



Free-Standing Mathematics Qualification

Making Sense of Data 6983

Foundation Level

Report on the Examination

2007 examination - June series

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General

The majority of candidates were well prepared for this paper. Overall, many very good scripts were submitted and pleasing standards were achieved. Candidates scored well on questions one and six. Presentation and working were generally quite good, usually with appropriate methods able to be followed. However, a number of candidates apparently did not possess a protractor and drew freehand the pie chart in question 4.

A few candidates included the data for the USA in question 1, even though the data to use were given at the start of the question. Such candidates were only penalised one mark. The data sheet enables students to understand the context of the questions, but the data is often adapted in the question paper to avoid candidates trying to memorise the answers.

Question 1

This question was answered well by virtually all candidates. Part (a), (b), (c) and (f) were usually all answered correctly. If any errors did occur, these were in parts (d) and (e), where the median and the mean were interpreted in reverse order. Part (g) caused candidates problems; most just quoted that the mean was smaller, as to find the mean you divided the total by eleven.

Question 2

Many correct bar charts were seen in this question. However, marks were lost when candidates:

- (i) failed to label the vertical axis, including appropriate units;
- (ii) failed to use a linear scale for the vertical axis;
- (iii) failed to start their vertical axis at zero.

Question 3

It was common to see $60 \div 3$ rather than $60 \div 4$; relatively few candidates showed that they realised that to divide in the ratio 1:3, four parts were required.

Question 4

Part (a) of this question was a good source of marks for the majority of candidates who were able to calculate the correct sector angles for the pie chart. Unfortunately a minority did not have access to a protractor while some who did were unable to measure and label the pie chart sectors. A few attempted to draw the pie chart freehand.

In part (b) (i), relatively few candidates could find the required fraction. Of those who did find a fraction, it was rare to see the correct fraction simplified from $\frac{100}{450}$ to $\frac{2}{9}$. In part (b) (ii), only a few candidates attempted to calculate $\frac{11}{100} \times 200$.

Question 5

Many partially correct scatter diagrams were seen. Some candidates failed to use a linear scale on either axis, but the majority plotted most points reasonably accurately. The scales chosen frequently resulted in the plotting of the points being difficult. Few candidates stated that if the values were in direct proportion then the points would be in a straight line through the origin. Only the better candidates realised that because of the rounding used by cooks in this converter the points would not lie exactly on a straight line.

Question 6

Part (a) caused candidates problems in converting 12 out of 30 into a percentage. The tally chart in part (b) was completed correctly by the majority of candidates. Most were able to give a satisfactory explanation for the method used to check the recording of the total number of responses in part (c). Few gave a sensible reason in part (d), with some assuming that Rose's survey was indeed representative in contradiction to the data found in the BBC on-line poll. In part (e), the pictogram was answered well. A few decided to use a different symbol for each different comfort food; a more common error was that the symbol used for 5 people was different from the symbol used for ten people; candidates should use, for five people, half of the symbol which they use for ten people.

Principal Moderators Report

FSMQ Foundation Level

The majority of centres submitted Managing Money and Making Sense of Data portfolios, with only a small number of centres submitting portfolios for Working in 2 and 3 Dimensions.

Managing Money Portfolios

It was pleasing to see that most centres had developed a suitable table at the beginning of their portfolios which enabled candidates to ensure that all elements had been completed according to the specification. The investigations submitted for 'Best Buys' and 'Order Forms' were generally very appropriate and many candidates were able to demonstrate independent work, with parties and family holidays figuring in a large number of submissions. There were varied investigations submitted for 'percentage and fractional increases/decreases'. It should be noted that for a grade A, candidates must carry out both percentage *and* fractional work. The 'savings' task, again, gave many candidates the opportunity to demonstrate independent work by reference to savings accounts available on the high street or on the internet.

Most centres applied the scaling rules for incomplete portfolios accurately. (These scaling rules are indicated in the specification). If work is attempted for all elements (even though one element may be very slight) then the portfolio is complete.

It is one of the aims of FSMQ coursework that candidates should be encouraged to check their work by using a variety of methods. When checking is carried out, it should be indicated by the candidate. A typical method for checking work would be the use of approximation techniques. A significant number of candidates were awarded fewer marks in Strand 2 than in the other two marking strands because they did not carry out sufficient checking.

Comments made by candidates on their work were generally meaningful, with more able candidates including mathematics in their comments.

Making Sense of Data Portfolios

It was pleasing to see that many centres had included a check list of the twelve items required for completeness of this portfolio at the front of their work.

The standard of the portfolios was generally good, with spreadsheet work being a particular highlight. Independent work was developed from a variety of sources relating to the candidates' work in other subjects. Direct proportion was well understood, with the majority of candidates able to explain and describe appropriate situations. Candidates were able to write meaningful reports on data and charts from a variety of sources.

As in Managing Money, some candidates either did not carry out checking of their work or did not indicate they were carrying out checks.

Working in 2 and 3 Dimensions Portfolios

Although some excellent portfolios were submitted, generally portfolios were not of as high a standard as those for Managing Money and Making Sense of Data. Centres should ensure that the specification is closely observed and that all elements are carried out. The scaling rules for incomplete portfolios are detailed in the specification. The majority of centres carried out all the administration extremely well, with sample scripts being received and despatched quickly and efficiently.

Mark Ranges and Award of Grades

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