Functional Skills Certificate

MATHEMATICS

4368 Level 1

Report on the Examination

4368

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General

Overall, most students taking this assessment were able to demonstrate some competence in the three process skills of representing, analysing and interpreting. However, the proportion of non-attempts in later questions in the paper was higher than usual, suggesting that many students experienced time pressures in their attempt to complete the paper. Associated with this was the tendency for some students to use up time by giving answers that were not asked for, for example in question 1(e) where the cost of the holiday was often worked out unnecessarily.

Some students did not always give full answers to questions and, because of this, often lost the marks available for communication and interpretation. Some answers were presented very haphazardly and were difficult to follow; centres are advised to encourage students to practice giving full and clearly communicated solutions to questions with all working and units shown.

Most responses suggested that the pre-release Data Sheet was well used, and nearly all students made a conclusion in those questions where they were asked to do so. Overall, calculators were used effectively.

Topics that were reasonably well answered included:

- making a simple calculation from values read from a table
- calculating a cost involving 5% discount
- selecting values from a table
- calculating the total cost of petrol for a given total mileage
- calculating the profit made from a number of items sold on a market stall
- completing a rota from given criteria
- calculating the profit made from selling a school newspaper
- working out the number of years it takes to pay for the cost of solar panels.

Topics which students found difficult included:

- checking answers to calculations involving two operations
- showing that sixteen lots of 250 W equals 4 kW
- working out the number of solar panels that fit on an L-shaped roof
- working out how much a person should be paid for the electricity made from solar panels.

Task 1 Camping in France

(a) This question was well answered, with nearly all students obtaining the correct answer.

(b) Most students made a reasonable attempt at this question, although a significant minority calculated 5% incorrectly and many did not include their answer to 1(a) in their calculation.

(c) Many students scored full marks for this question, but a significant minority made no attempt and some simply stated that 1 mile equals 1.6 km without reference to the graph. Others converted correctly from the graph but then did not clearly use their conversion to show that 600 miles equals 960 km; for example, they obtained 300 miles = 480 km from the graph but then did not multiply by 2.

(d) This question was answered fairly well, with many students scoring full marks. However, some students used the correct operations but did not use 600 miles as required.

The check was fairly well done, with most students trying to use a reverse method. Centres are reminded that when checking a calculation involving two operations with a reverse method two operations are required, starting with the answer and ending with a given value. Many students only used one operation; for example, just 75 ÷ 5 = 15 when they also needed 15 × 40 = 600 to score the mark.

(e) A significant minority did not attempt this question; those who did usually scored at least two marks. Errors included not returning to Caen, camping at Caen when there was no campsite there and travelling for longer than 5 hours between campsites. Some students gave costs, which was not required in this question. The standard of presentation was often poor, although there were some very well presented solutions.

Task 2 Market stall

(a) This question was answered well, with many students scoring 6 or more marks. Higher scoring students showed a clear understanding of the routine for working out profit by subtracting cost from income. Lower scoring students tended to work out either income or costs only. Some students had difficulty in working out the reduced price of the kettles, often giving this as £3.60 instead of £6 – £3.60

(b) This question was answered very well, with a fairly high proportion of students scoring 3 or 4 marks. The most common error was to include the same person more than once on the same row of the grid. There were also some incomplete grids with just Tom, Ali and Wes included.

Task 3 School newspaper

(a) This question was reasonably well answered. Most students managed to work out the total number of seconds required to print 1500 copies of the school newspaper, but some struggled to convert this to hours and minutes.

(b) A significant minority did not attempt this question. Most of those who made an attempt managed to work out the cost of making 1500 copies, with a fairly high proportion going on to work out the amount made. However, a fair number were incorrect when trying to work out 90% of the number of newspapers left after the free copies had been subtracted.

(c) A high proportion of students did not attempt this question, but many of those who did gained full marks. Some made an error or added incorrectly but still gained one mark.

(d) Again, a high proportion of students did not attempt this question. Most of those who made an attempt scored well, usually by scaling 50 lines to 450 lines by multiplying by 9, although some got no further than this. A fairly high number of students did not interpret 6480 as 'about 6500'.

Task 4 Solar panels

(a) This question was well done, although again a significant proportion made no attempt.

Overall, the check was poorly done, with relatively few students being successful, often only using one of the two appropriate operations.

(b) This was another question where a relatively high proportion of students made no attempt. Of those who did, many were unsuccessful, mainly because the connection between watts and kilowatts was not stated explicitly.

(c) This question required students to follow a procedure given clearly in the data sheet; however, about 30% of students made no attempt. The rest nearly always scored some marks, with many scoring 4 or 5. Common errors included incorrect calculation of a in step 1 and using 30 days in August instead of 31

(d) This question was not well answered, with very few students scoring any marks at all; again there was a relatively high proportion of non-attempts. Common incorrect attempts included those based on area and on perimeter. Very few students divided a length on the roof by a length of the panel, which formed the basis of a solution.

(e) Very few candidates scored full marks for this question, and there was a very high proportion of non-attempts, possibly because of lack of time. Common errors included only multiplying 0.1768 by one reading (usually 6502), multiplying both values by 0.1768 but not subtracting, missing the £ symbol and/or not rounding to the nearest 10 pence.

(c) The majority of students could follow at least some of the steps needed to answer this question. Common mistakes were to leave out one of the algebraic steps or to do × 3 × 11 or × 16 × 11.
A large number of students did forget to make a conclusion here.

(d) The majority of students struggled with the final part of this task, not understanding that they should subtract the meter readings. A large number just multiplied 18p by 6502. There were very few students who could round the correct answer to the nearest £10, using just rounding to the nearest pound.

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