

Contrasts in mathematical challenges in A-level Mathematics and Further Mathematics, and undergraduate mathematics examinations.

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Contrasts in mathematical challenges in A-level Mathematics and Further Mathematics, and undergraduate mathematics examinations FREE

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Abstract

This article describes part of a study which investigated the role of questions in students' approaches to learning mathematics at the secondary–tertiary interface, focussing on the enculturation of students at the University of Oxford. Use of the Mathematical Assessment Task Hierarchy taxonomy revealed A-level Mathematics and Further Mathematics questions in England and Wales to focus on requiring students to demonstrate a routine use of procedures, whereas those in first-year undergraduate mathematics primarily required students to be able to draw implications, conclusions and to justify their answers and make conjectures. While these findings confirm the need for reforms of examinations at this level, questions must also be raised over the nature of undergraduate mathematics assessment, since it is sometimes possible for students to be awarded a first-class examination mark solely through stating known facts or reproducing something verbatim from lecture notes.

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