AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

Mathematics   4360

Unit 1 Higher Tier   43601H

Report on the Examination

2010 examination - November series

General

This was the first Unit 1 paper for the new specification. The overall impression is that candidates had prepared well for the new style AO2 and AO3 questions and the functional elements. Most candidates found the questions accessible with no evidence of difficulties arising from the increased use of contexts in the questions. Candidates worked hard to show appropriate levels of working out so that if they did not achieve the correct answer, they were, in many cases, able to achieve part marks on questions. Candidates are reminded that if they use additional sheets, they should make it very clear on their scripts that they have done so. They should also cross out work from their original attempt if they do not want it to be marked.

Topics that were well done included:
- correlation and scatter diagrams
- ratio
- questionnaires
- mutually exclusive probabilities
- calculating a stratified sample value.

Topics which candidates found difficult included:
- designing an observation sheet
- comparing two distributions
- describing stratified sampling
- conditional probabilities
- bounds.

Question 1

The first two parts of this question provided a good source of marks for candidates. In part (c) there were some good answers although it was quite common for candidates to not round or truncate their answer to a whole number. This part was assessing the quality of written communication.

Question 2

This question was well answered even though it involved functional elements and multiple steps were required. Some candidates seemed to miss the one-quarter of toys being given away but worked through the other stages. Although presentation was a problem for some, there were a large number of well organised responses to this question.

Question 3

It was common to see candidates working on 5.4 minutes being 5 minutes and 4 or 40 seconds in part (a). In part (b) candidates usually referred successfully to their diagram or referenced negative correlation. A common error was to focus on one or two points rather than the general pattern. Part (c) and the novel part (d) were both extremely well answered.

Question 4

In part (a) candidates often complicated their responses or used questionnaire type headings instead of using a simple table. A variety of successful methods were seen for part (b). Some candidates did not state a decision after doing the mathematics. Part (c) was well answered, especially by those who did not over complicate their question.

Question 5

This was very well answered although a sizeable minority divided 224 by 7 instead of 4.

Question 6

As part (a) was a 'show that' question, candidates must give a clear reference to the relevance of 24 if the method used was to find 60% of 40. Many did not do this. Part (b) was the only question in the paper where it seemed that significantly large numbers of candidates were unaware of how to approach the problem. Most candidates did not attempt to calculate measures of average or spread. Quoting data from one or more class intervals is insufficient as a suitable comparison - measures are essential.

Question 7

In part (a) few could accurately describe a stratified sample. Candidates should be aware that an answer such as 'to get a fair number from each group' is not detailed enough. However, most candidates who 'calculated' a stratified sample value were successful in part (b).

Question 8

Most candidates made a good attempt at this rather novel question. All parts saw a better response than responses to standard questions on quartiles set on previous examinations.

Question 9

In part (a), most candidates attempted cumulative frequency with some success. However, a significant number of candidates plotted at midpoints and/or read across from 90 rather than 30. Overall the quality of the graphs drawn was good. Part (b) was not well answered which was consistent with questions on this topic set previously.

Question 10

This question proved to be challenging to all but the most able candidates. However, many candidates could identify at least one correct bound in either the ratio or in the standard form value.