Functional Skills Certificate
MATHEMATICS

4368 Level 2
Report on the Examination

4368
November 2015

Version: 1.0

Level 2

General

Overall, most of the students taking this assessment were able to demonstrate some competence in the three process skills of representing, analysing and interpreting. However, a significant proportion of students often failed to give full answers to questions, and consequently did not always score marks awarded for communication. Centres should encourage students to give full, clearly communicated solutions with all working and all relevant 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:

- reading values from a timetable
- solving a variety of problems involving money
- comparing a value given in grams with a value given in kilograms
- solving a 2-step problem where the answer needed to be rounded up.

Topics which students found difficult included:

- converting time as a decimal number of hours to time in hours and minutes
- working out the perimeter of an L-shape
- rounding values to the nearest 50 to check the perimeter of an L-shape
- working out the mean of values given in a frequency table
- checking the answer to a multi-step calculation
- working out how many small cuboids fit in a larger cuboid.

Task 1   Athletics

(a)   This question was well answered, with nearly all students dealing with all or most of the criteria.

(b)   Most students made a reasonable attempt at this question, although many added 0.25 seconds to Kelly's best time for the 200 metres instead of subtracting. A minority of students added their new points total for the two events to the original total of 4928.

(c)   It was possible to score 4 of the 5 marks on this question with a clearly communicated, but incorrect, solution. Only a small proportion of students scored full marks, although many found the correct solution but did communicate it clearly. Many students scored only one mark because they did not consider combinations of more than one size of bus in their calculations.

Task 2   Steam Trains

(a)   Most students circled the correct answer.

(b)   Answers to questions where students are asked to give a plan are best presented in a list, with required calculations separated from the final plan. Unfortunately, this approach was fairly rare, although there were some very good, clear and correct solutions. Most students lost marks because they did not accurately calculate the walking time. Some made no reference to it in their plan. Others made a clearly communicated estimate, which maximised the chance of follow through marks. Some students worked out a time in hours but did not accurately convert it to hours and minutes with, for example, 2.2 hours being converted to 2 hours 20 minutes or 2.8 hours being converted to 3 hours 20 minutes via 2 hours 80 minutes. Here, knowing that 0.1 hours is equivalent to 6 minutes is useful. A minority of students read times from the wrong timetable.

Task 3   Sheep Farming

(a)   Overall, few students circled the correct perimeter. Most incorrect values were found by not adding the two unmarked lengths. Some students attempted to work out the area of a 485 m by 815 m rectangle and circled 395 275 m

The **check** was poorly done. Many students did not round all the lengths to the nearest 50 metres correctly; others did not attempt to do it. A significantly large proportion made no attempt at the question.

(b)   Most students accurately worked out the pre-VAT price of the fence, but many of these did not go on to work out and add the VAT.

(c)   Several students scored zero or made no attempt at this question. However, most of the rest made a good attempt at working out the area of the L-shape and using the formula given on the Data Sheet.

(d)   This question was poorly done, with few students showing the method required to calculate a mean value from a frequency table. Adding up the given weight categories and calculating $19.5 \div 6$ was common.

(e)   Again, several students scored zero or made no attempt at this question. However, most of the rest made a good attempt. Many did not work out the correct number of ewes and rams because they divided by 7, instead of 8, to work out the number of rams. Some mixed up the amount of wool obtained from ewes and rams with $3.2 \times 210 + 3.6 \times 1470$ being used instead of $3.2 \times 1470 + 3.6 \times 210$

Task 4   Sweets

(a)   This question was well done, although many students lost marks by failing to show the conversion between grams and kilograms.

(b)   This question was well done, with nearly all students doing the correct calculation. However, a small number did not round up to obtain their final answer.

Most students found the check for this question difficult, due mainly to its multi-step nature. Attempting the problem using an alternative method was the best solution.

(c)   Questions which ask for the number of small boxes that fit into a larger box, where the boxes do not fit exactly, are often done badly. This was no exception, with many students scoring zero or making no attempt. Nearly all of those who scored zero divided the volume of the large box by the volume of the small box, which only gives a correct solution when the boxes fit exactly. Some students, who correctly worked out the number of small boxes that could fit along each dimension of the large box, added these values instead of multiplying them.

(d)   This question was done reasonably well, with most students scoring 4 or more marks. The biggest problem seemed to be in working out the number of each box, with many working out the number of boxes of fudge incorrectly. Most students subtracted the total cost from the total selling price to work out the profit.

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