

Examiners' Report

October 2016

Pearson Edexcel Functional Skills
Mathematics Level 1 (FSM01)

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General comments

While only a small cohort took this examination, it has been very pleasing to see such a good response to the questions set. A clear majority of learners engaged with all the questions and very few responses were left blank when compared to some more popular series. This attests to the fact that the learners were well prepared to sit this Level 1 paper. Having noted that, the occasional blank responses appeared in the last section of the paper which implies that the learners may need to apply a more strategic approach to the timing of their responses to assure they have plenty of time to attempt all questions in the paper.

As it often is the case with paper-based examination, most of the learners presented their working throughout each question but there were a few instances where the calculations were not clearly organised or simply missing. This led to some learners missing out on process marks. Learners should be encouraged to present all their calculations, however simple, and do so in an organised and logical order. Another frequently seen issue is the lack of showing an explicit check of their calculation. Learners should develop a habit of showing the check of their calculations, especially when explicitly asked to do so.

Centres should assure that learners have access to calculators and other equipment necessary to complete the paper, especially rulers, as a significant number of hand drawn diagrams was seen. When drawing diagrams, accuracy is paramount. It is also critical that learners state their decision clearly as at least one mark in every question is awarded for correct conclusion accompanied by accurate figures. Accurate figures also require showing the units they are working with, i.e. litres, £, 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, practise extracting essential information (highlighting key data is advisable) and focus on what the demand asks for when making their final decision.

Level 1 specifications that most unsuccessful learners failed to engage with or whose attempts failed included solving problems involving simple ratio, common measures (especially distance and time) and constructing geometrical shapes. It is also rather surprising that quite a few learners were unable to work out a simple area or failed to design a simple data collection sheet.

Section A

Question 1

This was a very straight-forward percentage question and majority of learners were able to gain all the marks. However, some learners are clearly unsure about how to calculate percentage amounts; learners need more opportunities to grasp the concept of dividing by 100 to find 1% of a given amount in practical context. Although this question did not require it, it is good practice to ensure that learners always use correct money notation as this is a functional skill.

Question 2a

Most learners successfully found $\frac{1}{4}$ of the given amount and made the correct choice of a coupon. While some took a less efficient way by finding the price after both offers were applied, they clearly understood this practical problem. However, a small number of learners got confused and subtracted 0.25 from the total cost instead. This implies that they had access to calculators, which is reassuring, but sadly proves that the concept of finding a fraction of a price was beyond them. It is recommended that centres set tasks for the learners to find common fractions of different amounts, especially in money notation, in practical every day contexts.

Question 2b

The success rate on this question was not great due to frequent misinterpretation of the question. The amount of saving on travel each month was given in the question. However, quite a few learners did not use this amount in their workings. Instead they assumed that this was the amount they needed to take away from the current cost to find the savings. Those who understood the question often presented their final figure without £ or trailing zero, hence not gaining the mark for lack of correct money notation. This was also a question where we asked for an explicit check of their working and it was seldom present.

Question 3a

This practical question tested ability to work out a mean and majority of learners were successful and gained all the marks. There were some arithmetical errors in response to this question which suggests the lack of access to a calculator and some learners did not include a decision in their answer. It is very important that learners answer the question once they have found figures to compare – very often “Yes” or “No” will suffice – to get the interpretation mark.

Question 3b

This task involved using simple formula expressed in words. It was very refreshing to see that vast majority of learners engaged with this question effectively. As in the previous question the last mark was not awarded in some responses due to the lack of correct final decision that would answer the question. Centres should encourage learners to read the question again once they complete their calculations and clearly state their decision. This way they will secure the interpretation mark.

Section B

Question 4

Working with time often proves a challenge to Level 1 learners. The understanding of the fact that 1 hour is 60 minutes is essential as some learners still use calculators to work out time, making an error of putting hours and minutes with decimal place i.e. 1 hour and 15 minutes is 1.15 hours rather than 1.25. Centres should practise more tasks set in real life that involve simple conversion of time e.g. $\frac{3}{4}$ hours is 45 min and adding on times. This particular question involved rather straightforward adding up (build up method) so most learners were able to secure all the marks here. However, some did not include all events or lunch in their time plan or failed to clearly show duration of each event by showing the start time and the end time of each event. Centres should put more emphasis on designing a clear time plan that works in practical situations.

Question 5a

While most learners were able to list all correct matches they very often failed to present their answer in an efficient data collection sheet format. Many showed 12 rather than 6 matches or failed to use correct headings. While this was a less challenging data collection task in comparison to previous series, it is evident that learners do not get enough practice in classes that requires a design of an efficient data collection sheet, i.e. a sheet that has clear input opportunities, correct headings and all necessary cells.

Question 5b

This very practical every day scenario had a mixed success. While we have seen quite a few fully correct and different answers, most learners failed to show the check of their calculations. Also, quite a few learners did not provide their workings in this question which lead to some not gaining the marks they would have normally been entitled to. It was, however, reassuring to see majority of learners engaging with this rather complex, though familiar, problem.

Question 6a

Majority of learners gained all the marks in this straightforward money question. Those who failed to gain all the marks mostly did not show their conclusion despite presenting accurate figure or misinterpreted the question and failed to buy two rubber grips. It is advised that learners underline all essential information in the stem of the question to make sure they engage with all the data given.

Question 6b

Assessing likelihood at Level 1 normally has a mixed success. However, in this question most learners gained the mark. As we do not expect calculations in multiple choice question it is difficult to explain why some learners chose any other answer than "likely". Centres are encouraged to use similar question when teaching their learners the concept of likelihood in practical situations.

Section C

Question 7a

The success on this question was dependent on understanding the concept of an area of a rectangle and square. Majority of learners were able to find partial area of the room but some worked out the perimeter which proves lack of understanding. Centres need to put more emphasis on the concept of area, often referred to as "space" in real life, and the need to multiply the dimensions or count up squares that make up the area.

Question 7b

Most learners gained 2 out of 3 marks in this question. They successfully engaged with the concept of 1 square on the grid representing 20 cm by 20 cm in the room and so were able to draw a rectangle with at least one correct length. What proved problematic was understanding the position constraints. Many learners did not place their rectangle along the side of the sink. Along the side means that one side of their rectangle must touch one side of the sink. Those who did so, did not place the shorter side, as stipulated in the question. Centres are advised to practice more drawings in a given scale on a grid and reading carefully the question to avoid missing some constraints.

Question 8

This ratio and common measures questions was mostly done well. Those learners who understood the problem managed to get most marks, some missing out on the last mark which is awarded for conclusion (Yes/No statement). Some learners failed to convert millilitres and litres correctly which affected their working and final answers. It is recommended that learners practice more tasks involving common measures and converting between units.

Question 9

The last question proved successful, despite its position in the paper. The biggest obstacle some learners faced was the ability to work out the number of hours between 9 am and 1 pm. Very often they assumed it was 5 hours which affected subsequent calculations. Very few learners showed the check of their calculations which would prove invaluable here due to this common time calculation error. Learners should practice dealing with simple time problems to avoid this type of issue.

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