

6 April 2006

To: SQA Co-ordinator (Secondary Schools,
Special Schools and Further Education Colleges)
Scottish Executive
HMIE
Directors of Education
Mathematics Assessment Panel members
Higher Education Institutions — Department of Education

**For the attention of all staff responsible for the delivery of
National Qualifications in Mathematics**

Action by Recipient	
	Response required
✓	Note and pass on
	None — update/information only

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Dear Colleague

National Qualifications Update — Mathematics

This letter provides an update on National Qualifications and should be passed to the member of staff responsible for Mathematics.

Since the last update letter (November 2005), there has been further progress in effecting two recommendations arising from the NQ Mathematics subject review.

1. Design of questions in examination papers in Mathematics

The update letter (October 2004) informed centres of the findings resulting from the research into alternative methodologies, techniques and design of questions. Objective testing was concluded to hold the most promise regarding maximising the best use of examination time in Mathematics. Centres were apprised that a Subject Advisory Group (SAG) would be formed to investigate the potential benefits offered by objective testing in external assessment, and were invited to send views and comments on this development for consideration by the SAG.

The update letter (November 2005) informed centres of progress to date. Appendix 1 gave a full and detailed overview of the work carried out by the SAG to progress the investigation, and Appendix 1A was an exemplar examination paper at Higher level.

A number of centres responded to the request for views and comments on the work of the SAG, and all correspondence was duly copied to members of the SAG for deliberation at their February 2006 meeting. Additionally a compendium of all feedback received was issued to members of the Mathematics and Statistics Assessment Panel (MSAP) for consideration at their March 2006 meeting.

On behalf of the SAG and MSAP I should like to thank everyone who took the time to respond to the request, and confirm that all feedback received was most useful in further informing members in their deliberations. All correspondence has been responded to individually by myself in the light of the discussions at the SAG meeting.

At the March 2006 meeting of the MSAP the SAG made the following recommendations:

Mathematics at Higher level

Recommendation: The examination will continue to consist of two papers, one of which will not allow the use of a calculator. The total time for the examination will remain unchanged (2 hours and 40 minutes, with a 20 minute break between papers) as will the total mark allocation (130 marks).

Paper 1 (non-calculator) will consist of two sections:

- ◆ Section A will contain 20 multiple choice questions, and have an allocation of 40 marks.
- ◆ Section B will contain a balance of short questions designed to test knowledge and understanding, and extended response questions which also test problem solving skills, and have an allocation of 30 marks.

It is likely the time allocation for Paper 1 will change from 70 minutes to 90 minutes.

Paper 2 (calculator) will contain a balance of short questions designed to test knowledge and understanding, and extended response questions which also test problem solving skills, and have an allocation of 60 marks. It is likely the time allocation for Paper 2 will change from 90 minutes to 70 minutes.

The MSAP supported the recommendation.

This recommendation will go forward to the Validation Panel in November 2006. When approved and validated, centres will be notified by January 2007 to allow for implementation in session 2007/08, ie the new arrangements will apply to diet 2008.

SQA will require time to make changes to Arrangements documents and issue a new specimen question paper. It is envisaged that an item bank of objective test items will be developed for use by centres in the construction of prelims, and these will be available on the secure area of SQA's website (available to all SQA Co-ordinators). An information booklet for candidates containing examples of the kinds of objective test questions they will be asked in the examination and advice on how to respond and record their answer will also be developed for centres to use with their students.

The proposed introduction of objective testing will require **no change** to the course content at Higher level, and it is envisaged that there will be **no change** to NABs at this time.

Please note that there will be **no change** to the format of the Mathematics examination paper at Higher level for diet 2006 and diet 2007.

Centres will be kept informed of future developments.

Mathematics at Intermediate levels

Recommendation: There will be no change to the examinations at Intermediate levels at this time. Further development work is required, with full account being taken of the impact of the Scottish Executive initiative *A Curriculum for Excellence*.

Centres will be kept informed of future developments.

2. Advances in calculator technologies and capabilities

Consultation on the use of graphing calculators took place in the winter of 2004 and a full report on the Response to the Consultation (May 2005) was produced. Both the questionnaire and the report are available on the Mathematics homepage of SQA's website (www.sqa.org.uk).

One of the proposals was to instigate the writing of a National Unit at Higher level to assess the full power of current and emerging technology. I am delighted to inform centres that funding has been secured for this exciting development and a consultant will be working with a focus group on this development over the next few months.

If you have particular thoughts, views or comments, or would like to be involved in the investigative work associated with this development, please contact Joanne Boyle, Qualifications Officer:

Direct Line: 0141-242 2203

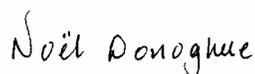
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who will coordinate all responses, and ensure these are taken into account during the development stage. The focus group are planning to meet initially at the end of April, and any thoughts, views or comments would be welcomed by mid-May 2006.

Centres will be kept informed of future developments.

I hope you find the information in this letter helpful. If you require any further clarification please do not hesitate to contact me.

Yours faithfully



Noël Donoghue
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National Qualifications Directorate