

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

April 2017

Level 1:

Skill standard - Representing:

Learners should be prepared to understand practical problems, whether familiar or unfamiliar. Unfortunately, some errors in approach could be attributed to reading errors or misunderstanding of the task's requirements. Further practice, prior to final assessment, with tasks that require identification of information may support familiarity and reduce errors.

Common errors seen with identifying and obtaining information included the initial identification of dimensions, inconsistent units, and incorrect conversions. It wasn't uncommon to identify calculation errors with hours and minutes or with pounds and pence. Responses that required learners to work within metric measure were also often affected by inconsistent units or incorrect conversions.

The selection of mathematics often indicated confusion with area and perimeter, and range and mean. It wasn't uncommon to identify that area had been calculated instead of perimeter, or perimeter instead of area. It will be beneficial to check that learners preparing for assessment can identify and select appropriate methods.

Similarly, approaches to tasks requiring problem solving with measure (for example, identifying lengths or widths in a given shape using division) indicated that further practice would be beneficial. Reinforcement of consistent units and accurate conversions will support learners preparing for final assessment.

Skills standard – Analysing:

Generally, familiarity was demonstrated applying methods to calculate fraction values and percentage values. However, errors identified in assessments indicated some confusion between 5%, 10% and 20% methods. Equivalencies between fractions, decimals and percentages often indicated lack of familiarity, and showing amounts as fractions or percentages was also often indicated as a development area.

Other key development areas identified were probability, ratio use, and simplification (fractions and ratio). Learners should be prepared to show probability as a fraction, decimal or percentage, and should be prepared to show a ratio or fraction in simplest form. Vocabulary exploration and advice may be useful to ensure familiarity with expected displays and terms such as 'likelihood', 'simplest form' and 'lowest terms'.

Learners preparing for final assessment should be encouraged to use appropriate checking procedures and should be prepared to display appropriate checks when requested. It was not uncommon for an explanation of the method applied, or no response, to be submitted by learners when requested to display a check of their answer. Incorporating practice within a range of tasks may support learners' experience and understanding, and increase familiarity with expectations.

Skills standard – Interpreting:

The display of final answers often affected marks awarded. Common errors included the displays of ratio, fractions, probability, area and money. 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, $2:3$). All learners preparing for final assessment should be advised on the correct displays of money, and on expectations of displays to 2 decimal places or the nearest penny.

Learners should also be advised to show their workings. There were several instances where learners solely relied on their final answers, and if this was incorrect no marks could be awarded. However, display of amounts identified and calculations applied may have resulted in part marks being awarded to reflect what had been done correctly.

Advice for tasks requiring interpreting and communicating solutions could also benefit from inclusion in exam practice. Learners' comments or explanations, if attempted, were often insufficient, for example, a 'difference' rather than 'bigger' or 'smaller'. Similarly, practice with graph titles and labels may support learners' confidence and completion.

Level 2:

Skill standard - Representing:

Learners should be prepared to understand routine and non-routine problems, whether familiar or unfamiliar. Unfortunately, some errors in approach could be attributed to reading errors or misunderstanding of the task's requirements. 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.

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 when converting between pence and pounds, or by working with inconsistent units, for example, adding pounds to an amount in pence. Similarly, converting a decimal display of time to hours and minutes has been identified as a development area for many learners.

In unfamiliar contexts, identifying appropriate mathematical methods often appeared challenging. Tasks within Measure, Shape and Space were often affected, for example, working with composite shapes or converting between metric and imperial using given conversions (whether to apply multiplication or division).

Skills standard – Analysing:

The development areas that were often identified included using negative and positive numbers, equivalencies between fractions, decimals and percentages, reverse percentages, probability, ratio and scale. These areas often affected the range of establishment that could be demonstrated by the learner in the assessment.

Additionally, there were instances of methods being mixed up. It wasn't uncommon to identify that a mean average had been calculated rather than a median, or to identify that perimeter had been calculated rather than area.

Common errors when applying mathematics to find solutions included the identification of dimensions (for example, distinguishing radius and diameter or identifying internal dimensions), inconsistent units and errors substituting when using formulae.

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:

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 assessments indicated that some learners could benefit from further practice on rounding and final displays.

The displays of probability and ratio also meant that some learners didn't achieve full marks at tasks. Advice that includes vocabulary (for example, simplest form, lowest terms, and 1 decimal place), ratio arrangement/order and display, and probability expression will be useful to many learners preparing for final assessment.

It wasn't uncommon to identify errors with bar graphs. Common errors included lack of title or labels, and scaling errors (a zero start and consistent intervals are expected). Learners should be encouraged to check their final charts or graphs for accuracy.

Straightforward conclusions, for example, whether a target or aim has been met were often accurate. However, 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 reading the task instructions and identifying initial information is vital, whether identifying dimensions (for example, internal volume) or checking unit consistency (for example, pounds and pence). Learners should also be encouraged to attempt each task.

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 if full marks weren't achieved). However, there were instances where only final answers were submitted, relying on complete accuracy with identification, methods and calculations.

Additionally, I would recommend that practice using checks is incorporated within preparation for final assessment, to increase learners' familiarity and to reduce the amount of no responses to check requests. I would also recommend that learners return to the task's instructions after a task has been completed to check that their final answer is displayed in accordance with task instructions (for example, to 2 decimal places), with appropriate units (for example, area as m^2 or m sq), or with an appropriate comment or conclusion.

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