Examiners' Report

January 2016

Pearson Edexcel Functional Skills Mathematics Level 1 (FSM01)

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General comments

Majority of learners engaged with all questions and there were few blank responses seen (mostly in the last section of the paper due to time constraints). There was some evidence that not all learners had access to a ruler, which disadvantaged them when drawing geometrical shapes on the grid or calculator when they attempted complex calculations.

Majority of learners presented their working throughout each question but there were a few instances where the calculations were not clearly organised or missing. This led to some learners missing process marks. Learners should be encouraged to present all their calculations, however simple, and do so in an organised and logical order. This also applies to showing what units they are working with throughout, i.e. cm, £, minutes etc.

Learners engaged with a variety of contexts and responded to tasks well in most cases. However, there were some instances where learners misinterpreted the results of their calculations and their final answer was incorrect. Learners should be encouraged to carefully consider the context, practice extracting essential information and focus on what the demand asks for when making their final decision. They should also develop a habit of showing the check of their calculations, especially when explicitly asked to do so.

There are a few areas that learners should work on.
These include understanding and using equivalences between percentages, fractions and decimals, and using rounding appropriately. Some learners unnecessarily do so in the intermediate stages of their process, which leads to inaccurate final decisions.
Converting between units and using these consistently, especially length and time; comprehending the concept of an area of a rectangle covered with smaller rectangular pieces (i.e. flooring) and organising and collecting data in a table efficiently.

Section A

Q1a) and 1b)

The vast majority of learners were successful in extracting relevant information from the table and engaged with constraints correctly in part (a). The follow up question, part (b), however, had a mixed rate of success. Some learners presented fully correct process and answer to finding 20% of the figure they identified in part (a) and even went a step further to take the discount off the original price and present the price after discount – a Level 2 skill. Other learners proved they lacked the concept of percentage and were not sure whether to multiply or divide. Some attempted finding 10% first, which is evidence that centres have explained the build-up method; however, quite often these learners lost marks due to premature or inaccurate rounding in the intermediate stage of the process. The checking mark was rarely awarded, as most learners did not show any check of their calculations. Centres should focus on encouraging a habit of showing a check of calculations.

Q1c)

This time question had a variety of responses and most learners showed functional understanding of time. However, not many learners scored all the marks in this question. Most learners lost some marks owing to poor manipulation and conversion of times (hours and minutes), addition or subtraction errors and stating no decision or the wrong decision to the correct answer. In was apparent that those learners who added times to 6.30pm often made fewer errors than those who attempted to compare total available time and total time of all events. This was due to misunderstanding that midnight was 12 and errors in converting minutes to hours. Centres should advise learners that when dealing with time they should not treat minutes in the same way as decimals when adding or subtracting them.

Q2)

This best buy question was generally done well by learners. Marks were most frequently lost by not carefully reading the question and just manipulating the values given and not proceeding in a systematic way; not showing all processes in their method, especially the final subtraction as the sum was relatively easy; and poor money notation. Learners should be reminded that when working with money they should present their answer in money notation that means not truncating trailing zero.

Q3)

Many learners did not read the question carefully and often started their response correctly but then forgot that one person has already paid a deposit and hence lost some marks. The concept of the question was set in a very common context so it is believed that more focus on the premise of the question is required. Again, as sums were relatively easy some learners did not show their working and hence lost marks as well.

Q4)

This likelihood question was mostly done well. There was some evidence, however, that despite being able to show the maths behind the scenario (5/200 seen which is a Level 2 skill), the answer was incorrect. These learners have

failed to read the question carefully or did not understand the likelihood rating scale.

Section B

Q5a)
This question aimed at testing the understanding of equivalences between fractions and percentages and was not done well. Most learners made the mistake of comparing 3/10 and 1/3 and assuming it was equivalent. Centres should focus on drilling the equivalences of most common fractions in decimals and percentages.

Q5b) and 5c)
This question was generally done well with only a few learners misinterpreting the scale and hence plotting incorrectly. Few, however, did not seem to understand the difference between line graph and bar chart and also failed to plot in the correct month, despite finding the correct value on the scale.
The follow-up comment in part (c) was often functional and valid. The majority of learners correctly described the trend (increase/decrease) or correctly read off the value for other months. Only few learners failed to write any comment or made a comment that referred to incorrect value and showed misinterpretation of the trend or simply stated the title of the chart.

Q6a)
Success in this question was varied. While the majority of learners made a start with writing the correct headings and providing input opportunities, most failed to fully engage with the data categorisation required to gain full marks. Learners should be encouraged to check if they represent and label each sub-category the data is given in. They should also work on creating an efficient table - a fully efficient sheet is one where counting down a column is enough to work out the total for that item (sub-category). Some learners did not provide 3 subheadings/columns for weight and 2 subheadings/columns for days and so only gained 1 mark for the design of the table. When presenting the data, they were however able to show where each person would fall in, and so gained data marks. It is important that the concept of efficient data collection sheet is practised in real-life situations. It must also be pointed out that some of the data collection sheets were bar charts which are inappropriate.

Q6b)
Most learners were able to work out the mean correctly. However quite a few of them failed to interpret their result and gave incorrect answer or failed to show their full calculations. The majority of learners failed to show a check of their working – centres should encourage the habit of showing checking of the working.

Q7)
This rule question was done successfully. There were plenty of fully correct methods shown and correct interpretation of their results in the final answer. The errors that were seen most frequently involved misinterpreting number of skydivers for number of rings that needed to be substituted in the rule, or stating incorrect answer to their correct working

Section C

Q8a)
This question required learners to convert between mm and m which some learners were unable to do. The concept of cutting out the 4 pieces of worktop required out of 3-metre lengths was also a difficult one for most learners who simply added all the lengths needed and left it at that. It is recommended that learners practice converting between common units of length in real-life situations (mm, cm, m, km).

Q8b)
The majority of learners were successful in this question but failed to show a check of their workings. The learners who lost marks in this question failed to show enough working and often mentioned 9 and 27 but did not show what the relationship was with 36. Some drew diagrams, however, these were mostly incomplete. There was also a considerable number of responses that did not have any answer or the answer was incorrect.

Q9)
A vast majority of learners completed this question correctly. Those learners who did not engage with the scale and constraints fully mostly lost marks on drawing a rectangle with only one correct dimension or failing to place the rectangle equal distance from both sides. There were some responses, which showed that learners did not have access to a ruler and these often-lost most, if not all, marks. Centres should ensure that all equipment required for the completion of the paper is available and that the learners are encouraged to use it.

Q10)
This question had a varied rate of success. Some learners started working with perimeter rather than area and that lost them all the marks. If they found area and started engaging with the packs of flooring, they sometimes lost the marks as they failed to round their figures to the whole number of packs. Centres should emphasise the fact that it is not possible to buy part of a pack or part of a length in any DIY project. Occasionally, some learners failed to state the final answer.

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