Functional Skills Certificate
MATHEMATICS

4367 Level 1
Report on the Examination

4367
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General

Most of the paper appeared to be accessible to its target group, with the vast majority of students attempting all questions. Working was often seen, but not always in a well-structured way. Some students did not give conclusions where they were needed.

Topics that were well done included:
- reading amounts of sugar from a table
- following a simple step formula from the data sheet
- calculating the cost of painting a bedroom.

Topics which candidates found difficult included:
- comparing using percentages
- calculating a mean
- working out capacity.

Task 1   Muesli

1 (a)   This question was answered well by the majority of students.

1 (b)   A large number of students could work out the calories for each brand for the week, but some of these did not show the difference between the two brands. Of those who did, a few answered as if the question was asking whether there was exactly 150 calories difference. Some stopped after calculating that the difference between the daily calories per brand was 18

1 (c)   There were many possible ways of using the 10% in this question. Some worked out 250 correctly; a small number of these made the wrong conclusion. Others worked out 10% of 260 or tried to work out 260 as a percentage of 2500, but usually the wrong way round.

1 (d)   Some students answered as if you had to buy oats and apricots in complete 100 gram bags rather than working out the cost of 350 grams of oats and 25 grams of apricots. Others answered as if each of the other ingredients cost 95p, which resulted in a cost much larger than the shop-bought version.

Task 2   Hot Air Balloon

2 (a)   Students continue to have problems working with periods of time. A large number could work out the 4 hours from 1600 to 2000 but many struggled with the time period from 1030 to 1300. Common wrong answers included 3.5 hours (which became 3 hours 50 minutes) and 2.70 hours (which became 2 hours 70 minutes and then 3 hours 10 minutes). The correct time of 3 hours 30 minutes sometimes became 3.3 hours. Conclusions were usually seen and correct for their total time.

2 (b)   This question was answered well, although a small number of students applied the steps to a starting point of 5000 feet. Directing the students to the steps on the data sheet seemed to have a positive effect.

2 (c)   In this question quite a large number of students correctly divided 3200 by 4, but there were also many who did not make a correct start. Common errors included multiplying by 4, dividing by 4^3 or trying to work out 3200^3.

The check required a simple reverse calculation, but less than one-third of the students managed to do this. A large number did not make an attempt or just repeated the same calculation. Some gave the answer in the main working lines then showed the method in the checking space, which does not get the mark.

2 (d)   Despite this challenging multi-step question requiring students to assimilate a lot of information, there were some excellent responses, and overall the question differentiated well. A common error was in working out the number of months from April to October with answers of 6, 12 and 5 months often seen. Also, some students omitted either the 4 people per trip or the 8 flights per month. Of those who did get to the overall income of £32 480 (or the equivalent for their number of months) a small number did not subtract the costs, and compared £32 480 with £25 000

Task 3   Canteen Survey

3 (a)   There were many good attempts at finding the mean, although some students with otherwise correct answers did not make a conclusion. A small number worked out the median or the mode instead of the mean and a relatively large number failed to work out anything creditworthy. A common error was to add the two halves of the list separately and divide each answer by 10; the resulting values were then compared to the 2.5, or to each other. Others just talked about the number of seats not making a difference as there were the same number of students.

3 (b)   There were some good responses to this question, but the majority did not multiply the number of each sandwich by 4 to give the total number of 80 sandwiches. Instead, many students simply chose which sandwiches to make in order to have 80 sandwiches, which often gave a total of more than £200. Another recurring misconception was for students to calculate the cost of making their particular sandwiches each day for a week.

3 (c)   There was a mixed response to this question, with a large variety of bar charts and pictograms seen. For those who drew a bar chart the heights and widths of the bars were usually accurate, with only the occasional slip seen, which was usually the width of the gaps between the bars. The most common error was in not labelling the frequency axis. A small number of students labelled the centre of the bars on the axis rather than the top of each square. Pictograms usually had a key and were drawn reasonably well.

Task 4   Room Makeover

4 (a)   The most common mistake in this question was to find the area instead of the perimeter. The majority of students showed clear working to arrive at the answer of 10, although a small number worked out 3 × 3 + 2 × 2 = 13 and concluded that there was not enough.

4 (b)   A large number of students did not attempt this question. Those who did attempt it used the steps in the formula with fluency, although some lost one mark at the end for an incorrect radiator choice. Arithmetic slips were rare, but sometimes the wrong room factor was used. For step 1, some students used their perimeter from 4 (a) instead of multiplying the given length and width.

4 (c)   The majority of students correctly added up three costs. However, a large number of these did not work out the area of the room to work out the cost of the underlay; most either used £3.99 or multiplied £3.99 by 10 (the perimeter of the room). Another common error was to use 10 packs of gripper rods, despite the question clearly stating that Tom only bought one pack. Conclusions were usually correct.

4 (d)   Most students attempted this question and many went on to perform a check. A common error was to work out (28 + 55) × 6 instead of 28 × 6 + 55. A small number of students gave the answer without any units.

Again, in the check there are still a large number of students who repeat the same calculation or suggest that they checked by using their calculator. However, there was an overall increase in the number of correct checks taking place.

Mark Ranges and Award of Grades

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