



Functional Skills Principal Assessor Report

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Subject	Functional Mathematics
Level	Level 1 and Level 2
Date	January 2014

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future assessments. It is intended to be constructive and informative and to promote better understanding.

Comments on candidate performance

General comments

There appears to be a continual improvement in candidate performance since the publication of the last report. Centres are again encouraged to ensure that these reports are passed to all staff involved in the delivery of Functional maths.

Candidates continue to perform well at Level 1 although there are some areas where knowledge is sometimes lacking.

At Level 2, a number of candidates are opting not to attempt a number of questions which significantly reduces their opportunities to gain sufficient marks to pass the assessment. This, coupled with some extremely low marks, suggests that they may have been entered for assessment at an inappropriate Level and/or without sufficient preparation covering all of the skills standards, coverage and range. This practice should be avoided as it is unfair to candidates and could result in lower levels of motivation and self-esteem.

Areas in which candidates performed well

Candidates continued to generally perform well, at both Level 1 and Level 2, in questions relating to or involving:

- Money
- Statistical measures (average and range)

Areas which candidates found demanding

Candidates regularly experience problems in areas relating to or involving:

- Calculations involving time where there was a tendency to confuse minutes and decimals; either minutes or decimals of an hour should be used consistently throughout the calculations and the final answer presented in a functional format, it is not functional to present a final answer as 1.2 hours
- Demonstrating the checking of calculations; simply repeating the original calculation(s) will not be acceptable but use of reverse calculations, estimation etc would achieve the marks
- Multi-stage problems where candidates do not always follow the problem logically and draw appropriate final conclusions. Examples of this include calculations regarding the decorating of a room or the purchase of a carpet such as those shown in Questions 1 and 2 of the Past Papers with Commentary - available at:
http://www.sqa.org.uk/sqa/files_ccc/FunctionalSkillsMathsLevel2pastpaperApril2014.pdf

Also, see **Example 1**, at the end of this report.

- The production of graphs or charts (Level 1) where labelling is often not sufficiently detailed (eg 'temperature' should be 'temperature °C') and where the scales used are not linear

- Calculations involving probability (Level 2); acceptable responses can be in words, as a fraction (in its simplest form) as a percentage or as a decimal. An example of this is when asked to work out the probability of winning a raffle such as Question 10 in the Past Papers with Commentary - available at:

http://www.sqa.org.uk/sqa/files_ccc/FunctionalSkillsMathsLevel2pastpaperApril2014.pdf

Also, see **Example 2**, at the end of this report.

- The calculation and use of scales and/or proportions (Level 2)

Advice to centres for preparation of future candidates

As questions will not necessarily refer to contexts with which the candidate is familiar, it is important to remember that it is the transferrable skills of the candidate which are being tested. Candidates should be prepared for this by undertaking sample assessments before undertaking the formal assessment; they should not be entered for live assessments to provide them with practice or as a diagnostic exercise.

As there are a range of live assessments which are randomly allocated to candidates, centres should avoid coaching candidates for a specific version of the assessment but should be prepared for assessment by ensuring that their knowledge encompasses all of the skills standards, coverage and range, providing a revision book or a few worksheets is not a substitute for actual teaching.

Past Papers with Commentary for both Level 1 and Level 2 are available at <http://www.sqa.org.uk/sqa/64681.4251.html>. Centres are strongly advised to refer candidates to these papers for guidance as to how marks are allocated as well as hints on the level of problem solving required and areas where special care is needed to avoid the needless loss of marks.

Areas in which marks are often lost, causing candidates not to achieve are:

- Ensuring that calculations are shown in full, as a high proportion of the marks are awarded for identifying and undertaking the processes rather than the final answer
- Reviewing the answer in the context of the number of marks available as a question worth, say, 5 marks is unlikely to require a single line or one word answer
- Failing to specifically answer the question posed; many candidates carry out appropriate calculations and then fail to draw the conclusion required in the question. Examples of this are shown in Questions 4, 6, 8 and 10 in the Past Papers with Commentary - available at:

http://www.sqa.org.uk/sqa/files_ccc/FunctionalSkillsMathsLevel2pastpaperApril2014.pdf

- Where an explanation or justification of an answer is needed, failing to ensure that this includes reference to the calculations carried out; it is not sufficient to select an option without explain why (eg lowest cost, higher cost but includes 'free' gift etc)

- Where the question specifies a degree of rounding then this must be followed; where this is not specified then any rounding will be accepted as long as it is accurate, reasonable and functional. Functionality of an answer includes ensuring that it is practical eg purchasing whole rolls of wallpaper (and therefore rounding up), and whole tins of paint, such as in Question 1 in the Past Papers with Commentary- available at:

http://www.sqa.org.uk/sqa/files_ccc/FunctionalSkillsMathsLevel2pastpaperApril2014.pdf

- Ensuring that appropriate, and functional, units are used in answers. A significant number of candidates are failing to achieve sufficient marks to pass a paper solely as a result of failing to show the unit of the answer; responses involving time should either be in the 24 hour format or specify am/pm

Example 1 – Candidates failing to work through multi stage problems

This example comes from question 2 of the level 2 Maths past paper, available from the SQA website:

[Calculator](#)

Bedroom

- Carpet costs £9.59/m² and comes in widths of 4 m.
- Underlay costs £2.99/m²
- The bedroom is 2.4 m long by 1.9 m wide

Gripper fits round the edge of the carpet and comes in packs with total length of 12.21 m costing £6.99.



Work out the lowest cost of carpeting the floor.
Show your working.

(6 marks)

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In questions such as this, some candidates become confused by the range of information provided and have difficulty working through the problem in logical stages. They need to start by working out what information they need to solve the problem, i.e.:

Cost of carpet + cost of underlay + cost of gripper = overall cost of carpeting the floor.

When they start trying to work out the cost of each component (carpet, underlay and gripper), they should be aware that they may need to buy more than they need of some products, i.e.:

- They can only buy the carpet in widths of 4m.
- They must buy a whole number of packs of grippers.

Longer questions such as this one, requiring multi stage problem solving are common within Functional Skills assessments. Candidates should be given adequate opportunity to practise and prepare for this type of question before they sit their assessment.

Example 2 – Questions relating to probability

This example comes from question 7 of the level 1 Maths past paper, available from the SQA website:

[Calculator](#)

Charity
A class sells books of raffle tickets to raise money.
A book of raffle tickets contains 10 tickets.
The number on the first ticket in a book is 181.

<p>No 181</p> <p>Name</p> <p>Address</p>	<p style="text-align: right;">No 181</p> <p style="text-align: center;">RAFFLE TICKET</p> <p style="text-align: right;">Price 50 p</p>
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a) What is the number of the last ticket in this book?
(1 mark)

b) The year group sells a total of 350 raffle tickets.
A boy has bought 10 of them.
What is the probability that the boy has bought a winning ticket?
(1 mark)

In questions such as 7(b), above, candidates may learn different ways of calculating and presenting their answer to probability tasks. Candidates could express the probability as:

1 chance in 35, or as $1/35$, or as 0.0286, or as 2.86%.

It is important that candidates are prepared for questions involving the probability of an outcome.