

# Principal Examiners' Report November 2010

FS

## Functional Mathematics Level 1 (FSM01)

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# FSM01 - Functional Skills Mathematics Level 1

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## Introduction

From the evidence presented in this paper it is clear that some candidates are not using calculators to process arithmetic. By their very nature, functional questions involve arithmetic operations and data handling techniques. Candidates did encounter problems addressing some of the questions because they appeared to lack a calculator.

In order to award marks for process, a key element in functional skills examinations, the candidate should show working and a clear methodology. It is not the case that correct answers always earn full marks: the process by which the answers have been arrived at attracts the majority of the marks. Candidates need to be encouraged to read questions very carefully in order that they are able to handle the conditions and constraints that functional mathematics questions provide.

Organisation of the work is crucial for the award of marks: disorganised working spread across the working space attracts few marks simply because the process followed is not clear. This is particularly important in functional skills exams because candidates are having to answer open ended questions and need to describe the process through reasoned mathematics and relevant argument. Centres need to continue to place emphasis on the meaning of the notepad symbol as some candidates are still ignoring the key need to show clear working. Those candidates who provided no working or disorganised working made it very difficult to credit their efforts.

Overall, candidates found questions most difficult when they were not directed: that is, the more open-ended type questions. These are necessarily essential on a functional skills paper, since that is the nature of many of the problems they face in real life situations. This includes choice of graphs, charts or presentational techniques. Centres need to continue to offer opportunities for solving these types of problem in preparation for examinations in functional skills.

It is evident that careful reading of questions, and use of required detail is essential when aiming for high marks. Techniques such as underlining, highlighting or emphasising key words or phrases in each question was evident in the work of high scoring candidates.

In functional questions, the facility to reflect on whether the final answer is reasonable is important. Candidates need to reflect on whether the final answer is reasonable in the context of the question.

## Report on Individual Questions.

### Question 1a.

Candidates were successful at processing the arithmetic and generally arrived at the correct response.

### Question 1b

The question was not answered as well as it might have been. Candidates needed to understand the relationship between a width of curtain and a window. Candidates needed to use the result in (a) and make a judgement.

Errors included:

Believing that the width of a curtain should be the exact width of the window, thus ignoring the result obtained in (a).

Using the rule given in part (a), inappropriately inputting the curtain width.

### Question 2.

Candidates were able to make progress in this question. The open nature of the problem allowed full marks to be gained through different placement positions of the sofa and table.

The constraint placed on the table was successfully recognised and acted upon. The scale was used correctly by nearly all the candidates. Some candidates did not place the sofa in a correct position.

### Question 3.

Candidates were generally able to interpret the demand. However, a significant minority of candidates were not able to coordinate months and weeks and arrive at yearly total costs. A significant number of candidates were unaware that there are 52 weeks in a year.

Other candidates did not understand that the deposit and per week/month instalments needed to be added together to find a total.

Success in this type of question relies upon candidates reflecting upon the magnitude of the answers obtained.

### Question 4.

Candidate performance on this question was mixed.

Most candidates did not check the hours that Jason actually worked. This information was given at the start of the question.

A check that 8 hours at £15 per hour was frequently made.

### Question 5(a)

Candidates were required to interpret a situation by expressing the likelihood of an event with an explanation.

Candidates need to be precise in expressing likelihood. Unlikely/very unlikely is not the equivalent of impossible.

### Question 5(b)

This question was answered successfully by the majority of candidates. Many used a tabular approach with efficient opportunities.

A minority of candidates work was incomplete and lacked opportunity for an efficient input. Candidates need to be encouraged to ask themselves whether their design is fit for purpose.

### Question 5(c)

This question required candidates to use time periods with a rate of pay. A significant minority of candidates were unable to work out the length of time between 10am and 12.30pm.

Some candidates:

- Wrote the time period as 2.3hrs
- Counted round the clock, thus obtaining an answer of 14.5 hours

The correct answer was obtained by a minority.

### Question 6

A majority of candidates assumed that the number of days was 5 or 7 without checking that the number of days was each day from Monday to Saturday.

A minority of candidates managed to link number of days to sandwich costs. Too often incorrect money notation was seen in the final answer for each sandwich type.

### Question 7(a)

Candidates were mostly successful at representing the information. Bar charts or line graphs were used well. Candidates need to remember to label each axes and choose consistent scaling.

### Question 7(b)

A majority of candidates were successful here. However, a number of candidates did not answer the question with a correct explanation.

The general nature of the whole graph needs to be alluded to.

### Question 8

This question is relatively straightforward. However, only a small number of candidates were successful. Proportion questions appear to be poorly answered by functional skills candidates, the topic is mentioned in the coverage and range at Level 1.

### Question 9(a)

Some candidates were able to write down sufficient evidence to demonstrate that distances from Old Cross to High Pass and From High pass to Tor Glen were being considered. However, the majority of candidates did not write sufficient information in the answer space to ascertain what strategies ( if any) they were attempting to employ.

A small number of candidates wrote the correct answer with insufficient working. This question requires evidence that demonstrates candidates have come to the correct conclusion through reasoned argument.

**Question 9(b)**

The question was answered well by candidates.

A minority did not understand that the fixed cost and the cost per leaflet needed to be considered.

**Question 9(c)**

Candidates were successful at coordinating the information from the tally chart with the cost for each gift. The cost of gifts was given in mixed units. This caused an issue when handling the arithmetic necessary to find the total cost of gifts.

**Question 10**

Candidates were able to handle the question well. A minority of candidates did not link times and events together. Some candidates made processing errors. The most common errors were to omit one activity (often the time for the fastest finishers), or to make 1.25 pm the finishing time for all runners, or to link all activities to times correctly but not order the time plan sequentially.

**Question 11(a)**

This question was answered successfully.

**Question 11(b)**

A minority of candidates gained all three marks. There was some confusion in differentiating between Group C, Group D, and Group E.

A minority of candidates believed that an hour and a quarter is 115 mins!

## Pass mark for FSM01

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Maximum mark	48
Pass mark	30
UMS mark	6

**Note:** Grade boundaries vary from year to year and from subject to subject, depending on the demands of the questions.

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