



Chief Examiner Report for Functional Skills Mathematics – Legacy

NCFE Functional Skills Qualification in Mathematics at Level 1 – 501/2325/7

NCFE Functional Skills Qualification in Mathematics at Level 2 – 501/2324/5

August 2020

Introduction

This report covers the last year of legacy Functional Skills Mathematics qualifications at Level 1 and 2. Following the introduction of reformed Functional Skills qualifications in September 2019, the numbers of assessments being taken have steadily declined. There have not been any new assessment variations for the qualifications over the past 12 months.

Level 1

Number:

Some assessments had been completed well by learners, with evidence that clearly indicated the learners' underpinning skills and ability to transfer those skills to a range of tasks and problems.

For some learners, evidence would seem to have indicated that they were clearly not at the level they were entered for, with a low number of marks being awarded and in some instances zero marks.

Learner errors were often seen in final displays of money, with responses frequently not shown to two decimal places, particularly when the value ends with a zero, ie £12.6 instead of £12.60, and with the subtraction and conversion of time involving decimal values to hours and minutes.

Similarly, errors were seen in equivalencies between fractions, decimals and percentages and this was regularly seen as a challenge for many learners, particularly where it was evident that the learners did not have a sound understanding of and the ability to apply the required underpinning skills.

Measure, Shape and Space:

Some learners clearly had the necessary skills and ability to tackle and complete the tasks in the assessments, with full workings out being shown and correct final answers including correctly indicated units.





Practical problems with length, weight and capacity were often seen as a difficult area for some learners, with incorrect metric conversions, ie use of 100 when converting between millimetres and metres and also between metres and kilometres. This would appear to have indicated a lack of familiarity in applying the appropriate approaches or methods to tackle the problem.

Conversions within metric units and the necessity to work with consistent units was also a common area that appeared problematic for some learners.

Handling Data:

In this area, some learners seemed to find difficulty with evidencing a probability of an outcome as a numerical response, ie as a percentage, fraction or decimal. It was often represented by likely or unlikely and learners should be taught to show this as mathematical response, as well as indicating any probability on a probability scale, particularly if the learners then progress to undertake the reformed Functional Skills.

The identification of information from tables and graphs involving whole numbers was generally completed well by learners but there was evidence to indicate that completion of simple pie charts and graphs, especially in the labelling of axis and completion of a linear scale on an axis when requested, was problematic for some learners. In some examples, scales did not start at zero or did not have consistent divisions.

Level 2

Number:

At this level, learners tended to demonstrate good skills in the use of the four calculations and were able to apply these to a range of tasks. Working with larger numbers was generally undertaken competently, although in some cases errors were seen that may be the result of an incorrect input to a calculator, as working appeared to support a good understanding of the task requirements but final answers were incorrect.

Evidence was also seen to indicate that further practice for learners preparing for assessment in the use of fractions and percentages would be of benefit, especially calculating reverse percentages, ie finding the original value when given a discounted or increased value.





Measure, Shape and Space:

It has been evident that some learners have still tended to be careless with units – either omitting them or performing incorrect conversions between different metric units, examples of such misconceptions include 100 metres being equivalent to a kilometre and a litre is equal to 100 millilitres.

There have also been errors in the conversion between metric and imperial units. Evidence was seen of some confusion when calculating area, perimeter and volume of 3D shapes and has occasionally manifested itself in the area of compound shapes being calculated as the product of three lengths.

Handling Data:

Learners have made errors in calculations involving the use of averages, with mean, median, mode and range often being incorrectly calculated and especially involving data sets that may have zeros in them. Learners have generally calculated these without recognising that zero is a value for this purpose.

Generic Overview Level 1 & Level 2:

Learners should be adequately prepared prior to being entered for all levels of assessment. Several examples were seen where learners were evidently not at the level being assessed, with some very low marks being awarded and in some assessments no calculations/responses were seen that justified any marks at all across the whole assessment.

It is advisable that all learners should undertake an initial/diagnostic assessment prior to being entered for any assessment, so that all learners can be entered onto the correct level. This will also enable learners and centres to identify gaps in learners' skills and develop a learning plan that meets these needs prior to undertaking the required level of assessment. Learners also need to be confident in their underpinning skills and have the ability to transfer the necessary skills to a range of tasks in different scenarios.

In several cases, learners had not even provided responses to some of the simpler tasks, such as identifying required information from a table or chart or identifying the correct calculations to use. It is noticeable in learner feedback reports that some learners were not consistent in the application of various skills across a range of tasks and learners should be provided with the opportunity to use the skills learnt across a range of tasks.

Learners need to ensure that they show all working out, which is crucial if they initially make an error, as marks may be awarded for part answers or correct calculations seen in working as well as identifying relevant information from tables or charts. On some occasions, learners have lost all the marks for a task where an incorrect final answer has been given without any supporting working.





In addition, learners also need to ensure that they indicate what units their final answers are in, ie cm, m, km, as well as using indices to indicate whether a measurement is a volume or an area, as this is often an area where marks may not be awarded.

Errors at the initial stages of tasks are regularly seen and may be the result of learners not ensuring that they have read the task instructions fully. Learners should be guided to read questions more than once and in the case of paper-based assessments, they can be encouraged to underline or highlight key information essential to the tasks.

Evidence of working out and checking of answers are frequently seen to be two of the most common areas where marks are not awarded at both levels, and learners need to be supported and encouraged by centres to make sure that this is demonstrated in their assessment responses. The checking of calculations can often identify errors in learners' original working and therefore provides an opportunity to maximise marks by enabling learners to correct errors.

Several learners are not awarded marks through not taking note of key command phases such as:

“Show how...”

“Explain your answer”

These phrases indicate that more than a worked answer is required and fulfills the Level 2 Skill Standards of ‘interpret and communicate solutions to multi-stage practical problems in familiar and unfamiliar contexts and situations’, and also ‘draw conclusions and provide mathematical justifications’. In some given examples, marks were occasionally not awarded due to the lack of explanation or justification of learners’ choices or responses; the learners have merely stated ‘yes’ or ‘no’ as their final response without a corresponding explanation.

There have been a variety of assessments that have included suitable topics to engage learners of all ages and abilities. The assessments are generic and are considered to be accessible by a range of learners of all abilities. All variants of assessments have performed consistently with the level of tasks being appropriate and that meet the required standards, range and coverage. All assessments are available as paper scripts as well as online, with access being provided for learners with specific learning needs, such as enlarged print, braille and coloured scripts.

A full suite of learning resources is available on the NCFE website that can provide opportunities for learners to fully prepare for their assessments. This includes sample assessments and resources, such as subject content specific information sheets, PowerPoints that can be customised to different occupational areas and learner activity and answer sheets along with learner checklists, that can be used in teaching environments or as self-directed study.

Chief Examiner: Heather Peacock

Date: August 2020

