

Principal Examiner Feedback

March 2012

Functional Skills Mathematics
Level 1 (FSM01)

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please call our GCE line on 0844 576 0025, our GCSE team on 0844 576 0027, or visit our qualifications website at www.edexcel.com. For information about our BTEC qualifications, please call 0844 576 0026, or visit our website at www.btec.co.uk.

If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

Ask The Expert can be accessed online at the following link:

<http://www.edexcel.com/Aboutus/contact-us/>

Alternatively, you can speak directly to a subject specialist at Pearson about Edexcel qualifications on our dedicated English telephone line: 0844 372 2188.

Pearson: helping people progress, everywhere

Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

March 2012

Publications Code FC031142

All the material in this publication is copyright

© Pearson Education Ltd 2012

Functionality and Process Skills

Candidates must ensure that the process of how they come to an answer is clearly shown: in real life there is more than one way to get to an answer and that rarely is it the case that only one way and one answer is acceptable. Candidates should ensure that even though they are using a calculator they show all stages in their working. In a number of questions on every paper, the correct answer only without working may be credited with just one mark, or sometimes none, when the whole question may be worth 4 or even 5 marks: it is here that the process marks are important and working must be shown.

Candidates should be prepared to check that their answers are fit for purpose such as interpreting graphs, devising a time plan, finding a numerical value and giving a data collection form.

In questions that involve comparing possible values to draw a conclusion, those students who took a little time to analyse each situation having separately worked out these values were invariably well rewarded, especially if they came to a conclusion relating to their figures. Breaking down a question into its component parts and coming to a judgment is an important aspect of these processes.

In questions that involve an explanation, candidates must realise that their answer must be supported by mathematics.

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,' and provide situations that allow candidates to practice the skill. 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. Candidates need additional guidance on checking. It needs to be emphasised that a repeat of the previous working is not acceptable as a check. The difference between a check and a cheque also needs to be made clear.

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.

Question 1a

This question proved challenging for many candidates. An error seen frequently was to miss that there were 4 rounds of 30 minutes and thus reach 110 minutes rather than 200 minutes. Candidates who compared 110 minutes with the 240 minutes available were still able to obtain 2 of the 3 marks. However if they had highlighted or underlined key information they might have avoided this error. Other candidates with a poor understanding of time converted 110 minutes to 1 hour 10 minutes. Some candidates who correctly calculated that they needed 3 hours 20 minutes forgot to write down that 9 to 1 was 4 hours and so showed insufficient information to make a valid decision. The most successful candidates were those who moved forward from 9 am building towards 12.20 Candidates need to have opportunities to practise time plans in contexts. Examples of contexts might be to look at timetabled days, lessons, breaks etc. and ask what would happen if we changed to different lesson lengths, different number of lessons per day, different length of break and get them to produce a time plan for different options. Time planning could also be set around social activities or workplace activities.

Question 1b

This question was answered well. Many candidates were able to use scale correctly to produce a correctly sized shape and most also considered the placement constraints. Those who lost a mark here tended to place the beam too close to the space for another piece of equipment.

Question 1c

There were many pleasing solutions to this question. Some candidates moved the placement in a row one place left or right while others moved one place up or down a column. Those who were using a less systematic approach were still often successful by using trial and error, checking, and then making changes.

Question 2a

Mixed success levels here. There was clearly some misunderstanding of place value as consideration of 35 and 6 or 8 was used rather than .35 and .6 or .8 in some cases. A small number of candidates did not read the question correctly and so did not base evidence for the decision on the scores for bars.

Question 2b

This question was answered well.

Question 3

Many candidates were successful with this question. It was pleasing to note that candidates usually remembered to make a decision having carried out the calculations. Those candidates who were less successful were usually unable to calculate that $12 \times 1.50 = 18$. Provided that they showed their process this would only have resulted in the loss of the accuracy mark. However a significant number did not provide the working and so lost more marks. Others who did not gain full marks did not successfully separate the costs (Clare paid for), from the income (Clare got money in from). Again highlighting key information might have avoided this problem.

Question 4a

There were 3 criteria to be met, not Monday, afternoon and 3 slots. Most candidates were able to gain at least 1 mark for meeting 2 of the 3 criteria. The slots were indicated in a variety of ways by candidates but usually clearly enough for the meaning to be obvious. Many followed the shading method shown for the appointments already booked. As a general principle using the method to book seen in the question is a good idea.

Question 4b

A significant number of candidates did not read this question correctly and so worked out the price to pay rather than the discount. Perhaps reading the demand again after completing the calculation would have avoided this error.

Question 4c

Some candidates did not know how to calculate the mean. These candidates attempted to make a decision based on the number of days the sales were over £200 and gained no credit. Other incorrect answers used the median or the range in sales. Centres need to place emphasis upon candidates having a firm grasp of each statistical process and the correct name for each process. Occasionally candidates correctly calculated the mean but then made no decision or made an incorrect decision. These candidates lost the last mark.

Question 5

There were a significant number of candidates who did not know how to convert between ml and litres. Those who successfully dealt with the conversion often went on to score full marks. Centres need to place emphasis upon candidates knowing and using metric conversions for distance, weight and capacity.

Question 6a

Candidates were often able to score at least 2 marks. The most frequent errors were a lack of 'profit' as a label, or an inability to deal successfully with large numbers and produce a linear scale. Centres are advised to provide opportunities for candidates to choose appropriate scales for plotting a variety of data types and on a variety of different sizes of graph paper.

Question 6b

Most were able to make a simple comment for example identifying the salon with the most profit as Ashton.

Question 6c

Only the very weakest candidates were unable to gain both marks here. A small minority believed that their 145 answer was £1.45

Question 7a

This question was badly done. A significant number did not know how to work out the area of a rectangle. Others assumed that the m^2 in the units meant the bag of pebbles covered an area of $9 \times 9 = 81$ or $2 \times 9 = 18$. Centres are advised to provide many contexts in which area (or perimeter) processes are required and discuss with candidates how to recognise which process is relevant in each situation. A visit to a DIY store or garden centre, to look at coverage in a variety of practical situations might help.

Question 7b

Too many candidates used $2+3 = 5$ and calculated the cost for 5 screens rather than considering the partial perimeter. The meaning of words such as 'along' is not clear to some candidates. The comments made in question 7a are relevant here also.

Question 7c

Centres need to spend time discussing with candidates what constitutes a check. Cheques were often drawn, or the same calculation written down again. Neither of these gains any credit. Candidates need to understand that checking can be done by using a reverse calculation, or a different method from the original or in some situations using sensible estimates. There are a multitude of real life contexts in which the checking skill could be usefully employed. It is a key functional skill.

Question 8

This question was often done well. Those who made errors tended to ignore the need to pay $12 \times 180 = 2160$ and added 240 to 180. Others thought the deposit could be subtracted, or ignored that he wanted to pay the cheapest total cost and gave answers based on preferring monthly payments, or preferring a company where the setting up was free.

Question 9a

Most candidates were able to score at least 1 mark here. It was pleasing to see that candidates were crossing off on the diagram or ticking, as they worked out which constraints were being met. This logical approach allowed many to score both marks and should be encouraged.

Question 9b

Again this question was answered well. There was often evidence of a trial and improvement approach, with candidates discarding solutions as they found a better one. Candidates clearly had sufficient time for the paper as very few blank responses were seen. Those who did not gain both marks tended to ignore the need to buy as many items as possible, or stated the correct items but forgot to include the total to show they could afford to buy them.

Pass mark for FSM01

Maximum mark	48
Pass mark	32
UMS	6

Note: Grade boundaries vary from year to year and from subject to subject, depending on the demands of the questions.

Further copies of this publication are available from
Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467
Fax 01623 450481
Email publication.orders@edexcel.com
Order Code FC031142 March 2012

For more information on Edexcel qualifications, please visit
www.edexcel.com/quals

Pearson Education Limited. Registered company number 872828
with its registered office at Edinburgh Gate, Harlow, Essex CM20 2JE

Ofqual




Llywodraeth Cynulliad Cymru
Welsh Assembly Government

