
11	109	109	109	108	108	108	107	107	107	107	106	106	106	105	105	105	104	104	104	104
12	111	110	110	109	109	109	108	108	108	107	107	107	107	106	106	106	105	105	105	105
13	112	111	111	110	110	110	109	109	109	108	108	108	107	107	107	107	106	106	106	106
14	113	113	112	112	111	111	110	110	110	109	109	108	108	108	108	107	107	107	106	106
15	115	115	114	113	113	112	112	111	111	110	110	109	109	109	108	108	108	107	107	107
16	117	116	116	115	114	114	113	113	112	111	111	111	110	110	109	109	109	108	108	108
17	119	118	118	117	116	116	115	114	114	113	112	112	111	111	110	110	110	109	109	109
18	121	121	120	119	118	118	117	116	115	115	114	113	113	112	112	111	111	110	110	110
19	124	123	122	121	120	120	119	118	117	117	116	115	115	114	113	113	112	112	111	111
20	126	125	124	124	123	122	121	120	120	119	118	117	117	116	115	115	114	113	113	113
21	128	128	127	126	125	124	124	123	122	121	121	120	119	118	118	117	116	115	115	115
22	131	130	129	128	128	127	126	126	125	124	123	122	122	121	120	119	119	118	117	117
23	133	132	132	131	130	130	129	128	127	127	126	125	124	124	123	122	121	121	120	120
24	135	134	134	133	133	132	132	131	130	130	129	128	127	127	126	125	124	124	123	123
25	137	137	136	136	135	135	134	134	133	133	132	131	131	130	129	129	128	127	126	126
26	139	139	138	138	138	137	137	136	136	135	135	134	134	133	133	132	132	131	130	130
27	***	***	***	***	***	***	139	139	139	138	138	137	137	137	136	136	135	135	134	134
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	139	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.

EARLY YEARS

**NATIONAL
CURRICULUM
5–16**

GCSE

GNVQ

GCE A LEVEL

NVQ

**OTHER
VOCATIONAL
QUALIFICATIONS**

For more copies (for any purpose other than statutory assessment), contact:

QCA Publications, PO Box 99, Sudbury, Suffolk CO10 2SN

(tel: 01787 884444; fax: 01787 312950)

Order ref QCA/03/1067 (teacher pack)

QCA/03/1068 (pupil pack – level 2)

QCA/03/1069 (pupil pack – level 3)

255729