



LONDON
MATHEMATICAL
SOCIETY



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Mathematics: made to measure

The Ofsted triennial review of school mathematics teaching, *Mathematics: made to measure*, which is published today, provides an in-depth analysis of the state of mathematics teaching in our primary and secondary schools. The report strengthens the message of the previous Ofsted review *Mathematics: understanding the score* (2008).

- Serious work is needed if we are to make necessary improvements in mathematics teaching where required, particularly in secondary schools. We need a coherent system to strengthen teachers' subject knowledge throughout their careers.
- Apparent improvements are often the result of schools 'gaming the system' rather than strengthening the quality of teaching.
- Current practices institutionalise low expectations for able students as well as for those who struggle.
- Early entry for GCSE should be actively discouraged, so that weaker students have as long as possible to make sense of what they learn, and more able students can aim to achieve total mastery.

Poor teaching routinely focuses on enabling students to pass tests, and presents mathematics as a collection of disconnected facts and methods. According to the report, schools often view a grade B at GCSE as acceptable where students should be aiming for a grade A or A* to be better prepared to continue to A-level (very few of those who are successful in mathematics A-level manage this with a Grade B at GCSE). At the same time, the introduction of modular GCSE and the reduction to

two-tier assessment has reduced the amount of harder material that is tested.

Professor Nigel Steele, Honorary Secretary of the IMA, welcomed the report and said: 'The report represents a detailed picture of the state of mathematics teaching in the nation's schools. The discrepancy in level of achievement of able students is disturbing particularly at a time when the government's aim is for increased study of appropriate mathematics, including A-level mathematics post-16. The report's recognition of the need for the enhancement of teachers' subject knowledge is to be applauded and methods for this to be achieved must be a priority particularly for less confident teachers'.

Dr Tony Gardiner, Education Secretary of the LMS, said: 'This report and its predecessor raise two key issues. The most basic is the urgent need for a national framework within which we can plan systematic, subject-specific CPD for all mathematics teachers. The second pressing issue is the damaging effect of 'early entry' on students' confidence and progression (which was also underlined by the recent DfE report, *Early entry to GCSE examinations*)'.

Notes for editors

1. The **London Mathematical Society (LMS)** is the UK's learned society for mathematics. Founded in 1865 for the promotion and extension of mathematical knowledge, the Society is concerned with all branches of mathematics and its applications. It is an independent and self-financing charity, with a membership of over 2600 drawn from all parts of the UK and overseas. Its principal activities are the organisation of meetings and conferences, the publication of periodicals and books, the provision of financial support for mathematical activities, and the contribution to public debates on issues related to mathematics research and education. It works collaboratively with other mathematical bodies worldwide. It is the UK adhering body to the International Mathematical Union.

2. The **Institute of Mathematics and its Applications (IMA)** is the learned and professional society for mathematics. It promotes mathematics research, education and careers, and the use of mathematics in business, industry and commerce. Amongst its activities the IMA produces academic journals, organises conferences, and engages with government. Founded in 1964, the Institute has 5,000 members. Forty percent of members are employed in education (schools through to universities), and the other 60% work in commercial, industrial and governmental organisations. In 1990 the Institute was incorporated by Royal Charter and was subsequently granted the right to

award Chartered Mathematician and Chartered Mathematics Teacher designation.

3. The LMS and IMA are members of the **Council for the Mathematical Sciences (CMS)**, which also comprises the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society.

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