

# Principal Examiners' Report January 2011

FS

## Functional Skills Mathematics Level 1 (FSM01)

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# FSM01 - Functional Skills Mathematics Level 1

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## Introduction

1. From the evidence presented in this paper it is clear that some learners:
  - are not using calculators effectively to process arithmetic.
  - do not have access to calculators whilst sitting the paper.

By their very nature, functional questions involve arithmetic operations and data handling techniques. Learners did encounter problems addressing some of the questions because they appeared to lack a calculator.

2. In order to award marks for process, a key element in functional skills examinations, the learner 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.

Learners need to be encouraged to read questions carefully so that they can handle the conditions and constraints that many functional mathematics questions provide.

3. 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 learners are having to answer open 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 learners are still ignoring the key need to show clear evidenced working.

4. Overall, learners found questions most difficult when they were not directed: that is, the open and multi-stage questions. Centres need to continue to offer opportunities for solving these types of problem in preparation for examinations in functional skills.

5. 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 learners.

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

## **Report on Individual Questions.**

### **Question 1a.**

This question was answered well by learners. A minority stated that Phil should go on holiday in August. These learners may not have interpreted the statement 'He does not earn money when he is on holiday'

### **Question 1b**

The question was straightforward with 4 data points to display.

A majority did not gain all three marks.

Learners need to:

- Test whether the scale adopted will accommodate all the data.
- Ensure that the scale drawn is linear.
- Ensure axes have suitable labels.

### **Question 2.**

Learners were able to make some progress in this question. The open nature of the problem allowed full marks to be gained through a sequence of different approaches. Progress in adopting these approaches was mixed.

Many learners only adopted a single approach thereby not being in a position to compare their work with Phil's assertion.

Some learners misinterpreted and believed that it was £70 per year.

Successful learners arrived at the actual monthly or yearly figures.

Some learners arrived at correct figures and did not reason that Phil's statement was correct.

Learners need to practice interpreting situations from correct work.

### **Question 3a.**

The correct placement and dimensions of the shed provided no issues for the overwhelming majority of learners.

### **Question 3b.**

Learners made good progress with the sequencing of jobs. The table provided the template and the time intervals that learners processed were relatively undemanding.

Some learners did not realise that the time given to fit a small window was 'per' window. Such a learner proceeded to have a tea break at 0945.

A small minority did not link times to jobs or sequenced the jobs in a different order to those set out in the question.

A number of learners gave a narrative account of the day.

### **Question 4**

Learners were successful with a variety of approaches gaining full credit.

Some learners interpreted the situation as requiring set meals. The open response nature of this task accommodated this response as valid in the context of the theme being examined.

### **Question 5a**

Some learners were only able to address either rectangular tables or circular tables. The demand of the question required learners to address both types of table. The majority of learners were able to gain full marks in this question.

A significant proportion of learners used arithmetic techniques to evaluate  $190 \div 8$ . The paper allows use of a calculator!

### **Question 5b**

Most learners gained success with this straightforward percentage question. A significant number misinterpreted the demand. The question did not ask for the discounted price. Unnecessary processing was undertaken by a majority of learners.

### **Question 6a**

Learners successfully interpreted the tabular data.

A variety of successful methods were adopted to find which Hotel Chris and Kerry should choose. Most learners found the cost of hosting the wedding at each hotel and quoted the cheapest. Other learners successively subtracted the room hire DJ and Meals of each hotel from the budget.

### **Question 6b**

Learners were successful at finding the monthly cost.

A minority of learners did not process the deposit and instalments in the correct order. A small minority divided by 12 instead of 16.

### **Question 7a**

The majority of learners added together all the figures in the distance chart.

A minority of learners correctly answered the question.

Learners need to have access to data which is displayed in this way. Learners need to be able to interrogate and use the data for a functional purpose.

### **Question 7b**

This question is relatively straightforward. However, a minority were successful at gaining three marks.

The quantities required were incorrectly interpreted from the table.

Some did not appreciate that Anne needed 2 water bottles and 2 vests.

Learners did not correctly add together the cost of the items or successively subtract the cost of the items from the budget.

Some learners were arithmetically processing the figures instead of indicating the sum and then using a calculator to find the answer.

Errors were commonplace in the arithmetic processing.

Correct money notation was required. £18.5 and 18.5 are not correct money notation.

**Question 8**

Most learners were able to access the question and gain some credit.

A significant minority did not use the fact that Sally injured her leg and proceeded to calculate responses as if she completed the charity bike ride.

A variety of arithmetic techniques were required to solve the problem. Learners were more successful at finding the correct sponsorship total for the Health food shop.

The conversion between km and metres was understood well. A number of learners failed to identify how many stages 72 000 m represented.

**Question 9a**

Most learners found the amount raised by Notpool. However, only a minority of learners went on to successfully explain their answers. There were a number of cases where an incorrect decision was made from correct working or no decision was made from correct working.

A minority were unable to process large figures, in this case hundreds of thousands.

**Question 9b**

A majority of learners processed the information and wrote a creditworthy newspaper headline.

## Pass mark for FSM01

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Maximum mark	<b>48</b>
Pass mark	<b>30</b>
UMS	<b>6</b>

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

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