

Principal Assessor Report 2004

Assessment Panel:

Mathematics and Statistics

Qualification area

**Subject(s) and Level(s)
Included in this report**

Mathematics – Intermediate 2

Statistical information: update

Number of entries in 2003	12913
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Number of entries in 2004 (pre-Appeal)	13723
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General comments re entry numbers

The number of entries this year has increased by 5.9%. Approximately 25% of these are candidates sitting Units 1, 2 and Applications.

8.8% of the entries were from S4 candidates. This is an increase from last year (496 in 2003 to 1193 in 2004).

Statistical Information: Performance of candidates

Distribution of awards

See table overleaf.

Comments on any significant changes in percentages or distribution of awards

Grade boundaries for each subject area included in the report

Distribution of awards (pre-Appeal)	%	Cum %	Number of candidates	Lowest mark
A	27.3	27.3	3749	62
B	22.1	49.4	3032	52
C	18.8	68.2	2582	43
D	7.9	76.1	1081	38
No award	23.9	100.0	<u>3279</u>	0
			13723	

General commentary on passmarks and grade boundaries

- While SQA aims to set examinations and create mark schemes which will allow a competent candidate to score a minimum 50% of the available marks (notional passmark) and a very well-prepared, very competent candidate to score at least 70%, it is almost impossible to get the standard absolutely on target every year, in every subject and level
- Each year we therefore hold a passmark meeting for each subject at each level where we bring together all the information available (statistical and judgmental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the senior management team at SQA
- We adjust the passmark downwards if there is evidence that we have set a slightly more demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- We adjust the passmark upwards if there is evidence that we have set a slightly less demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- Where the standard appears to be very similar to previous years, we maintain similar grade boundaries
- An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions are different. This is also the case for exams set in centres. And just because SQA has altered a boundary in a particular year in say Higher Chemistry does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related as they do not contain identical questions
- Our main aim is to be fair to candidates across all subjects and all levels and maintain standards across the years, even as syllabuses evolve and change

Comments on grade boundaries for each subject area

The pass mark was set at 43. In determining the 2004 pass mark the following factors were considered.

- The level of demand of 2004 Question Paper was eased intentionally following the 2003 Question Paper.
- Entries from S4 candidates had more than doubled.
- There was significantly improved performance, in particular at grades A and B.

Comments on candidate performance

General comments

Almost unanimously markers reported a good response to this year's paper. There seemed to be fewer poorer candidates – very few candidates were unable to tackle most questions. Some markers reported 'batches' of very good scripts and suggested these could be from good S4 candidates.

Areas of external assessment in which candidates performed well

Paper 1:

Question 2 (both versions)
Question 4a and b (Units 1, 2, 3) and Question 5 a and b (Units 1, 2, Applications)
Question 6b (Units 1, 2, 3)
Question 4 (Units 1, 2, Applications)

Paper 2:

Question 2 a (both versions)
Question 5 (Units 1, 2, 3) and question 6 (Units 1, 2, Applications)
Question 9 (both versions)
Question 11 b (Units 1, 2, 3)

Areas of external assessment in which candidates had difficulty

Paper 1:

Question 3 (both versions)
The question tests the content in a fairly straightforward way. However it seems that the communication skills of the candidates were such that they could not explain their strategy/logic. Many candidates did not name the angles to which their calculations referred and working was laid out in a haphazard way so that markers were unable to allocate marks. It may be a better strategy for candidates to sketch the diagram and write the calculated angles on it.

Question 6 (Units 1, 2, Applications)
Most candidates merited only the first mark (for substitution) in each part. They seemed to have great difficulty in processing this without a calculator.

Paper 2:

Question 8 a (Units 1, 2, 3) and Question 4 a (Units 1, 2, Applications)
Many candidates seemed to have no idea how to tackle this question, often simply adding those sides marked on the diagram.

Question 3 (Units 1, 2, Applications)
In the past flowcharts have usually been reasonably well done. However few candidates achieved full marks for this question. Common mistakes were ... calculating incorrectly the miles claimed and ... not realising

that the final answer is in pence.

Question 8 (Units 1, 2, Applications)

A significant number of candidates did not appreciate that the percentage details on the table were for information only and did not have to be used in calculations.

Question 12 (Units 1, 2, Applications)

Candidates continue to find difficulty in calculating the mean from a grouped frequency table.

Recommendations

Feedback to centres

Candidates should be encouraged to consider using diagrams as a way of presenting evidence of strategy used. For example, in 2004 Paper 1 Question 3 and Paper 2 Question 8, the use of a diagram may have assisted candidates in accessing all the available marks.

Centres should continue to build in opportunities for practising non-calculator skills. In Paper 1, Question 6 (Units 1, 2, Applications) most candidates were awarded only 2 out of 5 available marks because they could not process the calculations without a calculator.