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# Functional Skills Certificate

# **MATHEMATICS**

4367 Level 1

Report on the Examination

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## General

Most of the paper appeared to be accessible to its target group, although there was evidence that some students may have run out of time. Working was often seen, but methods were sometimes difficult to follow. Some students did not give conclusions where they were needed.

Topics that were well done included:

- simple area
- comparing data sets
- selecting a correct cost from a table
- completing a rota
- following a formula in words.

Topics which candidates found difficult included:

- finding costs involving a simple ratio of quantities
- using points and money to pay for items
- checking answers effectively
- working out calories burned over a time period
- calculating the amount of chlorine needed in a swimming pool.

## Task 1 Garden Birds

**1 (a)** There were some good answers that were explained fully, but a large number of students failed to show all the steps leading to their answer. Students should understand that ‘Show that’ questions require every step of the working to be seen.

Common errors included the number 120 appearing with no evidence of method and, similarly, the values 90, 93 and 84 stated without the multiplication shown.

**1 (b)** The majority of students could work out that 28 800 g were needed, but many stopped there and did not compare it adequately with 29 kg. Students had to compare in consistent units to gain full credit. Quite a few students stated that  $29\text{kg} = 2900\text{g}$  despite being given the conversion factor. A small number did not make a decision based on their answer.

The least successful students tried to combine the numbers in the question in various forms, with  $360 \times 29$  and  $80 \times 29$  being the most frequent of these.

**1 (c)** The majority of students found this question challenging, with only the most able understanding the ratio of half lard to bird seed. Some students did not halve their 28 800 grams from part (b). The majority of the successful students worked out that 200 g was enough for 5 fat cakes, and then usually went on to successfully work out how many packs were needed and the total cost. The least successful students simply multiplied 360 by 34p or 200 by 34p

**1 (d)** This question was answered well by the vast majority of the students. The most common method was to add the frequencies, usually successfully but with some arithmetical errors seen. Quite a large number then went on to calculate the means and many were successful.

A small number of students stated that Emma saw more birds on 5 days, while Jenny saw more birds on only 2 days.

Only a few candidates attempted to compare differences as a method of comparing totals. These students usually failed to find the total differences successfully.

## **Task 2 Winset Park**

- 2 (a)** A large number of students could follow the steps on the data sheet to calculate the height of the tree. A small number of students used the values from the data sheet example rather than those in the question. Students should take care to use the correct information.

Checks were not done well, with the majority of students repeating the same calculation or stating they had checked it with a calculator. Quite a large number of students just gave the answer in part (a), and then showed their method in the check. This was their original method so gained no extra credit. The best checks are simple reverse calculations.

- 2 (b)** This question was answered well, although a small number of students worked out the perimeter and showed that it was not equal to 224
- 2 (c)** The most common error in this part was to use 44.8 as the number of bags he had to buy. Students should have realised that this was not practical, as full bags must be bought. A small number of students rounded their value down (to the nearest whole number) failing to realise they would not have enough. The least successful students simply multiplied 5 by £53.75
- 2 (d)** Students usually made some progress with their scale drawing, with the 2 by 2 squares and 5 by 5 square often being correct. Many students then struggled to draw the 7.5 by 4 rectangle correctly, with 7 by 4 and 8 by 4 being the most common errors. Other errors included missing out one swing set or drawing it a different size or not labelling their diagrams. A very small number of students drew pictures of swings, etc, instead of the shapes to represent the area needed for each one.

## **Task 3 Fitness Club**

- 3 (a)** This question was answered well.
- 3 (b)** The majority of students could find the correct total of the 4 separate tickets, but many stopped there and just stated that the family ticket was cheaper. Students need to read the questions carefully, as this question asked if it was over £100 cheaper. Evidence of testing this is required, for example by subtracting to find that it was £101 cheaper.
- 3 (c)** This question was not answered well, with many students just dividing 892 by 15
- 3 (d)** The most successful candidates were those who had some structure to the way they completed the table. For example, some students kept the workers in their pairs (Amy and Kim, Sal and Tom) and just worked them on alternate days. Another successful method was to use all four names alternately down the grid until all the spaces were filled. Those who went for a piecemeal approach often made errors. Common errors included having

someone working for more than 2 consecutive days and swapping the number of days for Kim and Amy with Tom and Sal.

- 3 (e)** Students often did not understand that 2 millilitres were needed for every **1000** litres of water so a common answer was 900 000. The other common error was to divide 450 by 2. Checking was again often just a repeat of the same calculation

#### **Task 4 Saving Money**

- 4 (a)** A large number of students worked out the values of £30 and £18 but then either added both of those to the amount for opening the account or subtracted both. Others just stopped at £30 and £18. A small number of students divided 125 by 5 and 75 by 3 and concluded that the banks were both the same.
- 4 (b)** The majority of students said that £4 would be the difference after another month, presumably by doubling £2
- 4 (c)** A large number of students completed the form correctly, but there were also a lot of arithmetical errors, particularly in the total. The most common error in the table was for 1.55 to become 15.5
- 4 (d)** Students struggled to understand how the points system worked despite the information on the pre-release material. The most able students realised that you only got a point for every £2 spent on petrol. The majority thought that £42 spent meant 42 points, so he was correct.
- 4 (e)** The most able students could access this question well and showed method leading to the £85 required and the decision No. Weaker students divided by 3p instead of multiplying. A small number started with the £820 and divided that by 3p, without subtracting the £90 first. The least successful students mixed up points and pounds and divided 24500 by 820
- 4(f)** A large number of students could find 10%, but many of these subtracted it from 58, giving their answer as the amount spent rather than the discount. There was a lot of poor money notation with £ signs missing and/or incorrect pence notation.

#### **Mark Ranges and Award of Grades**

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.