AQA

FUNCTIONAL SKILLS
MATHEMATICS

4368 Level 2
Report on the Examination

4368
June 2015

Version: 1.0

Further copies of this Report are available from aqa.org.uk

General

Overall, many students were able to demonstrate competence in the three process skills of representing, analysing and interpreting. The proportion of students not attempting questions was unusually high, suggesting that students found the paper difficult. In addition, responses to some questions suggested that many students were not as familiar with the pre-released data book as they could have been.

Students should be encouraged to give full, clearly communicated solutions with all working and all relevant units shown; this will give students the best chance of answering questions well.

Most students made a conclusion in those questions where they were asked to do so. A calculator was not always used where appropriate, resulting in numerical errors.

Topics that were reasonably well answered included:

- using symmetry and translations to design a rug
- solving a variety of problems involving money
- working out shop opening times.

Topics which students found difficult included:

- solving a problem involving a formula
- working out actual areas from a scale drawing
- solving a problem comparing two sets of discrete data in frequency tables
- finding how many small cubes fit in a larger cuboid.

Task 1

(a) Students who could follow the instructions in the data book did well, and many produced a fully correct design. A correct first reflection was common, but often errors occurred when attempting the second reflection, or in repeating the pattern to produce the final design. The second reflection often turned out to be a translation or a part reflection and part translation. A small number copied directly from the data book and others were not able to make an attempt.

(b) Correct answers were rare. The majority circled 10 cm^2.

(c) Few students gave a fully correct solution, though nearly all did some correct area work. However, only about one-third managed to make a valid attempt at calculating the area of black wool. Virtually all of those who did this successfully found the black area by subtracting the white area from the total area. Many students thought that the black area was the total area and some only gave the area of one of the white rectangles.

Many students used scaled lengths rather than multiplying areas on the scale drawing by their area scale factor from (b).

A high proportion of students did not attempt this question.

(d) This question was done badly. A significant number of students did not use the section in the data book about the number of strands of wool needed to make a rug and made up their own invalid method. Those students who attempted to use the given formula were often confused about which values to substitute for the area with many using 150 or 70. These are values given in the question that have nothing to do with area. Follow through from their area from (c) was allowed, but those students who used the formula correctly often stopped after working out N with many stating that this was the number of packs rather than the number of strands.

A high proportion of students did not attempt this question.

(e) Overall, students answered this question reasonably well. Nearly all students clearly appreciated the need to work out the total cost of the wool and rug canvas, but working out the cost of the rug canvas often caused problems. Relatively few realised they needed a 1.5 metre or 2 m length. Some used area to calculate the amount of rug canvas and, but confusion with the units, resulted in unrealistic costs. Adding VAT was answered fairly well.

Task 2

(a) This question was answered well, with a significant proportion of students showing their working in an exemplary fashion. Some students could not work out 15% of £250 with 250 ÷ 15 occasionally seen.

(b) A significant number of students did not appear to be familiar with the pre-released data book and ignored the statement about 'Free staff places'. Some of those who managed to work out that only two staff had to pay used the wrong 'cost per person' or did not know how to work out ¾ of a quantity. A few students wrote their answer as 420 instead of £420.

(c) This question was answered poorly with a significant number of students using an incorrect approach (for example, adding up the scores 10 + 9 + 8 …). Those who tried to work out Harry's total score and Maya's total score often made numerical slips. Comparing the total scores was common with students forgetting the additional 10 arrows that Harry had shot. The small proportion of students who took the different numbers of arrows into account usually did so by working out the mean score per arrow.

Task 3

(a) This question was not well answered. Many students divided the volume of the large box by the volume of the small box without realising that this is invalid unless there is an exact fit.

(b) The majority of students answered this question well, though many could not work out that 40 cupcakes needed only 20 double boxes choosing 40 instead. Some chose incorrect costs from the table.

A high proportion of students did not attempt the check. However, many of those who did were successful, appreciating that all they needed to do was repeat their original calculation but with costs of 80p instead of 79p and £1 instead of 99p.

(c) This question was mostly answered well with one-third scoring 7 or 8 marks. Most students appreciated that to work out the profit they needed to find the difference between income and costs, but had some difficulties in the individual calculations. In particular, finding the numbers of single boxes sold at full price and at half price was not answered well and the number of double boxes was again often 40 instead of 20. Many forgot that Amy had to buy the boxes and did not include their cost of this (worked out in (b)) in their calculation of total costs.

Task 4

(a) A high proportion of students scored zero or did not attempt this question. However, many students gave fully correct answers, working out the total length of skirting required and dividing by 4.2 metres and rounding up.

(b) This question was answered reasonably well with over one-third finding a fully correct solution. Many were able to work out that the shop needed to open for a total of 58 hours from Monday to Friday but could not convert this into correct opening times.

(c) This question was done reasonably well, although there were some attempts which were hard to interpret. Those who used a logical step-by-step approach usually found a combination of Fridges and Display Units that met the given criteria with, for many, few calculations. A significant number did not include the number of bottles, giving combinations that did not meet the cost restriction or had fewer than 5 display units. Failing to communicate which particular Fridges and Display Units Dan should buy was common and students should be encouraged to identify their final answer clearly; a costed list is probably the best way of doing this.

Mark Ranges and Award of Grades

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

Converting Marks into UMS marks

Convert raw marks into Uniform Mark Scale (UMS) marks by using the link below.

UMS conversion calculator