

# **12 supercurriculars that strengthen your child's Mathematics application.**

*What top universities actually want to see beyond A-level grades.*

*the activities:*

*Your child doesn't need to do all 12. Pick 2-3 that genuinely interest them and go deep.  
Admissions tutors can spot a checklist approach immediately.*

### 1. **UKMT Senior Maths Challenge + BMO**

The single most recognised maths supercurricular. Oxbridge tutors genuinely value strong UKMT performance, and qualification for BMO1 is a serious signal.

**Start here:** Enter via school or register at [ukmt.org.uk](https://ukmt.org.uk). Start with Senior Challenge in Year 12. BMO1 qualification is the stretch goal.

### 2. **TMUA Preparation**

Required for Maths at Cambridge, Imperial, and Warwick. Also used by Durham, LSE, and others. This is your entry ticket.

**Start here:** Past papers free at [esat-tmua.ac.uk](https://esat-tmua.ac.uk). Start UKMT in summer of Year 11 to build reasoning, then move to TMUA papers in summer of Year 12.

### 3. **STEP Preparation**

Cambridge makes STEP part of the offer for Maths. Warwick accepts it too. This is a post-offer exam, not an entry test, but preparation starts early.

**Start here:** Past papers and solutions at [maths.cam.ac.uk/step](https://maths.cam.ac.uk/step). Work through papers alongside A-level content. The thinking style is what matters, not just the answers.

### 4. **Read University-Level Maths**

Shows you understand what the degree actually involves. Admissions tutors want to see you've engaged with real mathematics, not just the A-level syllabus.

**Start here:** [How to Think Like a Mathematician](#) by Kevin Houston is the standard. Also: *Mathematics: A Very Short Introduction* by Timothy Gowers.

*the activities (continued):*

## 5. **3Blue1Brown + Numberphile**

The best maths content on YouTube. Builds visual intuition for concepts most students only see algebraically. Admissions tutors notice when a student can explain ideas geometrically.

**Start here:** [3blue1brown.com](https://3blue1brown.com) for visual maths. Numberphile for curiosity. Watch one video a week and write a paragraph about what you learned.

## 6. **NRICH Problem-Solving**

Cambridge's own free problem-solving resource. The problems are pitched between A-level and STEP. Perfect bridge material.

**Start here:** [nrich.maths.org](https://nrich.maths.org). Work through the 'Upper Secondary' and 'Post-16' collections. Quality over quantity.

## 7. **A Deep-Dive Maths Investigation**

Pick one area of mathematics and spend three months exploring it. Number theory, graph theory, cryptography, chaos. Admissions tutors want intellectual growth, not a reading list.

**Start here:** Choose something that interests you. Read one paper or book chapter on it. Try to solve an open-ended problem. Write up what you found.

## 8. **Free Online Courses**

MIT OpenCourseWare offers real university-level maths for free. Brilliant.org builds problem-solving intuition through interactive exercises.

**Start here:** [ocw.mit.edu](https://ocw.mit.edu) for lecture courses. [brilliant.org](https://brilliant.org) for interactive problem-solving. Complete one full course, not three halves.

*the activities (continued):*

### 9. **Attend Public Maths Lectures**

Gresham College in London runs free public lectures on mathematics. The Royal Institution has maths events. These give you material no other applicant has.

**Start here:** [gresham.ac.uk](http://gresham.ac.uk) for free London lectures. Also check your target university's public lecture series.

### 10. **Maths Competitions Beyond UKMT**

The Mathematical Olympiad for Girls (MOG), UK Senior Kangaroo, and international competitions like the Intermediate Mathematical Olympiad all strengthen an application.

**Start here:** Full list at [ukmt.org.uk/competitions](http://ukmt.org.uk/competitions). Enter everything your school offers. Reflection on what you learned matters more than medals.

### 11. **Tutor Maths to Younger Students**

Teaching deepens your own understanding and shows leadership. It also gives you concrete personal statement material.

**Start here:** Run a maths club at school, volunteer with [ukmt.org.uk](http://ukmt.org.uk) mentoring programmes, or tutor a younger student one-to-one.

### 12. **University Summer Schools & Taster Days**

The 'Why this university?' interview question needs a specific answer. Attending a taster day gives you one.

**Start here:** Check the maths department websites of your target universities from Year 11 onwards. [Cambridge STEP preparation course](#) is particularly well-regarded.

*Pick 2-3. Go deep, not wide. Quality over quantity.*

## Want the full requirements data?

This guide shows what to do. The Maths Requirements Cheat Sheet shows where to apply. Grades, offer rates, STEP/TMUA requirements for 17+ universities.

[uniplan.me/shop/maths](https://uniplan.me/shop/maths)

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## Need a personalised plan?

Book a 1:1 Education Advice Call. 30 minutes. Your child's specific situation. A clear plan forward.

**£50 / 30 minutes / book this week**

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Find your child's actual matches (free, grade-matched) at

[uniplan.me/courses](https://uniplan.me/courses)

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