

## Principal Assessor Report 2006

**Assessment Panel:**

**Mathematics**

**Qualification area**

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

**Applied Mathematics: Advanced Higher**

## Comments on candidate performance

### General comments

In 2005, there were 314 candidates, this number fell to 280 in 2006. This is disappointing but is still 50 more than there were in 2004.

The breakdown across the three options was:

Statistics	145 (165 in 2005)
Mechanics	134 (138 in 2005)
Num. Anal.	1 (same as in 2005)

Taken overall, the performance was slightly poorer than in 2005 with the mean mark down by approximately 5%. There were fewer very high scorers. The figures below lend support to the conjecture that candidates (especially those doing the Statistics paper) found Section B (Maths) harder than in 2005.

Option	No. of candidates	Section A average	Section B average	Overall average
Mechanics	134	41.46	18.10	59.56%
Statistics	145	36.82	13.23	50.05%

Analysis of this data indicates that the Statistics candidates performed less well than the Mechanics candidates. (Note that the total marks available for Sections A and B were 68 and 32 respectively.)

In 2005, 50 centres presented candidates for Applied Mathematics. 16 of them did not present in 2006 but 8 centres (who had not presented in 2005 but might have done so in earlier years) had candidates.

[Statistics quoted are those at Passmark stage.]

### Areas which candidates found demanding

As remarked above, the performance in Section B was poorer than in Section A. There is an argument that candidates taking the Mechanics paper are more likely to be using items covered in the Section B part of the course than those choosing the Statistics paper which makes no use of the mathematics part of their course.

### Advice to centres for preparation of future candidates

It should be emphasised to candidates that they should pay greater attention to the material in Section B.

## Statistical information: update on Courses

Number of resulted entries in 2005	314
------------------------------------	-----

Number of resulted entries in 2006	280
------------------------------------	-----

## Statistical Information: Performance of candidates

### Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum %	Number of candidates	Lowest mark
Maximum Mark - 100	-	-	-	-
A	35.4	35.4	99	69
B	12.9	48.2	36	58
C	17.1	65.4	48	47
D	10.4	75.7	29	41
No award	24.3	100.0	68	-

### 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 arrangements evolve and change.