

# Functional Skills Certificate MATHEMATICS

4368 Level 2 Report on the Examination

4368 March 2017

Version: 1.0



#### General

The four tasks provided students with opportunities to show their proficiency in the three process skills of representing, analysing and interpreting. Many students found the longer problem solving questions to be challenging and some students did not complete the paper in the time allowed.

Some solutions were well presented, but there was also a significant number of responses that were difficult to follow. This was particularly evident in the higher mark questions. Students who show a correct method are able to gain follow through marks after numerical slips.

Very few students failed to make a conclusion in those questions where they were asked to do so. Most students appeared to have had access to a calculator.

Questions that were well answered included:

- working out the length of a simple route (2(c))
- working out a total score after two frames (1(a))
- working out the cost of electricity (4(a))
- working out a number of tubs (2(a)).

Questions which students found difficult included:

- comparing costs of using different types of bulb (4(c))
- comparing proportions (1(c))
- designing a salon on a scale drawing (3(a))
- complex money problem involving profit (3(c)).

#### Task 1 Tenpin bowling

- 1 (a) This was quite well answered, although some students took the symbol for a spare to mean that no pins were knocked down. A common error was to add 18 and 27 at the end. The check was sometimes correct, but many repeated their calculation from (a).
- 1 (b) It was common to see students work out the score for Frame 8 incorrectly but then follow through correctly for Frame 9. Some students reworked all the totals from Frame 1 onwards but they rarely obtained the given 75 at the end of Frame 7.
- 1 (c) This question was not answered well. Many students wrote one or two appropriate fractions but made no attempt to convert them to a comparable form. Some students worked out averages.
- 1 (d) This was quite well answered, with the mean attempted for each person. Nearly all students who worked out both means made the correct conclusion. Common errors were to only consider totals or to attempt a mean for Tom's first six games. Very few students attempted to work out medians.

### Task 2 Sandwiches

- 2 (a) There were many correct solutions to this question. However, a fair proportion of students multiplied or divided incorrect values and use of the wrong conversion value for grams to kilograms was common. Some students did not convert at all and ended up with 2400 tubs. Some students attempted a build-up method, but often lost accuracy through truncation.
- **2 (b)** Those students who knew that they needed to work out how many boxes fitted along the length, width and height of the crate usually gained full marks, although some added their values instead of multiplying them. Most students knew they had to truncate their decimal results. The most common error was to divide two volumes.

- **2 (c)** This was very well answered.
- 2 (d) Most students were able to describe and calculate the length of one possible route. However, many did not find the shortest route and some occasionally left off the final visit to the shop. A significant minority gave the shortest route without the distance. Some students chose a route that ended at Office B and were then unsure how to get back to the shop.

# Task 3 Hairdressing salon

- 3 (a) Very few students obtained fully correct answers to this question. Circles were rarely seen and, if present, were usually too small. The other shapes required were often the wrong size. The sinks and the display cabinet were often correct and most students had a design that allowed the door to open. However, labelling was often omitted. The number of non-attempts was quite high.
- 3 (b) Most students correctly assigned the juniors, and many rotas gave Craig a day off on Saturday. It was fairly common to see the wrong number of shifts for the stylists and/or for a stylist to be working two shifts at the same time. Students quite often had a rota that gave each stylist a day off. There were many incomplete grids and the writing was sometimes ambiguous, particularly when students had crossed out and replaced work.
- This was not well attempted. Many students omitted the information about the total number of appointments and occasionally confused appointments with prices. Students often added cost and income. Working out 10% caused problems; many made no attempt to do this and those who did often worked out 10% of an incorrect amount. There were many non-attempts.

#### Task 4 Electricity

- 4 (a) There were many correct answers to this question, but also many non-attempts. Some students did not multiply all three values to work out the number of units for each setting. Most knew to work out the total number of units and then the cost or vice-versa. Working in pence caused problems for some students, who ended up taking their answer to be already in pounds.
- **4 (b)** Many students gave the correct answer, but again there were many who made no attempt. Some students tried to change the watts to kilowatts and others worked out the number of months.
  - The check was often a repeat of the original multiplication, but some good reverse methods were seen.
- 4 (c) Many students made no attempt at this question. Some students worked out the annual values, but then usually combined them with the 4-yearly costs. It was common for students work with the hours only, failing to include the wattage. Converting watts to kilowatts was not well done. Students who calculated the usage costs often did not add in the costs for buying the various bulbs. Fully correct answers were rare.

# Mark Ranges and Award of Grades

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

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