

GCSE MATHEMATICS

43601H Unit 1: Statistics and Number (Higher)
Report on the Examination

Specification 4360
November 2014

Version: 1.0

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

Copyright © 2014 AQA and its licensors. All rights reserved.

AQA retains the copyright on all its publications. However, registered schools/colleges for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to schools/colleges to photocopy any material that is acknowledged to a third party even for internal use within the centre.

General

The paper was generally accessible and gave students of all abilities the opportunity to demonstrate their knowledge and skills.

Topics that were well done included:

- scatter graph and line of best fit
- data collection methods
- simple ratio
- tree diagram
- calculating a stratified sample
- histogram frequencies.

Topics which students found difficult included:

- median and mean problem
- comparing and interpreting statistical measures
- standard form in context
- stratified sample definition
- conditional probability
- mean from a histogram.

Question 1

This question was well answered. The plotting was mostly accurate and a line of best fit was usually used appropriately.

Question 2

Most students could link at least one method correctly in part (a). Part (b) was less well answered. Most students knew it was primary data but many thought it was also continuous.

Question 3

The majority of students were able to choose at least two correct combinations but many made mistakes when attempting to find all four. It was common to see combinations for three or five games rather than the necessary four games and sometimes the total scores were incorrect.

Question 4

Part (a) was well answered. The common wrong answer in part (b) was $\frac{1}{2}$. In part (c), some students divided the number of children by the whole ratio whilst others misread the values from the bar chart.

Question 5

Most students worked with the actual difference and were able to state its value correctly. Some then incorrectly worked out the difference as a percentage of the final value. Many were able to round their answer to the required accuracy.

Question 6

This question was poorly answered. It was common to see a total of 40 stated or used but many thought 8 was the third number in the list and some also thought that there were five numbers.

Question 7

Part (a) was well answered but many in part (b) added the probabilities, doubled their final probability or included the probability of choosing a white counter and an orange counter.

Question 8

This question differentiated well. Many students were unable to read accurately from the cumulative frequency scale but completed the cost calculation accurately. Some confused adults with children.

Question 9

Part (a) was a good discriminator with most students working out at least two of the relevant measures needed for the box plot and creating the correct structure. Many were unable to accurately locate the upper and lower quartiles. Parts (b) and (c) were poorly answered. Many failed to reference the medians in part (b) and very few used the interquartile range in part (c).

Question 10

Students found the context and the use of standard form challenging. However, many were able to access the question by attempting one of the required percentages or working out the average spent per tourist. Standard form was often misunderstood with, for example, 10^7 interpreted as 70.

Question 11

In part (a), very few students defined a stratified sample accurately with many only mentioning that the sample was grouped or fair but few understanding the idea of proportional representation. In part (b), many accurately calculated the number of juniors in the sample but very few were able to work out the probability that the second person chosen would also be a junior.

Question 12

Part (a) was well answered. Part (b) was poorly answered with few using midpoints and frequencies. The few students who used midpoints usually added them and divided by four or multiplied by the heights rather than the areas. In part (c) many subtracted the given values or used incorrect bounds. There were a significant number of non-attempts in parts (b) and (c).

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 www.aqa.org.uk/umsconversion