3748-119 (Evolve) and 3748-319 (Paper)

Functional Skills Mathematics Level 1

Chief Examiners' report – March 2017

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Contents

1 Introduction

The purpose of this document is to provide centres with feedback on the performance of candidates for 3748-119 and 3748-319 Functional Skills Mathematics Level 1.

2 Overall Performance

This report covers the period from September 2016 to February 2017.

2.1 Areas of good performance

Candidates have now been sitting the remodelled papers for eighteen months following the relaunch in September 2015. The changes in assessment content for Level 1 were minimal as the skills standards remained the same and therefore the patterns of student responses (and difficulties experienced) are similar to those encountered in the previous assessment tests.

The changes to the paper based format were minor. For candidates who chose the online assessment option, there were a number of changes to the test presentation, in particular the reduction of the use of pop-ups to show source material and the extension of scrolling to provide continuity and a reduction in the requirement to return to previous screens. Generally candidates have continued to cope well with the layout.

Well prepared candidates cope with calculation requirements, understand the principles of basic operations (addition, subtraction, multiplication and division) and can deal with fractions, decimals, percentages, ratios/proportion and scaling within task contexts. Many candidates have demonstrated good skills in producing scale plans both on paper and using the online diagram creator. The use of the diagram creator by candidates who have produced diagrams using this tool, suggests that many have been both encouraged to practise drawing and have been well instructed in its application.

Basic statistical calculations (mean and range) have been dealt with competently by most candidates and graphical presentations (bar charts particularly) are generally well executed.

Checking of calculations has been well demonstrated by most candidates. Explanations of what results mean in the context of tasks is slowly improving.

2.2 Areas for development

Although many candidates have been well prepared for the assessment, script marking still shows that some candidates are unprepared for, or simply unable to cope with, the demands of the Level 1 papers. The need to prepare candidates for a problem solving approach involving not only calculation but also the selection of relevant data and the presentation and explanation of results, cannot be overemphasised.

Candidates are expected to show their working in order to be eligible for compensation marks in cases where they have not achieved a fully correct answer. Online there is a calculation tool bar to assist this process where there is a clear instruction to show working.

A few online candidates have missed parts of sections by failing to scroll down sufficiently and some seem unaware of the need to access source material. Some candidates do not appear to have had sufficient practice in using the diagram or chart tools and have therefore lost a significant number of marks.

Introduction and source material. In order to tackle tasks, candidates must read the instructions given in the introduction and select relevant data from the source material. A number of candidates appeared to neglect to read the detail of the requirements of each task and its overall purpose, and some clearly failed to access all required source material, especially in online versions where candidates failed to scroll down sufficiently to find data. Generally candidates should approach each task as a whole with the view that earlier parts of a task may inform later parts.

Units. Misunderstanding units, particularly relating to linear dimensions (mm, cm, m and km) and those of time, prevents some candidates from successfully completing their search for information needed to complete a task. Many candidates ignore the need to make use of the £ sign and some give answers in incorrect money format, eg an answer £107.30 written as £107.3 will be penalised.

Checking. Some candidates are still not attempting to show checks. The marks available for these steps could make the difference between a pass mark and a fail grade. Checking calculations requires candidates to use a different method from the original calculation, usually reverse calculations or approximation. Candidates should be encouraged to state which part of an earlier calculation they are checking as it is often difficult to identify this from their previous work. Some **Task 2** checking relates to the interpretation of a scale plan. Candidates should be able to explain their use of scale by relating the scale used to the actual and scaled length on a diagram, eg 1cm (square) = 5m, so 5cm (squares) = 25m is one acceptable way of fulfilling this requirement. Some candidates lose marks by missing either reference to the scale or reference to the scaled length

Calculations*. The following are examples of calculations that are not understood by a number of candidates:

- percentages **eg** recognition that 20 out of 50 (customers) is 40%
  eg recognition that 30% is the same as 3/10
- fractions **eg** calculation of one fifth as a price reduction
  NB one third is not 30%, nor 0.3
- ratio **eg** use of ratio 1 : 2 to make increase the length of sides of a figure
- time **eg** recognition that 38.5 hours is 38 hours 30 minutes
- time **eg** additions of hours and minutes
- weight conversions **eg** 1.25kg = 1250g
- calculation of area **eg** of rectangle 5m x 7m = 35m^2

- scaling down **eg** use of 1cm represents 1m
- linear conversion **eg** recognition that10mm = 1cm, 1000m = 1km

Candidates generally calculate means and ranges accurately. A few confuse range with the mean or another type of average.

* More detailed information for calculation requirements may be found in the Functional Skills Mathematics Level 1 Guidance for Delivery on the City and Guilds website.

Presentation of results. Many candidates who demonstrate their ability to calculate accurately to find solutions for the tasks, find some difficulty in summarising and explaining their results in the context of the task. Explanations generally need to be no more than simple statements relating to what a candidate's results show. On some occasions, a comparison of two values will explain findings and candidates should be taught to use words that indicate comparison, eg 'the highest average'.

In particular, many candidates do not understand what range values show in terms of the variation / consistency of data.

Most tasks require some graphical support for, and/or summary of results. Although most candidates produce good presentations, a number of candidates lose marks for the following reasons:

Tables:

- inadequate / no headings
- poor layout
- data inconsistent with results

A few candidates still draw charts or graphs (for which they will be penalised) instead of the required table.

Scale diagrams:

- misunderstanding of scale
- failing to label diagram

Charts / graphs:

- failing to label axes, particularly the vertical axis
- not constructing a continuous linear scale on the vertical axis
- failing to start the vertical scale at zero (bar chart only)
- not drawing bar heights, plots or sectors accurately

General:

- paper based presentations are more likely to be accurate if candidates use a ruler
- online (E-volve) candidates should practise the use of the presentation tools available

3   Recommendations/Advice for centres

Centres should use the Functional Skills Mathematics Level 1 Guidance for Delivery (City and Guilds website) in order to support teaching and learning. This Guidance provides information and examples of what is expected from Level 1 candidates.

Centres should carefully consider whether a candidate is operating at an appropriate level for entry at Level 1. Unfortunately there have been a small number of candidates who were clearly not anywhere near the standard required.

There are two platforms, paper based and online, available for this assessment. Centres should ensure that an appropriate choice of platform is made for candidates based on each candidate's need and preference.

Centres should advise candidates about appropriate 'exam technique' particularly with regard to attempting tasks in order. Candidates may attempt tasks in any order and it may be to a candidate's advantage to start with Task 2 or 3 rather than Task 1.

Candidates who choose to access assessment online need to be prepared not only in terms of the prescribed Functional Skills Standards, but also in terms of using the E-volve platform. They must be well practised in the use of the presentation tools (tables, diagrams, charts and graphs) but also understand how to insert sufficient text, eg to show calculations and working, so that potential compensation marks, in the event of incorrect answers, are accessible.

The importance of showing working in paper based assessment should be stressed for the same reason.

4   Additional Information

Centres should be aware that pass marks may vary from paper to paper as a result of an awarding process undertaken by City & Guilds. Any difference in pass marks reflects the perceived and actual difference in demand of the exam papers, including the source materials and the questions themselves. Therefore, it is possible that two candidates with the same score may have different overall results (pass or fail) if they have taken different versions of papers.

Centres should note that drawing scaled diagrams is still required on both assessment platforms at Level 1.