Chief Examiner Report for Functional Skills Maths

NCFE Functional Skills Qualification in Mathematics at Level 1 –
501/2325/7
NCFE Functional Skills Qualification in Mathematics at Level 2 –
501/2324/5

December 2016

Level 1:

Skill standard - Representing:

Learners should be prepared to understand practical problems, whether familiar or
unfamiliar. However, responses to tasks within Measure, Shape and Space often
contained errors in approach. Common errors included the initial identification of
dimensions, working with inconsistent units, incorrect conversions, and with the
selection of method, for example, selecting perimeter rather than area.

Many learners demonstrated establishment identifying information from charts or
graphs, for example, using information in a table to calculate a range or a mean
average, or using a bar graph to identify task values. However, it was common to
identify errors as a result of unfamiliarity. Examples included identifying and displaying
values as a ratio, or identifying and displaying values as a fraction or as a percentage.
Further practice, prior to final assessment, with tasks that require identification of
information and requests that include specific displays may support familiarity.

The selection of mathematics often showed proficiency with problems with time or
money (although many learners' final answers were affected by the incorrect displays
of money). However, the approaches to tasks requiring proportional problem solving
(for example, identifying lengths or widths in a given shape using division)
demonstrated less appropriateness.

Skills standard – Analysing:

Generally, familiarity was demonstrated applying methods to calculate fraction values
and percentage values. Similarly, applying methods to calculate range and mean
average often showed proficiency. However, there were instances where range and
mean methods appeared to be confused. Further exploration of the purpose and use
of range and mean, as well as the method, within teaching and learning may be
beneficial to support understanding.

Straightforward problems requiring probability and ratio use were completed less
proficiently, and lack of familiarity was indicated. Vocabulary exploration may be
useful so that familiarity with terms such as 'likelihood' and 'parts' is increased.

The amount of no responses, or inappropriate responses, to check requests remains
a concern. Learners preparing for final assessment should be encouraged to use
appropriate checking procedures and should be prepared to display appropriate
checks when requested. Incorporating practice within a range of tasks may support
learners' experience and understanding, and increase familiarity with expectations.

Skills standard – Interpreting:

Tasks requiring interpreting and communicating solutions often highlighted unfamiliarity with comparisons. Learners' comments or explanations were often insufficient, for example, a 'difference' rather than 'bigger' or 'smaller'.

However, diagrams or graphs and charts were mostly completed accurately. If learners weren't awarded full marks, the lack of a title was a common error.

Similarly, the displays of final answers often meant that some learners didn't achieve full marks at tasks. Common errors included: money not displayed to 2 decimal places, pounds displayed as pence, and final answers without units (it was common for area to not be displayed appropriately). Similarly, displays of fractions, ratio and probability were highlighted as a development area for many learners. For learners completing final assessments on-line, it will be beneficial to advise that m sq and m^2 are both acceptable, and to provide advice on fraction displays (for example, 1/4) and ratio displays (for example, 2:3).

Level 2:

Skill standard - Representing:

Assessment tasks will be within familiar and unfamiliar contexts and situations. Learners preparing for assessment will benefit from practice with a wide range of tasks to increase their experience.

Many learners demonstrated establishment identifying methods and choosing from a range of mathematics in familiar contexts, for example, when working with money. However, responses were often affected by errors: common errors included unit consistency with pence and pounds and converting between pence and pounds. Similarly, learners' inconsistency when working with time often affected final responses.

In unfamiliar contexts, identifying appropriate mathematical methods often appeared more challenging. Tasks within Measure, Shape and Space were often affected. Common errors included the identification of dimensions (for example, distinguishing radius and diameter), inconsistent units, and unfamiliarity with composite shapes and internal dimensions.

Errors in approach could often be attributed to the learners' range of establishment. However, misreading task instructions, or appearing to not process the task requirements, was often indicated as the cause of errors. The identification of the problem to solve and how to proceed is a common area of challenge and further practice with problem solving, using a step by step approach, may be beneficial for learners preparing for final assessment.

Skills standard – Analysing:

Often, when learners have not yet achieved at final assessment, a wide enough range of methods hasn't been demonstrated. However, there are common areas within the standards that appear to be challenging for learners.

Common development areas include: recognising and using 2D representations of 3D objects, finding area and volume, working with consistent units, converting between or within systems (within metric, or converting between metric and imperial), and working with ratio, proportion and scale. Additionally, equivalencies between fractions, decimals and percentages, and probability, were identified as common development areas.

Common errors included displays of final answers without units, working with inconsistent units, and accuracy errors when calculating. Many accuracy errors could have been rectified if appropriate checking procedures had been used.

The use of appropriate checks, and the display when requested, remains an area of development. Many learners will benefit from support with checking methods, and checking opportunities, to prevent inaccurate final answers. This support may minimise the number of no responses, or inappropriate checks, when requested. Advice on checks using reverse calculations and checks using estimation should be included.

Skills standard – Interpreting:

Generally, establishment with bars and graphs was demonstrated, although errors were identified with circle angles and with scaling. Additionally, it was common to identify one bar, in a bar graph, that wasn't within tolerance. Learners should be encouraged to check their final charts or graphs for accuracy.

The displays of final answers often meant that some learners didn't achieve full marks at tasks. Common errors included final answers without units and final answers not displayed in accordance with the task instructions, for example, to the nearest whole number or to 2 decimal places.

The displays of probability and ratio also meant that some learners didn't achieve full marks at tasks. Advice on displays may be beneficial prior to final assessment. For learners completing final assessments on-line, it will be beneficial to advise that m sq and m^2 are both acceptable, and to provide advice on fraction displays (for example, 4/7) and ratio displays (for example, 3:5).

Straightforward conclusions, for example, whether a target or aim has been met were often accurate. However, responses to comparisons of time indicated this as an area of development.

Responses to more open questions, for example, tasks requesting a comment on the results indicated that learners found this challenging. It wasn't unusual for no response to be submitted. Further preparation on open responses, for example, comparing values and drawing conclusions may support learners preparing for final assessment.

Generic Overview:

Errors at the initial stages of tasks are common. Care in identifying initial information is vital, whether dimensions (for example, internal volume), unit consistency (for example, pounds and pence), or task instructions.

Similarly, care in presenting information is important. Displays of calculations and approaches, whether on-line or paper based, were generally clear and sufficient (often resulting in part marks). However, final answers were often not displayed in accordance with task instructions (for example, to 2 decimal places), or with appropriate units (for example, area as m^2 or m sq).

Additionally, I would recommend that practice using checks is incorporated within preparation for final assessment, to increase learners' familiarity and reduce the amount of accuracy errors and the amount of no responses to check requests.

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Date: December 2016