AQA

Functional Skills Certificate
MATHEMATICS
4368 Level 2
Report on the Examination

4368
January 2019

Version: 1.0

General

Overall, most students taking this assessment were able to demonstrate competence in the three process skills of representing, analysing and interpreting. In particular, the longer multi-step questions were fairly well answered, although, as expected, some students found them challenging.

The proportion of non-attempts in later questions in the paper was relatively high, suggesting that some students experienced time pressures in trying to complete the paper.
Some students did not always give full answers to questions and, because of this, often lost the marks available for communication and interpretation. However, in general, answers were presented well and were easy to follow.

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 well answered included:

- using timetables to plan a journey to work
- working out how much was left from wages from a part-time job after travel costs
- working out how much better off someone is in a new job
- working out the tax paid per year from a given salary
- solving a multi-step problem involving the cheapest fuel to use in a log burner.

Topics which students found difficult included:

- checking answers to calculations involving two operations
- calculating the mean from a frequency table
- working out the minimum area of a pig sty needed to house 1 sow and 7 piglets
- solving a problem involving area and perimeter
- using a formula to work out the smallest log burner that will heat a given room.

Task 1   On the farm

1 (a)   Relatively few students used the correct method to calculate the mean from a frequency table even though this is a standard question which has occurred regularly in past functional papers. Some students scored 1 mark for dividing an incorrect value by 30, but most simply added the values in the table and divided by 5

1 (b)   This question was reasonably well answered, with a significant proportion of students scoring high marks. Typical errors included multiplying an incorrect value by 385 and working out 7944 × 150 × 33 and not realising that this was an income in pence. Some students did not subtract their cost from their income and, consequently, did not justify their conclusion. Many students worked out the difference between income and cost in incompatible units (one in £ and the other in p).

1 (c)   There was a lot of confusion regarding which values to use in this question, with many students possibly not realising that a 'piglet' is a 'pig' despite being told so in the data sheet. The most common incorrect answer was $13.96m^2$, which is calculated from 2.48 + 7 × 1.64.

The check was not well answered, with many students only checking one of the two operations.

1 (d) There were very few fully correct solutions to this question. Most students simply compared the maximum possible perimeter with the area they obtained in 1(c). Some of those who showed an appreciation of the concepts did not give the rectangle with the largest possible area, often giving a 5m by 2m rectangle as their answer.

Task 2   Part-time work

2 (a) This question was very well answered, with a large number of students gaining full marks. Typical errors included adding 11 minutes to Emmie's time of arrival at the Queen's Road tram stop instead of adding 11 minutes to the arrival time of the next tram, working horizontally along the timetable rather than vertically and confusing Old Trafford with the Trafford Centre.

2 (b) This question was well answered by most students, although many subtracted an incorrect number of tram and bus fares.

2 (c) This question was also well answered, although a significant minority of students did not include the cost of transport in their calculation.

2 (d) This question was very well answered. However, a significant minority of students did not have a secure method for calculating 20% of a quantity.

Task 3   Log burner

3 (a) This question was reasonably well answered, although many students could not convert accurately between centimetres and millimetres.
The check was poorly answered with, again, many students only checking one of the two operations.

3 (b) This question was reasonably well answered. Many students were unable to calculate the area of the room correctly, with some attempting to work out the perimeter instead. An incorrect value for the height of the room was often substituted into the formula despite it being given in the question. A minority of students found the correct value of K but did not pick a log burner, whereas others picked an incorrect log burner for their value of K

3 (c) This multi-step question was very well answered with, overall, more than half of the students giving a fully correct answer. Some students found it difficult to combine all the variables correctly; sometimes, for example, dividing by 0.8 by 1.5 instead of multiplying. A relatively frequent error was failing to subtract the costs for the two fuels before making a conclusion.

Task 4   Apricot jam

4 (a) Overall, about half of the responses to this multiple-choice question were correct.

4 (b) Students used a number of different methods to answer this question; overall, they did fairly well. Those who worked out that 4 batches of jam could be made with 7.2 kg of apricots and that only 3 could be made with 2.5 kg of sugar or that you needed 2.8 kg of sugar to make 4 batches were the most successful, although some lost marks for failing to show or

imply an appropriate conversion between grams and kilograms. It is important that students know that there are 1000 grams in a kilogram.

4 (c) This question was not particularly well answered. Many students found problems with multiplying by $17\frac{3}{4}$ and relatively few converted to 17.75. It was also fairly common for students to round up or not round at all instead of rounding down to obtain their final answer. A sizeable minority of students did not attempt this question.

4 (d) This question was also not particularly well answered, with many students failing to decipher what the question was actually asking. Those who correctly found 70% of the total cost for 1 jar often made the wrong conclusion and there were some who did not have a secure method for calculating 70% of a quantity. A significant number of candidates needlessly multiplied all values by the number of jars they calculated from 1(c), but did not lose marks for this if it was done accurately. Again, a sizeable minority of students did not attempt this question.

Mark Ranges and Award of Grades

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