What is STEP? What is MAT?

- STEP is done at the same time as A-level, in June. Requires no more knowledge of formulas than A-level maths and further maths, but does require more imagination, versatility, and persistence

- You do a maximum of six questions in three hours, and you can get a good grade by getting four whole questions more-or-less right.

- Usually Q.1 and Q.2 of pure are more accessible. (We used to say they were easier, but the STEP people advise us that they reckon only to make them more "accessible" in the sense that it should be slightly more obvious what you have to do – but, for example, the algebraic working might be more involved. In any case, it's usually worth trying Q.1 and Q.2, but move on quickly from them - and don't despair - if you get into difficulties, or if they baffle you). Lots of students attempt no mechanics question, but usually at least one of the mechanics questions is easy if you've done even a bit of A level mechanics. Then you may need to find only one or two others you can do completely, and maybe one or two part-questions to top up. The official statement is: "In many years, four questions well answered have been sufficient to secure a grade 1 in STEP. However, this is not always the case and should not be taken as a definitive statement of what is required to secure a grade 1". Only a minority attempt any of the probability and statistics questions, but it's worth putting yourself in that minority. The probability questions are very different from A level, but often quite simple (and requiring almost no prior knowledge of formulas or such) if you've given yourself some practice in systematically tabulating and counting possibilities. The statistics questions are relatively similar to A level, and thus usually not hard if you know a bit of A level statistics.

- STEP has too papers. STEP 1 no longer exists. STEP 2 is based on A Level Mathematics and AS Level Further Mathematics. STEP 3 is based on A Level Mathematics and A Level Further Mathematics. Each has 12 questions across three sections: the first contains 8 pure questions, the second contains 2 mechanics questions, and the third contains 2 probability/ statistics questions.

- Only one university absolutely requires students to do STEP: Cambridge, usually asking for grade 1 in both STEP 2 and 3. Warwick says: "We ask many [i.e. not all] of our applicants to sit one of these papers: Mathematics Admissions Test (MAT); Test of Mathematics for University Admission (TMUA); STEP...

- MAT is a single paper, done in November (in 2022, 2 November). https://youtu.be/Oq3IzODYDXE for some explanation. The "syllabus" is based only on the first three or four terms of A level maths, not Further Maths. It is a test not of syllabus knowledge but of mathematical imagination and versatility. The papers start with ten multiple-choice questions, with no working required.

- Imperial says: "All candidates who apply up to 15 October are required to sit the Mathematics Admissions Test (MAT). Conditional offers to post-15 applicants who were unable to take MAT will include a STEP requirement. Our minimum STEP offer is a Grade 2 in either STEP 2 or STEP 3".

- Durham and Bath also receive MAT results, but do not require them. Other universities may give easier A level offers with grade 1 in a STEP paper.

- Many students do STEP not to improve their university entrance score but just to gain greater mathematical imagination and versatility and to start getting into the sort of maths they will do at uni (very different from school).

- As from 2019, you no longer get a formula booklet in STEP exams. However, if a question requires knowledge of a formula beyond what you will have learned for A level, then the formula will be given in the question. Go to bit.ly/step-ff to see what knowledge of formulas and such is assumed in STEP. Don't panic: if you're attempting this STEP course, then you're doing well with A level in Further Maths, and you'll pick up knowledge of those formulas that way.

- Go to bit.ly/step-sp for the full new STEP specification.