

# Principal Examiners' Report

## March 2011

FS

### Functional Skills Mathematics Level 1 (FSM01)

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# **FSM01 - Functional Skills Mathematics Level 1**

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## **Introduction**

Most candidates attempted the majority of the questions and gave thoughtful answers to the problems set. Overall candidates found questions most difficult when the context was unfamiliar to them, the question was open-ended or multi stage. As candidates are required to show success in problem solving in real life situations these types of questions are an essential part of functional skills papers. Centres need to ensure that candidates are offered many opportunities to solve such problems in preparation for the tests.

Many candidates did show their working clearly and were consequently able to obtain process marks. Centres need to place emphasis on the meaning of the notepad symbol as some candidates are 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. Awarding credit in multi stage problems was particularly difficult when a candidate's communication was poor.

Candidates need to understand that when dealing with questions that require them to 'explain their answer', it is important to provide both a decision and a reason for it. Centres need to place emphasis on understanding of functional language such as 'time plan.'

Candidates should be encouraged to ask themselves whether a data collection sheet they have produced is fit for purpose. Rereading the demand after producing a potential outline might help here.

Candidates sometimes missed key elements in questions. Centres should place emphasis on highlighting, underlining or circling key information in questions to minimise the errors caused by lack of careful reading.

There is evidence that some candidates are not using calculators. Centres need to ensure that there is always access to a calculator during the test and, when preparing candidates for the test, encourage them to make use of a calculator.

## Report on Individual Questions

### Question 1

Most candidates were able to score two marks for setting up a suitable table and completing at least one correct row. A minority of candidates thought that they had to write the names and/or age of each child in their table. Centres need to stress the importance of reading the demand carefully. Almost all of the candidates who used a tallying method made good use of the '5-bar' tallying system for counting the children.

### Question 2

Part (a) This question was often answered well. Many candidates were able to reach the total of 47 children and arrive at a sensible decision for the numbers of adults available. Those candidates attempting to use the children in Question 1 were generally less successful in determining what they needed to do with the excess (20) children. A minority of those who did reach 47 failed to state a correct decision and so lost the last mark.

Part (b) The best candidates were able to put all the information together to arrive at a correct answer. Some candidates misread the question for the number of days worked per week - typically using 7 days (common) or 6 or 4 days (less common). A small number of candidates used some of the figures twice in their calculation, e.g.  $5 \times 8 = 40$ ,  $8 \times 5.95 = 47.6$ ,  $40 \times 47.6 = 1904$ . The correct use of money notation (though not tested here) did not appear to be an issue for many candidates, but the questioning of whether an answer was realistic or not was an issue. Candidates should be advised to relate their answers to the questions they have been set, to see if they are realistic. In this question it was clear that some candidates were attempting a solution without use of a calculator.

### Question 3

Part (a) was generally done well. It was pleasing to note that few candidates placed anything in the door corner. Some candidates did not label any space, making it difficult to deduce their intentions. Centres should stress the need for clear labelling.

Part (b) More errors were made with this part. Some candidates failed to interpret 'along a wall' correctly. Centres should explain that the longer edge should be placed along the wall. Candidates were not, in this paper, penalised for placing the shorter edge along the wall. Many of the weaker candidates did not realise that each square in the diagram represented  $1 \text{ m}^2$ , and drew incorrect rectangles for the messy play area.

Part (c) was not done well. Few candidates gave sufficient evidence for their decision about the space available for the active play area. A decision backed by a clearly annotated diagram with an active play area marked, or counting of squares by sequential numbering, or a clear subtraction of the spaces used from the room area, was rarely seen. Centres should advise candidates to use clear annotation and back it with a decision when one is asked for.

#### **Question 4**

Part (a) Many candidates were able to develop a suitable solution to this problem. The better candidates were able to write down lists with the appropriate permutations of A, B, C and D, E F. Some of these solutions did not pay attention to the requirement that a pair playing in one game cannot play in the next game. As always, candidates should be advised to read the question thoroughly before starting and again after they have completed it.

Some candidates gave only AD, BE and CF as their final answer, and thus indicated only a superficial understanding of what was required in the question. Centres should provide candidates with problems requiring lists of combinations and then introduce other conditions to make the problems more challenging and realistic.

Part (b) Most candidates were able to gain at least one mark for this question (usually for 3 x 4.50), but only the better candidates were able to gain full marks. Common incorrect answers here resulted from not appreciating that the court cost was per hour while the food cost was a total.

Part (c) This question was generally done well. Most candidates were able to give a reason based on likelihood, though some thought that as Cove had won the last two games they were sure to win again or that Fleet had a win, lose, lose pattern and so would win next time. A minority recognized that Cove had 4 wins and Fleet 2 but failed to make a decision that this meant Cove was more likely to win. Centres should provide many opportunities for candidates to experience situations that require both a decision and a justification for it.

#### **Question 5**

Many candidates were able to obtain 11.50 from the table and use it to work out the cost of 40 tubes of Feather 3 shuttles. A significant number of candidates used 9.75, instead of 8.95, for the cost of the Nylon shuttles. It was good to see that most candidates were able to write down a suitable conclusion for their calculation- a minority presented their calculations without comment. Common errors here were multiplying the costs by only 4 or 10 (which were often accompanied by the correct process of subtraction, and a correct follow through conclusion). Centres should provide opportunities for candidates to meet and solve multistage problems. Highlighting or underlining key facts in this sort of question also reduces the chances of ignoring important information. There was evidence here of candidates attempting a solution without the use of a calculator.

#### **Question 6**

This was done well. Most candidates understood the requirements of the question and produced at least one team of 6 players. Ensuring that each player got a game was a difficult constraint for some candidates, though, in general, Asif was always selected for the Friday team, but Sam was sometimes ignored on Wednesday. Some candidates did not label their teams with a suitable day or date, and some gave 5 or 7 players per game rather than the 6 players asked for in the question. Clear labelling was required for full marks.

### **Question 7**

Part (a) Almost all candidates managed the 2 marks available here.

Part (b) Most candidates scored 2 or 3 marks. Those not getting 3 often supplied too little information to guarantee the third mark, often saying that Maha had reached her target simply by getting to the figure of 18000 but not making it clear that this was more than the required 17000 bottles or that it was 3000 more than last year.

### **Question 8**

Lots of fully correct answers, but some candidates lost up to all the available marks by not putting start times for each task, and by disregarding the fixed times for the tours and help in the café. Also, several candidates did not have a sequentially linked time plan, and did little more than repeat the tasks stated in the question. Some candidates also felt that the whole day should be worked without a break, even though this was not penalised if all the required tasks fitted within the available time at the correct place. Centres should provide opportunities for candidates to produce time plans in a variety of contexts.

### **Question 9**

Part (a) Candidates tended to obtain at least 2 marks or 0 marks here. Many fully correct answers were seen, but several candidates let themselves down by not giving a decision when they had done all the relevant working. A significant minority did not know what the mean was, with some giving the median, middle value or the range. A few candidates gave details about how to calculate the mean but without figures to back their responses.

Part (b) Once again, many candidates came up with a perfectly correct revised bill without indicating that the original bill was incorrect. Some candidates missed Brian's extra cream and so agreed with the given bill. These candidates were able to obtain 1 mark if they justified the £12 cost.

Part (c) This question had the fewest correct responses. Many candidates did not know that there are 1000 grams in a kilogram, often using 100 instead. Few realised that 4.5 kg is 9 lots of 500g and made little or no headway. Centres need to provide opportunities for candidates to solve problems where there is a mix of units.

## Pass mark for FSM01

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|              |           |
|--------------|-----------|
| Maximum mark | <b>48</b> |
| Pass mark    | <b>29</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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