

Entries for A level Mathematics and Further Mathematics continue to increase

Mathematics and Further Mathematics are among a handful of subjects for which entries in 2017 have increased significantly since 2016.

A level reforms introduced in 2015 have resulted in schools and colleges reducing the number of subjects taken by students at A level. As a consequence, entries for many A level subjects have decreased in 2017 compared with 2016.

A level Mathematics entries are up 3.3% from 92163 in 2016 to 95244 and Mathematics remains the most popular A level subject. Entries for A level Further Mathematics increased for the 14th consecutive year, trebling since 2003. This year entries increased by 6.0% from 15257 in 2016 to 16172. The popularity of Mathematics and Further Mathematics continues to grow and the number of students taking these highly-valued qualifications is greater than ever before, which is excellent news. It is vital that this trend continues. The UK lags behind other developed countries in the proportion of young people who continue to study mathematics beyond GCSE level. The [Report of Professor Sir Adrian Smith's review of post-16 mathematics](#) published in July 2017 highlights the role that Further Mathematics plays “as a ‘passport’ to mathematical study at research intensive universities”.

The Further Mathematics Support Programme (FMSP) congratulates all students who have successfully completed their studies of A level Mathematics and Further Mathematics this summer. Congratulations are also in order for the hard-working mathematics teachers, who supported these students during their A level courses.

Each year the FMSP provides mathematics enrichment events for over 12000 students, promoting the continued study of A level Mathematics and Further Mathematics as key facilitating subjects for further study in a wide range of subjects, and opening the door to many exciting and rewarding careers. Research by [Dilnot](#), published last week, and by [Adkins and Noyes](#) in 2016, indicates that there is a real benefit to students in taking Mathematics and Further Mathematics at A level, enhancing applications for places at university and improving career prospects and earnings.

The new GCSE Mathematics, taken by students for the first time this summer, has been designed to provide a better preparation for the transition to A level Mathematics. During 2016-17 the FMSP supported teachers with the changes to GCSE Mathematics through a programme of professional development and by providing access to new resources for teaching problem-solving, reasoning and proof. The new GCSE Mathematics has been designed to be more challenging and should aid transition to A level study. Every student

with a grade 6 or above on the new GCSE Mathematics should consider studying mathematics further, at least to an AS level Mathematics qualification, and should be given the opportunity to do so. Those achieving a grade 5 should discuss with their school or college the possibility of taking AS level Mathematics.

New specifications for A level Mathematics and Further Mathematics commence teaching this September. There has been some changes to the content, with more emphasis placed on problem-solving and reasoning, as in the new GCSE, but the new courses are not designed to be more difficult than the current A level. This year the FMSP supported well over 2000 teachers to help them prepare for the introduction of the new A level Mathematics and Further Mathematics specifications from September.

Compared with 2016 (UK figures):

A level Mathematics numbers are up from 92163 to 95244, an increase of 3.3%.
A level Further Mathematics numbers are up from 15257 to 16172, an increase of 6.0%.
Total entries for A levels decreased from 836705 to 828355, a decrease of 1.0%.

AS level Mathematics numbers are down from 162741 to 160450, a decrease of 1.4%.
AS level Further Mathematics numbers are up from 26742 to 27980, an increase of 4.6%.
Total entries for AS levels decreased from 1196380 to 728039, a decrease of 39.1%.

Since 2003 A level Mathematics numbers have increased by 88.2% (from 50602) and AS Mathematics numbers have increased by 151.3% (from 63841).

Since 2003 A level Further Mathematics numbers have increased by 204.1% (from 5315) and AS Further Mathematics numbers have increased by 730.0% (from 3371).

Notes for editors:

1. MEI (www.mei.org.uk) is an independent charity that is committed to improving mathematics education for all.
2. MEI is a major provider of professional development for mathematics teachers and leads the secondary strand of the National Centre for Excellence in the Teaching of Mathematics (NCETM).
3. The Further Mathematics Support Programme (www.furthermaths.org.uk) is a government-funded initiative, supported by the Department for Education and is managed by MEI. It follows on from the very successful 'Further Mathematics Network' initiative, which was set up following a successful 5 year pilot project that was developed by MEI and funded by the Gatsby Charitable Foundation.
4. The Further Mathematics Support Programme involves schools, colleges and universities working together collaboratively to widen opportunities for students. It uses a blended learning strategy that employs intensive tutorial input alongside independent study, supported by extensive, purpose-written, online resources. This model is proving very successful and, suitably adapted, could be used by other high-value shortage subjects such as physics and modern languages.
5. Further Mathematics reinforces the content of the standard AS/A level Mathematics and introduces students to important topics such as complex numbers and matrices, which are vital for many mathematics-related degrees.
6. For more information, please contact Charlie Stripp on 07771864507 or by email at charlie.stripp@mei.org.uk
MEI
Monckton House
Epsom Centre
White Horse Business Park
Trowbridge
Wilts
BA14 0XG
7. For detailed background information on the Further Mathematics Support Programme and Mathematics in Education and Industry (MEI), please see www.furthermaths.org.uk and www.mei.org.uk