NUMERACY

9EP13

Test manual

YEAR 9 NUMERACY TEST
MARK SCHEME
2013.

National Numeracy Tests

Llywodraeth Cymru
Welsh Government

Introduction and overview

This test was commissioned by the Welsh Government to assess the numeracy skills of learners in Year 9.

It is an easy-to-administer test that will be standardised on a representative sample of learners from schools throughout Wales.

Sample materials, showing the style of test materials, are available on Learning Wales to familiarise learners with the format of the tests in advance. If these have not already been used, it is recommended that teachers familiarise themselves with them and decide how best to use them with their learners.

Taking the test – overview

- ***Structure and timing of the test***

Learners are provided with one test booklet.

30 minutes are allowed for this test.

If a learner is customarily given additional time to complete tasks in class, then additional time may be given for this test. For example, if a learner customarily has an extra 25 per cent of time to complete their work in class, then they can have 25 per cent of time added to the test. For guidance please refer to National Reading and Numeracy Tests – access and disapplication arrangements guidance.

5 minutes should be allowed prior to the test to give test instructions and distribute the booklets.

- ***Resources***

The resources required for the test are indicated on the front cover of the test booklet.

Each learner will need a pen or pencil (depending on what they usually write with in class), a copy of the test booklet, ruler and eraser.

Note: learners may **not** use calculators for this test.

- ***Administering the test***

It is very important to administer the test in standardised conditions to ensure that the results are reliable and a fair reflection of the learners' abilities.

Learners should not be allowed to read aloud, discuss their work or copy one another.

Learners should complete the test using a pencil or pen, depending on usual classroom practice.

The test should take up to 30 minutes in total and should be undertaken in one sitting, with no breaks.

Learners who finish early should be advised to check their work, but then be allowed to read silently, if the teacher feels this appropriate.

- ***General guidance***

During the test, help may be given to learners in reading the text but not in providing any explanation of numerical meaning. You can explain contexts but you should answer questions such as 'What does xxx mean?' by saying 'What do you think? – see if you can work it out for yourself'.

Taking the test – in detail

• *Before starting the test*

Ensure learners are seated comfortably.

Explain to learners:

- the importance of making sure their answers are clear
- how to change their answers, if necessary, by crossing out or erasing errors
- they must work individually
- they must not talk to, or copy, each other
- if they have problems, they should ask for help by raising their hand
- if they cannot read any of the text, you can read it to them and explain context, but you cannot help them with answering the questions, and that includes explaining the numerical meaning
- if they find a question too hard, they should have a go and then move on to the next one
- they have 30 minutes to complete the test
- when they have finished, they should go back and try any questions not yet attempted. Then they should check their work (this should be emphasised).

• *Administering the test*

Give each learner a copy of the test.

If appropriate, ask learners to complete the cover of the test booklet with the following details:

- first name
- last name
- class
- school
- date of birth (an accurate date of birth is needed to calculate age-standardised scores)
- date of test (an accurate date of test is needed to calculate age-standardised scores).

In order to calculate age-standardised scores, it is essential that the above information is accurate. It may be appropriate, therefore, to check the detail.

Remind them of key points, such as the importance of not spending too long on one question and of reviewing their work, then start the test.

When the whole testing time has elapsed, ask learners to finish writing.

Finally, collect in all booklets.

Access arrangements

The test has been designed to make it accessible to the majority of learners in the recommended year groups. However, a small number of learners may need some form of access arrangement to enable them to demonstrate their best attainment on the tests.

Access arrangements are adjustments to the testing conditions that may be necessary to enable an individual learner to demonstrate true attainment. The access arrangements made should reflect the normal classroom practice for learners with particular needs. These arrangements must never give a learner an unfair advantage. To decide whether an individual learner needs access arrangements, you should consider their assessment needs and the nature and extent of the support that the learner receives as part of normal classroom practice.

Special arrangements could include the following:

- a note-taker to record a learner's answers if they indicate their response in any way other than a written response
- working in a room on their own (or with an assistant)
- providing a reader for learners who have difficulty reading
- allowing additional time (see page 3).

Questions and answers

- ***Do all learners in the class have to take the test?***

The tests have been designed to allow as many learners as possible to have access to them and there is an expectation that the great majority of learners will do so. A range of access arrangements are in place to support learners taking the tests and a suite of modified tests will also be available. There may, however, be a small number of learners who are unable to participate notwithstanding these arrangements. The decision that a learner should not sit the tests is for the headteacher to make. For guidance please refer to National Reading and Numeracy Tests – access and disapplication arrangements guidance.

- ***What do I do if there is a fire alarm during the test?***

Ideally, a fire alarm practice should not be scheduled during the testing period. However, if this is unavoidable or if a real fire alarm occurs during the test, then the test must be stopped. If it is possible, note how much of the testing period remains at the point when the test is stopped. When the situation returns to normal, the test can be reconvened and the remaining time made available. Learners should be encouraged not to talk about the test content until after the test is completed.

- ***What do I do if a learner arrives late for the test?***

Ideally, the tests should be carried out when the whole class is present and there are no interruptions. For example, the test should be scheduled when none of the learners are due to attend a music lesson. However, if the late arrival is unavoidable, and the test has not been underway for more than a few minutes, you may wish to ask the learner to take the test alongside his/her peers and then provide the additional few minutes at the end of the test period. Alternatively, it may be preferable to ask the learner to engage in another quiet activity and then take the test on another occasion. If this is the case, then the learner should take the test as soon as reasonably possible (ideally on the same day) and should be encouraged not to discuss the test content with his/her peers until after the event.

- ***What do I do if a learner asks me a question?***

Try to pre-empt any questions about pencils and erasers by telling learners how to obtain extra supplies. In general, follow your usual classroom practice.

If you feel that there are learners who are prone to worry, station yourself near them and answer any questions quietly.

Genuine questions asking for clarification of what to do may be answered at the beginning of the test. Once the test is under way, only respond to children who put up their hand. Go over to them and answer their question privately.

You are allowed to read any part of the text or questions to the learners but not explain the numerical meaning. Questions such as 'Is this the right answer?' should be answered by 'I can't tell you that – check your working, then decide for yourself'.

Markscheme

- ***General marking rules***

It is essential that you apply this markscheme, the marking guidance and the general marking rules given below to your own marking, in order for the standardised scores to be valid.

- Incorrect or unacceptable answers are given a mark of 0. No half marks are awarded.
- At the end of each double page spread of marking, record the total number of marks in the 'total' box in the bottom right hand corner. Check that the mark recorded does not exceed the maximum number of marks available.
- Once the marking has been completed, add up the total number of marks awarded. This is the total score and should be recorded on the cover of the test booklet and reported on the NFER online data collection system.

Marking guidance

It is important that the tests are marked accurately. The questions and answers below help to develop a common understanding of how to mark fairly and consistently.

- ***Must learners use the answer boxes?***

Provided there is no ambiguity, learners can respond anywhere on the page. If there is more than one answer the one in the answer box must be marked, even if incorrect. However, if the incorrect answer is clearly because of a transcription error (e.g. 65 has been copied as 56), mark the answer shown in the working.

- ***Does it matter if the learner writes the answer differently from that shown in the markscheme?***

Numerically equivalent answers (e.g. eight for 8, or two quarters or 0.5 for half) should be marked as correct unless the markscheme states otherwise.

- ***How should I mark answers involving money?***

Money can be shown in pounds or pence, but a missing zero, e.g. £4.7, should be marked as incorrect unless the markscheme states otherwise.

- ***How should I mark answers involving time?***

In the real world, specific times are shown in a multiplicity of ways so accept, for example, 02:30, 2.30, half past 2, etc. Do not accept 2.3 as this is ambiguous. The same principle should be used for marking time intervals, e.g. for two and a half hours accept 2.5 but not 2.5pm.

- ***What if the method is wrong but the answer is correct?***

Unless the markscheme states otherwise, correct responses should be marked as correct even if the working is incorrect as learners may have started again without showing their revised approach.

- ***What if the learner has shown understanding but has misread information in the question?***

For a two (or more) mark item, if an incorrect answer arises from misreading information given in the question and the question has not become easier as a result then deduct one mark only. For example, if the 2 mark question is 86×67 and the learner records 96×67 then gives the answer 6432, one mark should be given. In a one mark question, no marks can be given.

- ***What should I do about crossed out work?***

Working which has been crossed out and not replaced can be marked if it is still legible.

- ***What is the difference between a numerical error and a conceptual error?***

A numerical error is one in which a slip is made, e.g. within 86×67 the learner works out $6 \times 7 = 54$ within an otherwise correct response. A conceptual error is a more serious misunderstanding for which no method marks are available, for example if 86×60 is recorded as 516 rather than 5160

- ***What if learners use a method that is not shown within the markscheme?***

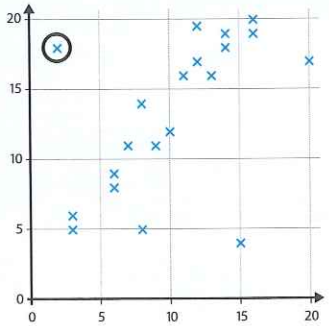
The markschemes show the most common methods. However, there can be a wide range of approaches to a question (for example long multiplication) and any correct method, however idiosyncratic, is acceptable.

In 1 mark questions, the mark should be given for the correct answer, whatever the method used.

In 2 mark questions, the correct answer should be given 2 marks, whatever the method used, unless the markscheme states otherwise. Most 2 mark questions give 1 mark if the answer is incorrect but the learner shows a correct method: a correct method is one that would lead to a correct answer if there were no numerical errors.

9EP13 Procedural test: Markscheme

Q	Marks	Answer	Comments
1	1m	£200	Accept £190 to £210 inclusive
2i	1m	18.80€ to 19€ inclusive	
2ii	1m	£31.50 to £32 inclusive	
3	1m	596.5	
4i	1m	25%	
4ii	1m	£18	
5	2m	> < =	
	Or 1m	Any three answers correct	
6i	1m	17.94	Do not accept equivalent fractions or decimals
6ii	1m	18	Do not accept 18.0 or equivalent values
7i	1m	23	
7ii	1m	$4\frac{2}{7}$	Do not accept equivalent improper fractions
8i	1m	$\frac{2}{9}$	Do not accept equivalent fractions
8ii	1m	£4	

Q	Marks	Answer	Comments
9	1m	545 miles per hour	
10i	1m	6	
10ii	1m	250	
11	1m	400 metres	
12i	1m	3 pupils	
12ii	1m		Accept any unambiguous indication, e.g. ticking
12iii	1m	Positive	Accept unambiguous misspellings Ignore additional words, e.g. strong
13	2m	18.84cm	Accept 18.8 or 19
	Or 1m	$\pi \times 6$ or 3.14×6 seen Or Correct method with only one numerical error	Example for 1m: $3.14 \times 3 = 9.44$ (error), $9.44 \times 2 = 18.88$
14i	1m	2	
14ii	1m	$\frac{3}{2}$	Accept equivalent values, e.g. $1\frac{1}{2}$ or 1.5
15	2m	86°F	
	Or 1m	Correct method with only one numerical error	Example for 1m: $30 \div 5 = 5$ (error), $5 \times 9 + 32 = 77$
16	1m	0.08	

Q	Marks	Answer	Comments
17	2m	£242.50	
	Or 1m	Shows the value 242.5 or 7.5(0) Or Correct method with only one numerical error	Example for 1m: 1% is 2.50 so 3% = 6.50 (error), 250 – 6.50 = 243.50
18	1m	100°	
19i	1m	10^7 or 10 000 000	
19ii	1m	10^6 or 1 000 000	
20	2m	12.3	
	Or 1m	Correct method with only one numerical error	Do not accept a place value error, e.g. 11.07 ÷ 0.9 = 1.23 (error) Example for 1m: 110.7 ÷ 9 = 12.4 (error)
21	1m	3 900 000	