Functional Skills Certificate

MATHEMATICS

4367 Level 1

Report on the Examination

4367

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General

The four tasks provided the opportunity for many students to demonstrate competence in the three process skills of representing, analysing and interpreting. Some students found the longer multi-step questions challenging.

There were many concise and clear solutions showing full method; students working in this way have a better chance of scoring follow-through marks after slips. There were a significant number of responses where the sequence of working was unclear, making follow-through marks difficult to award.

Centres are asked to remind students not to work outside the rectangle surrounding each page, particularly at the bottom, as this is often impossible to mark. It is also recommended that students do their working on the answer lines provided and not work close to the text in the question.

Most students made a conclusion in those questions where they were asked to do so. In making their conclusions, some students write a lot more than the simple 'Yes' or 'No' that is needed. This could contribute to the time pressures experienced by some students later in the paper.

Some students appeared not to have a calculator. A significant proportion did not seem to be aware of information given on the data sheet.

Topics that were well done included:

- solving problems about batches of cookie dough (1(a), 1(b), 1(c))
- using information from a table to work out vehicle tax (2(a))
- using subtraction to work out actual mpg (2(a))
- completing a rota (3(a))
- using information from a table to work out vehicle tax (2(a))
- working out how many hamsters could be transported (4(c))
- following given steps to convert °C to °F (4(d)).

Topics which students found difficult included:

- 'Show that' questions (1(d) and 3(c))
- checking an answer (2(a) and 4(c))
- analysing data to work out whether it is quicker by car or by train (2(d))
- drawing the side of a box accurately (4(a)).

Task 1 Cookies

1(a) This was well answered.

1(b) The majority of students obtained full marks. However, some students gave one batch for large cookies and one batch for small cookies to give the incorrect total of 2 batches. A minority attempted to work out the ingredients for 16 large and 24 small cookies, usually unsuccessfully.

1(c) This question was well answered, but a significant number of students forgot about the 1 egg they already had.

1(d) This was a 'show that' question, with marks awarded for the communication of full and correct working. This type of question is often not well answered at level 1, with often only a partial method being shown. For example, many students did not show the method for obtaining 2 batches and 3 batches or 5 batches although they subsequently used these values. A small number showed that the answer was incorrect.

1(e) The full range of marks was obtained on this multi-step question. A fair proportion scored 6 or 7 marks, with some of these students making an arithmetic slip or forgetting to make a conclusion. Some students multiplied 4 by 1.15 and 12 by 2.60 without going on to work out the correct number of bags; some of these added their totals to score 1 mark. Those who worked out the correct number of bags usually went on to obtain the total income correctly; a large proportion of these used this to make a decision about the profit, without subtracting the cost given in 1(d).

Task 2 Cars

2(a) This was well answered, with many students adding the correct amounts of money from the table on the data sheet, though some used the wrong value for year 1. A small proportion did not include the £ sign in their final answer.

Checking was generally poor, with many students simply repeating the same method or giving comments such as 'I checked my answer'. A significant number of students did not attempt the check.

2(b) This was well answered.

2(c) This question was reasonably well answered, with many students using the steps on the data sheet correctly, either for one day's travel or for all 5 days. Some students who worked out the cost for one day's travel failed to multiply by 5 and only scored 2 marks for £3.92. Other students ignored the steps on the data sheet and combined the numbers in the question in various usually incorrect ways. For example, a conclusion based on the answer to 5 × 4.90 was often seen. A minority used 83 instead of 75 and some did not make a conclusion.

2(d) This was not well done, with many students showing little awareness of what was needed to answer the question. Most attempted to find the total time for each day and then made a conclusion without giving a reason for it. Often those that made a valid statement about Thursday being quicker by car then made the wrong conclusion. There were many errors in converting hours in decimals to hours and minutes.

Task 3 Hotel

3(a) The rota was done fairly well. Common errors were to allocate more than 5 days for Del or to have the same person allocated to more than one shift a day; this was often caused by completing the table after an early error. Some students left one shift blank, possibly to avoid these errors.

3(b) There were some interesting approaches to this multi-step question, with a variety of correct methods shown. Common errors included thinking that there were 8 hours between 8 am and 3 pm or failing to take account of the 1-hour break. Some students calculated that 20 minutes to clean a room meant that 5 rooms could be cleaned in one hour. A common incorrect approach was to divide 180 by 20 to give an answer of 9 cleaners. Working often stopped at the value 18, the number of rooms done by each cleaner in 6 hours, without going on to divide 180 by 18. Some students confused minutes and hours in their working.

3(c) This 'show that' question was answered slightly better than 1(d). Many scored only 1 mark because they did not show how 24 was obtained. Some students did calculate the mean. A fair proportion of the students did not attempt this question.

3(d) Although there were some very good answers, a lot of students found this multi-step question challenging, with many not using the 2.4 altogether and, again, a large proportion of the students not making an attempt. The wrong values were often used in calculations, with many students just multiplying 120 by 6. Some students used a correct method but rounded 2.4 to 2 or 3 in their calculations.

Task 4 Transporting hamsters

4(a) This question was not well answered. Students could usually draw the 6 by 4 rectangle, and often it was symmetrical within their side of the box in at least one direction. A lot of students did not make the box at least 15.2 cm tall. Those who did usually made it exactly 15.2 cm, which made the symmetry of the window more difficult.

4(b) This question was done fairly well, although some students gave the wrong conclusion. Errors included multiplying by 600 and squaring the area for each hamster, presumably because area is in square units.

4(c) This question was well done. Some left the answer as 5.4 or rounded down to 5.

Checking was poorly done. A minority used a reverse calculation successfully but, again, many just repeated the original method. There was a large proportion of non-attempts.

4(d) This question was usually answered well, with the majority of students following the steps on the data sheet correctly and getting 82.4, although some went on to make the wrong conclusion. A minority started with 85 instead of 28.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.

Converting Marks into UMS marks

Convert raw marks into Uniform Mark Scale (UMS) marks by using the link below.

UMS conversion calculator