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# Functional Skills Certificate

# Mathematics

4367 Level 1

Report on the Examination

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4367

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**General**

The paper was accessible to the target group, with no evidence of a lack of time to complete the questions. The majority of students attempted all the questions and generally showed their methods. Conclusions, where required, were usually given. Some students still do their working all around the question rather than using the working lines given.

**Task 1 Water**

**1 (a)** The majority of students answered this question correctly, but many did not produce an acceptable check. A small number of answers came from the very long method of using the data sheet value of 288 litres used in flushing the toilet 32 times, dividing these values to give 9 litres per day, then subtracting the 1.5 litres saved and multiplying back up to 30 times. Students who used this method often made errors or gave the incorrect answer.

The best checks were the reverse methods. A significant number of students still repeat exactly the same calculation as a check.

**1 (b)** This question was answered well by a large number of students. Conclusions were usually seen and correct. Some students simply worked out the number of litres for 3 showers and compared this with 120

**1 (c)** In a 'show that' question each step must be clearly shown. A large number of students failed to show division by 1000, so giving an incomplete method. A small number of students multiplied 600 by 365 and multiplied 219 by 1000, successfully arriving at 219000 in two different ways. A very small number of students multiplied 219 by 365

**1 (d)** Common errors in this question were to fail to add the 125 or to multiply 125 by 3. A small number of students found the correct cost for a water meter but then did not make a decision about fitting it.

**Task 2 Swimming**

**2 (a)** The majority of students chose the correct slowest time, with the most common error being to choose 52.83, which was the lowest number and the fastest time.

**2 (b)** Students who followed the instruction about the allocation of lanes usually gave a fully correct list. A small number of students had a pair of swimmers in the reverse order. Less successful students simply used the order of the finishing times to complete the top and bottom half of the table, but did use the correct eight swimmers. Some students used names of people who did not qualify.

**2 (c)** Students used many different methods to try to compare the two swimmers. The most successful were those who compared either the total time or the mean time for each person. A small number of these students chose Ben as his total or mean was larger. A small number of students compared the median. The most common error was to take the six times as races against each other and so say that Duncan won 5 of them. Students gained some credit for this, but they were not told that they were the same races. The least successful students simply made general statements without any calculations or evidence of counting.

- 2 (d)** Students generally made good progress with this question until they had to consider the percentage discount. The majority found the total of £820 before discount, but some did not reduce this by 10%. A significant number of students found that 10% was 82 but then compared that with £750. The less successful students either ignored the discount and compared £820 with £750 or deducted 310 rather than 10%. A small number of students took no discount from the cost of the swim caps as they did not cost over £100

### **Task 3 Supermarket**

- 3 (a)** Many students clearly understood the criteria and completed an excellent rota. Problems usually arose when one of the five people was included more than once on a particular day. A small number of students allocated Ben to the correct three days but failed to progress further. Generally, students completed the form clearly, with any alterations easy to follow.
- 3 (b)** This question was answered well by the majority of students although some failed to include the £ sign; students should be encouraged to always show units in their working. Checks were again mixed, with some good use of reverse calculations. Very few chose to show an alternative method, e.g.  $24 \times £7 + 24 \times 50p$
- 3(c)** This question was very well answered. Few students failed to multiply 120 by 3. The majority used this method, although a small number divided 370 by 3 and compared with 120. Conclusions were almost always correct.
- 3 (d)** The majority of students first worked out that the bags sell for  $460 \times 5p$  or 2300 p or £23. A large proportion did not then subtract the cost of the bags, finding 50% of £23 to give a final answer of £11.50. The more successful students worked out the profit per bag first (4p) and then multiplied by the number of bags. A small number of these students found 50% of 4p before multiplying, usually reaching the correct profit. Quite a large number of students gave answers with incorrect units, with answers of £920 and £1150 often seen. Students should be encouraged to look at the original costs to see if their answer seems reasonable.

### **Task 4 Pets Corner**

- 4 (a)** This multiple choice question was answered quite well, with 1042 the most common incorrect answer.
- 4 (b)** A large number of students found the perimeter of the enclosure correctly, but many did not multiply by 4 for the four rolls of tape. Less successful students either found the area of the enclosure or gave the perimeter as 100. Conclusions were usually correct for their values and clearly stated.
- 4 (c)** Few students made progress with this question. Although the area of the enclosure was often found correctly, the majority of students simply compared that value in square metres with half an acre in square yards. Those students who did use the formula steps to convert to square yards usually did this correctly and then went on to correctly conclude that the enclosure was big enough. Few students used perimeter instead of area.
- 4 (d)** The vast majority of students completed the individual values correctly, but many did not include the £20 at the top of the list in their total. A small number also omitted the £13.18. Some students completed the amounts but did not produce a total.

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

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