

Principal Examiners' Report February 2011

FS

Functional Skills Mathematics Level 1 (FSM01)

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FSM01 - Functional Skills Mathematics Level 1

Introduction

Overall the response to this paper by the candidates was a positive one; most candidates attempted the majority of the questions. Calculations relating to time and money were often successfully answered.

It is important that centres highlight the embedded nature of Functional Skills Mathematics to prepare the candidates for the range of contexts in which the exam questions may be set. If the skills required are embedded into a range of lessons e.g. creating a timetable, using inverse calculations to check answers, designing a data collection sheet; the candidates will become adept at the skills.

Every Functional Skills Mathematics exam will contain multistage problems and it is important that centres provide their candidates with practice in working through multistage problems in a range of contexts.

The candidates should be encouraged to use a calculator, show all stages of their working even when they are using a calculator and to present answers with the appropriate units. Marks in Functional Skills Mathematics are awarded for the process; conversely marks may be lost if candidates do not show their processes.

It is of great importance that candidates take note of the working box icon. When the icon is present it is essential for working to be shown in order to gain full marks for the question.

Report on Individual Questions.

Question 1

The production of a data collection sheet with input opportunities did create some difficulties for candidates. In a significant number of responses the candidates listed the music styles and the price of a ticket but did not allow any space to record the information. A few candidates opted to produce a graph which was not suitable. More opportunities for learners to collect data using a data collection sheet would be beneficial, by collecting different types of data candidates would learn to design a range of appropriate data collection sheets.

Question 2

The majority of candidates were able to attempt this question but many were unable to work out the area of a rectangle and used perimeter or variations on the perimeter as a value to substitute into the formula. Candidates need to know how to find the area and the perimeter of a rectangle. The majority of students were able to correctly substitute into the formula using their value for the area of the room.

Question 3

Most candidates were able to attempt this question, a few chose to use a 3 dimensional representation which was considerably more difficult to complete correctly, but the majority selected to use a 2 dimensional representation. The production of the correct shape did not cause difficulties but many candidates did not draw the stage to scale; failed to use the grid provided or failed to gain the marks awarded for the positioning of the blocks, they only produced the stage outline. The use of a ruler in this question would have been beneficial.

Question 4

a) Many candidates did arrive at the correct answer of 5 hours, but 4 and 6 hours proved to be almost as popular. Working with time including parts of an hour is a common requirement of these exam papers and candidates should be competent in working out durations from given times.

b) The cost of hiring the hall was carried out successfully in most cases.

c) The final calculation, to find the number of tickets required, was more problematic. It was essential that the cost of the hall was included in this calculation, but many candidates ignored this item. The actual adding of the 4 costs also caused many problems as a significant number of candidates chose to complete this without a calculator and had difficulty aligning the costs with pence aligned with pounds. Candidates would benefit from practice in adding up figures in a range of money notation and confirming their answers with a calculator.

Question 5

a) The first mark awarded for multiplying 4 by 3 to find the amount of oil needed for the full services was achieved by most of the candidates. Most however failed to add the 5 litres needed for other jobs. They should be advised to re-read each question to ensure that they had considered and processed all of the information needed to provide a complete answer.

b) Many candidates failed to produce a reverse calculation. Many stated "I used my calculator" or gave a repeat of the calculation they had just completed which gained no marks.

c) The first mark for doing a multiplication by 8 or 9 was achieved by most of the candidates. Many gained credit for making a comparison but failed to find the best prices. They lost marks by failing to look at the special offers. A number did not understand the "buy 4 litres get 1 free" offer.

Candidates should be provided with opportunities to practice this type of 'Best Buy' problem as it is frequently met in ordinary life. Making comparisons should be encouraged within the classroom to support processing.

Question 6

a) This question provided a diary which seemed to confuse a lot of candidates. Many booked the new service into a slot which was already booked. Many booked only one slot. The constraint that the service should be before 14:00 was often missed. Reading the information is crucial. Many candidates put bookings in for both Andy & Jean. Some just filled every space with a service or MOT. Candidates need to be introduced to a range of diaries for booking clients for some form of activity as this is an activity often required in working life.

b) Whilst many candidates were able to transfer the hours worked by Andy and Jean successfully, for a significant number this activity caused a lot of problems. It seems that some just didn't see a connection between question 6a and 6b and random numbers appeared to be recorded.

c) This question was well answered and most candidates were able to draw a comparison from the figures in part b. Candidates should be aware that a comparison that specifies how many more hours Andy worked is worth an additional mark. Candidates who just made two statements of totals cannot gain marks unless the totals are compared.

d) It was pleasing to see the quality of the graphs produced and many also included a key. A large number of candidates did not use the graph paper provided and drew the graph on plain paper below the question. Many also failed to use a ruler to draw the graph and lost accuracy marks for their plotting. The most common error was to omit the label on the 'time' axis which lost the candidates a mark. Most provided a linear scale and plotting was usually accurate demonstrating good data handling skills. Colour should be discouraged as it may be lost when scripts are scanned. Where dual bars are drawn, using a key with one set of bars is shaded and one unshaded works well.

Question 7

The majority of candidates were able to access this question, most included the required treatments of manicure and eyelash tint in their selections and kept the cost of treatments below the £50 budget. Few, however, recognised the need to maximise the treatments selected within the budget available. This is another skill which is of genuine use in real life decisions and should be practised in the classroom with a range of contexts. A significant number of candidates lost marks when they did not clearly identify the treatments but merely listed treatment costs. Rereading the question in order to check that it has been fully answered is to be encouraged.

Question 8

This question proved quite difficult for many candidates. However those who made a positive attempt at providing a timetable often failed to include a structure which made it difficult for candidates to meet the criteria fully. A common mistake was to use only one therapist and then it was not possible to complete the treatments in the given time. The best responses were clearly laid out in 10 minute intervals from 7pm to 9.30 pm with two schedules given side by side. This type of response should be encouraged by candidates when the exam paper is used for exam practice in the future. Overall the candidates did not have difficulty working with the time intervals, the calculations with time were completed competently.

Question 9

a) It was apparent that most candidates were familiar with this style of question and most completed this correctly, the most common error occurring in the adding up of figures with decimal points. As with question 4c practice at this type of calculation and the use of a calculator would improve candidates' success.

b) A lot of correct responses were seen for this question but candidates should be encouraged to re-calculate values, a common mistake was to quote 20p rather than the amount required of $2 \times 20 = 40\text{p}$.

Question 10

There were many excellent responses to this straightforward ratio question but a surprising number of candidates did not know how to deal with a simple ratio. This type of practical ratio, fraction or percentage question will often be included in Functional Skills Mathematics and candidates need to be prepared for a range of questions utilising these skills in real life scenarios.

Pass mark for FSM01

Maximum mark	48
Pass mark	30
UMS	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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