
Mathematics at Cambridge: Guidance on admission selection

In selecting mathematics undergraduates, we look for three qualities:

- **Mathematical knowledge and skills**
Students should have suitable background knowledge in mathematics, on track to start our course (see [website](#) for more details). Students should also have good general skills in mathematics to be able to apply their knowledge in solving problems.
- **Mathematical ability and talent**
Students should have the ability to think mathematically. This includes having the creativity to make connections between different mathematical ideas, and the flexibility to understand new concepts quickly and use them to solve challenging problems.
- **Motivation for studying mathematics**
Students should have the commitment to study mathematics at university level, and be ready to work hard and persevere. Considerable interest in and enthusiasm for the subject are important, and can be expressed in many ways.

We look for evidence of these qualities using many sources of information. These include existing and predicted grades, school reference, personal statement, and what we learn at time of interview. We do not simply grade and sum these sources separately. Instead we use all available information together, taking individual context into account, to form a picture of each applicant.

STEP is an important part of our conditional offer; it enables us to compare applicants directly, and addresses all three qualities above to some extent. All Colleges use STEP for mathematics, and a typical offer includes a grade 1 in both papers 2 and 3. However, only about two thirds of our places are filled by those who achieved these grades. For the remaining one third of our places, Colleges review the full applications (now including STEP marks and scripts) of those who miss their STEP grades.
