

National Numeracy Tests

PROCEDURAL

9EP14

Markscheme



117580



Llywodraeth Cymru
Welsh Government

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 input onto the relevant mark sheet on the school's management information system, together with the details and date of the test taken.
- This data should then be submitted as part of the National Data Collection (NDC). Further details are available from the *National Reading and Numeracy Tests – 2014 test administration handbook* on the [Learning Wales](#) website and in *National Data Collection and reporting arrangements 2013/14* available on the Welsh Government website.
- Markers should record their initials on the cover of the test booklet to assist quality assurance.

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 two-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?

There can be a wide range of approaches to a question (e.g. long multiplication) and any correct method, however idiosyncratic, is acceptable.

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

In two-mark questions, the correct answer should be given two marks, whatever the method used, unless the markscheme states otherwise. Most two-mark questions give one 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.

9EP14 Procedural test: Markscheme

| Q | Marks | Answer | Comments |
|------|-------|--|--|
| 1 | 1m | 456 | |
| 2 | 1m | 1 : 50 | Accept 1 : 0.02 or equivalent, e.g. $1 : \frac{1}{50}$ |
| 3i | 1m | $\frac{3}{4}$ or equivalent fraction, e.g. $\frac{6}{8}$ | Do not accept equivalent decimals |
| 3ii | 1m | 0.8 or equivalent decimal, e.g. 0.80 | Do not accept equivalent fractions |
| 4 | 1m | 50 | |
| 5 | 1m | Any two numbers that are greater than zero and that add to 0.1, e.g. <ul style="list-style-type: none"> • 0.05 + 0.05 • 0.059 + 0.041 | Accept fractions, e.g. $\frac{1}{100} + \frac{9}{100}$ |
| 6 | 1m | 70 | |
| 7 | 1m | 1000 | |
| 8 | 1m | 20% | |
| 9 | 1m | 1.4 | |
| 10 | 2m | $^{\circ}\text{F}$    $^{\circ}\text{C}$ Or $^{\circ}\text{F}$    $^{\circ}\text{C}$ | Accept equivalent values, e.g. for $\div \frac{1}{5}$ <ul style="list-style-type: none"> • $\div 0.2$ • $\times 5$ e.g. for $\div 9$ <ul style="list-style-type: none"> • $\times \frac{1}{9}$ |
| | Or 1m | Content of the boxes is correct but -32 is not in the correct position | Example for 1m: $^{\circ}\text{F}$    $^{\circ}\text{C}$ |
| 11 | 1m | 6125 grams | |
| 12i | 1m | 78° | |
| 12ii | 1m | 60 people | |

| Q | Marks | Answer | Comments |
|------|--------------|--|---|
| 13i | 1m | 1.429 | Do not accept equivalent answers, e.g. 1.4290 |
| 13ii | 1m | 1.43 | Do not accept equivalent answers, e.g. 1.430 |
| 14 | 2m | $16\frac{11}{12}$ | Accept 16.92, 16.916, 16.917 or 16.9166 etc. |
| | Or 1m | Shows $\frac{11}{12}$ or equivalent Or Shows fractions equivalent to $\frac{2}{3}$ and $\frac{1}{4}$ but with a common denominator Or Shows decimals equivalent to $\frac{2}{3}$ and $\frac{1}{4}$ | Accept 0.92 etc. Example for 1m: $\frac{8}{12}$ and $\frac{3}{12}$ seen For $\frac{2}{3}$ accept 0.67, 0.66 or 0.666 etc. Do not accept 0.6 |
| 15 | 1m | 100cm | |
| 16 | 1m | Distance = Time \times Speed | Accept unambiguous misspellings and abbreviations, e.g. S \times T |
| 17 | 2m | £405 | |
| | Or 1m | Shows 5 Or Shows the intent to multiply by 101.25 or 1.0125 | |

| Q | Marks | Answer | Comments |
|------|-------|--|---|
| 18i | 1m | positive negative none 100% | |
| 18ii | 1m | 2 people | |
| 19 | 2m | 32g | |
| | Or 1m | Incorrect answer, but shows a method that would lead to 32g if calculated correctly, and contains not more than one numerical error | Examples of correct method: 40 ÷ 25 × 20 40 ÷ 5 × 4 |
| 20 | 2m | $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{8}$ $\frac{1}{9}$ | Accept any unambiguous indication, e.g. ticking |
| | Or 1m | $\frac{1}{3}$ or $\frac{1}{9}$ circled and no other fraction Or $\frac{1}{3}$ and $\frac{1}{9}$ circled and one other fraction | |
| 21 | 1m | 1.8 seconds | |
| 22 | 1m | 8207 820 000 000 8.20000000 82 000 000 | |
| 23i | 1m | 85 runners | Accept 83, 84, 86 or 87 |
| 23ii | 1m | 15% | Accept 14 to 16% inclusive |
| 24 | 1m | $\frac{1}{6}$ or equivalent fraction, e.g. $\frac{2}{12}$ | Accept 0.17, 0.167, 0.166 etc. Do not accept 0.16 |
| 25i | 1m | 1 : 3 | |
| 25ii | 1m | 1 : 9 | |