



GCSE

STATISTICS

8382/1F: Paper 1 Foundation
Report on the Examination

8382
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General

The majority of students showed a good understanding of most of the statistical concepts with students scoring reasonably well throughout the paper. There were a number of students who appeared to lack a calculator and as a consequence a number of marks were lost due to arithmetical errors.

Topics that were well done included:

- Frequency tables including the use of tallies
- Sample space diagrams and calculating probabilities
- Frequency polygons
- Criticising inappropriate diagrams.

Topics which students found difficult included:

- Pictograms with a key of 15
- Suitability of different averages
- Calculating and comparing proportions
- Sampling methods.

Question 1

This was well answered with just over three quarters giving the correct answer.

Question 2

This question was successfully completed by just over 50% of students. The most commonly selected incorrect response was 'privacy'.

Question 3

Two thirds of students got this right. The most commonly selected incorrect response was 'mode'.

Question 4

This multi-choice question was successfully completed by just over 50% of students. The most commonly selected incorrect response was $\frac{1}{6}$.

Question 5

Part (a) was done very well on the whole. Giving the headings seemed to be the most difficult mark to achieve.

Part (b) was generally well answered although some students could not give a suitable suggestion to the problem of the outlier.

Only a third of students were able to get part (c) fully correct with many thinking it was a good idea to group the data in groups of 5 minutes.

Question 6

This part was very well answered.

In part (b) only a quarter of students were able to show how to get the answer of 2. Many used words instead of showing the mathematical calculation.

Part (c) was done well with many students trying different combinations to reach the answer of 54.

Less than 50% were able to score on part (d), with less than a third scoring the 2 marks. Some compared the mean with the total instead of comparing two means or two totals.

Students found part (e) really difficult. Many tried to change the weather which had already been given instead of giving a valid reason as to why the theoretical and actual results differed.

Question 7

Part (a) was well answered with almost two-thirds getting the right answer.

Part (b) was also well answered with 'too time consuming' the most common answer.

In part (c) the question given was often correct but all often the response section was either overlapping or non-exhaustive. Only 15% of students scored full marks.

Some students lost the mark in part (d)(i) by giving response boxes but on the whole this part was done well.

Part (d)(ii) was done well with many students realising that people may not want to disclose their exact age.

In part (e) only 10% of students were able to give two valid criticisms in this part. Many scored 1 mark by mentioning that it was a leading question. Most failed to realise that the question was asking two things at once.

Question 8

Part (a) was done very well.

Part (b)(i) was also done well but some included the 4s from the headings.

In part (b)(ii) students struggled with this part with only 22% scoring the mark.

Question 9

Only 40% of students scored in part (a) even though the numbers used were straightforward.

Part (b) was done well with 50% of students scoring. A common wrong answer was to mention that the hotel may have more than one manager.

Question 10

This multi-choice question was done very well.

Students struggled part (b). Many thought that rounding had been used, i.e. that the midpoint of 20 – 29 was 24.5 which rounded to 25.

Part (c) was done well with over half scoring full marks. Some students were not as accurate as they needed to be with their plots, some used freehand to join the points and lost a mark for inaccuracy.

On the whole part (d) was done well but some students contradicted themselves, e.g. they're the same but one is slightly higher (referring to the actual percentages).

Students struggled in part (e) with four-fifths scoring no marks. Many failed to see that you couldn't tell because you don't know the actual minimum and maximum values with grouped data.

Part (f) was done poorly with many students failing to be able to make a further comparison between the two sets of data.

Question 11

In part (a) most students were able to give at least one valid criticism of the diagram but very few were able to give three.

Part (b) was done well with many giving the answer of bar chart. A common wrong answer was scatter graph.

Question 12

Most students scored the mark on part (a). The most commonly selected incorrect response was '2000'.

Part (b) was not done well with many students failing to give a pattern or feature over a long enough time-period.

Almost a third of students scored on part (c) with the vast majority commenting on the source. Lots of students thought that the calculations were correct even though they had been told they were very likely wrong.

Question 13

Part (a) was done really well. The most commonly selected incorrect response was '18p'.

Part (b) was not done well. Most students did not know the mathematical calculation needed for index numbers.

Question 14

Students struggled with part (a) as they were unable to show why the key was 15. Only 40% of students scored.

In part (b) very few students were able to compare the proportions with many using the 11 and 9 and stating the difference of 2 instead of calculating percentages.

Part (c) was done poorly; many students were unable to work with the key of 15.

Question 15

Part (a) was done very well.

Over 70% of students scored at least 1 mark in part (b), with many being able to answer the first part correctly.

Less than half scored on part (c)(i) as many failed to realise that the graph was about passenger km, not cars.

Part (c)(ii) was poorly done with many referring once again to cars and roads instead of passenger km.

Part (d) was well answered although some students contradicted themselves by saying things like 'it decreased, it increased' without giving specific time-periods.

In part (e)(i) most students were able to name the average but some did not show the calculation clearly enough to get the second mark. We did condone missing brackets when adding and dividing by 12.

Less than 20% were able to do part (e)(ii). Many spotted the outlier but did not mention that it was not a good use of the average.

Students really struggled on part (e)(iii). Very few were able to discuss the suitability of an average in this context. The few that did score normally did so by naming two other averages.

In part (f) a common misconception was to give an individual piece of data, or to comment about the method.

In part (g) many students were too vague, e.g. the news, the website.

Part (h) was done fairly well with nearly half of students scoring. A common wrong answer was 'to ask more friends'.

Use of statistics

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.

Mark Ranges and Award of Grades

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