Principal Examiner Feedback

October 2011

Functional Skills Mathematics
Level 2 (FSM02)

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Functional Skills Mathematics Level 2

Introduction

The majority of the candidates found the paper accessible and attempted to answer all of the questions, there was no evidence of candidates running short of time. Evidence that candidates can meet the Functional Skills requirement must be shown and they need to realise the importance of the presentation of their work. Some of the candidates' work was very difficult to follow and they need to be encouraged to follow the techniques they have learned to solve the problem, rather than randomly trying different processes in the hope of getting an answer.

Teachers should make sure candidates are aware that decisions made without any working are unlikely to gain any marks. Whilst many candidates showed some working, they need to be aware that complete processes are necessary to gain the full complement of marks. This should include a full method for their working and legible figures. It was disappointing to note that simple errors in calculation were unnecessarily made due to the fact that they did not always use a calculator. Centres need to ensure that their candidates have, and more importantly use, a calculator in this type of examination. Candidates should be advised that for any calculator paper they should not touch the calculator until they have written down the calculation they intend to do.

Candidates need to be encouraged to read each question carefully, to choose the relevant information and most importantly, to check their work in case they have not used all the necessary information. They must also be encouraged to check that their answers are sensible.

Report on Individual Questions

SECTION A: Overseas Aid

Most candidates successfully engaged with this section despite the unfamiliarity of some of the tasks.

Question 1(a)
Candidates were very successful with this question and showed the correct multiplication leading to a correct answer. Units were not required but were often omitted. Occasionally candidates introduced an incorrect decimal point in their final answer but had usually secured one mark through showing correct working.

Question 1(b)
This question was successfully tackled with most candidates finding 1/3 of 392 and then multiplying by 60. Where sensible rounding took place during working, candidates were still able to secure full marks for an answer in the range 7800-7860.

The most common errors occurred when candidates did not work with 1/3 correctly: some used 0.3 and others divided by 2 twice to find ¼ instead. There was some evidence of non-calculator work which sometimes let to inaccuracy particularly when multiplying multiples of 10.

Question 2
Successful candidates often used a trial and improvement method to ensure that the total load calculated was within the acceptable range given. Others used the strategy of working backwards from the acceptable total load, deducting the 4600kg for aid workers and kit, then sharing out the remaining weight equally between the 5 items. This in turn gave acceptable numbers of each item so full marks were often gained.

A significant number of candidates did not address the constraint of the maximum number of each item and many showed the plane taking all the aid items at once despite this making the total load far too heavy. A few forgot to include the 460kg for aid workers and kit in their total.

Question 3a
Successful candidates often rewrote the correct rearranged formula or showed a Speed-Distance-Time formula triangle diagram. The main error which occurred was a misinterpretation of the final answer of 4.5 hours to give 4 hrs 50minutes. A few candidates multiplied 2700 × 600 to give 1620000 but often then presumably realised that this answer was unreasonable so went on attempt subsequent divisions.

Question 3b
20/100 was often seen with candidates then going on to give the probability as 20% or attempt to simplify the fraction. Those not gaining full marks often gave the incorrect probability 20/80 or equivalent. Others did not give their final answer in a correct form for probability but wrote a statement such as "20 out of 100" or presented their answer as a ratio 20:100 sometimes simplified to 1:5 Candidates need to appreciate that probability should only be given as a fraction, decimal or percentage.

SECTION B: Selling online

This section provided the most challenge for candidates.

Question 4a
A significant minority considered totals by themselves an adequate representation thus losing marks.
Most candidates were able to plot the points on their graphs. However, a minority did not label the vertical axis. Problems with scaling were significant. Most errors centred on the vertical axis beginning on 5000 and equal scaling not being in place.

Question 4b
This was an undemanding couple of marks for level 2. A minority did not keep in mind what the data represented. The data does not represent profit or the number of sales or the number of people buying goods. At level 2 such responses are not credit worthy. Some candidates talked only about sales without specifying shop, online or total.

Question 5
This was a good question that differentiated well. Some were able to process the arithmetic but did not gain the last mark because they didn't check for the context.
Many were not able to use percentages e.g. 12% 0.12 X 45
Many, with calculators, chose to split up 12% as 10% and 2%........with limited success! Others misunderstood how to process the advertising fees.

Question 6
A minority were successful. Many chose to multiply all dimensions by 4.
Those that understood how to draw a net were successful.

Question 6c
Giving evidence that lengths were considered was required for the first mark. A number lost this mark as they failed to show their conversion. A few lost marks by failing to give the cost.

SECTION C: The cookery competition

Question 7a
Many candidates could carry out the conversion from ounces to grams or the reverse but many were unable to use the proportion of 2.5, selecting to work out either double or triple and then making a statement about sufficient or insufficient butter. Centres should encourage candidates to practice increasing or decreasing quantities using fractional direct proportion.

Question 7b
Candidates either found this very straightforward or were unable to attempt it. There is generally a formula question in the Level 2 paper and this was a well-known formula. Centres should encourage substitution into and evaluating formulae, both common formula and those less well known. Those who attempted the substitution but failed in their evaluation often multiplied the F by 5 and not the 32 – a common and avoidable mistake.

Question 8
Many candidates lost marks as they did not produce a time plan but worked out if there was sufficient time for the two dishes to be prepared and cooked. Time of day must be shown. Practice at producing time plans for a variety of contexts would be helpful preparation for the candidates. Some candidates placed the preparation of the dishes AFTER the cooking and some arranged to cook the dishes BEFORE the competition commenced. These errors could be avoided through practising time plan creation for a variety of contexts.

Question 9a
The majority of candidates completed this question correctly though some made errors in calculating the score for Harry but then worked out the other competitors' scores correctly. Adding negative numbers should be included in the classroom work to assist in exam preparation.

Question 9b
The majority of candidates were able to order the negative numbers but a few did not recall that -8 was smaller than -2. Again work with negative numbers in practical contexts would help here.

Pass mark for FSM02

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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