

## 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

February 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, and requests that include specific displays, may support familiarity.

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 within Measure, Shape and Space. Common errors included the initial identification of dimensions, working with inconsistent units, and incorrect conversions.

The selection of mathematics often showed proficiency with problems with money. However, many learners' final answers were affected by the incorrect displays of money or by inconsistency with money units. Some learners made similar errors working with time, or errors calculating the difference between times. 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.

#### **Skills standard – Analysing:**

Generally, familiarity was demonstrated applying methods to calculate fraction values and percentage values. However, identifying amounts as fractions or percentages showed less familiarity. Similarly, applying methods to calculate range and mean average often showed proficiency. However, there were instances where only the range method was identified and no final answer was calculated. There were also instances where methods appeared to be confused. This commonly affected range and mean, and area and perimeter. It was indicated that lack of familiarity affected responses to probability and using ratio. Vocabulary exploration and advice may be useful to ensure familiarity with expected displays and terms such as 'likelihood'.

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:**

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'.

Graph and chart production often resulted in lost marks for no title, or for an insufficient title, or due to lack of labels. Pie chart production was often affected by an inappropriate key or title, or incorrect angles.

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  $m^2$  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.

## **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: common errors included unit consistency with pence and pounds and converting between pence and pounds. Similarly, learners' unit consistency when working with time, or conversions of decimal displays of time, often affected final responses.

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). However, other shared development areas were often identified: using negative and positive numbers, equivalencies between fractions, decimals and percentages, reverse percentages, probability, ratio and scale.

## **Skills standard – Analysing:**

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 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  $m$  and  $m^2$  are both acceptable, and to provide advice on fraction displays (for example,  $\frac{4}{7}$ ) and ratio displays (for example, 3:5).

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. Similarly, pie charts indicated that support with circle angles may be beneficial prior to assessment.

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 dimensions (for example, internal volume) or 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). 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<sup>2</sup> or m sq), or with an appropriate comment or conclusion.

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.

**Chief Examiner: Felicity Black**

**Date: February 2017**