



Advanced Mathematics  
Support Programme®



## Year 13 Regular Problem Solving Classes

### Norwich

25th September 2021

#### Overview

A series of maths problem solving classes designed to develop students' problem solving skills so they have the confidence to apply for universities that include an admissions test as part of their offer.

These regular classes offer students the opportunity to develop their problem-solving skills by trying out challenging problems that require deep mathematical thinking, and so help them meet the challenges they may face in embarking on a maths-rich university course or career. The problems are fun and rewarding and attending the sessions will enrich a student's mathematical experience.

Students will look at problems from a range of sources including Sixth Term Examination Papers (STEP) used by Cambridge and Warwick Universities and the Mathematics Admissions Test (MAT) used by Oxford University and Imperial College, London.

#### Aims

- To develop confidence in dealing with maths problems
- To develop students' resilience when attempting maths problems
- To provide information about the problem solving skills required in university admissions tests
- To give students the opportunity to attempt problems both in groups and on their own
- To give students the opportunity to think about how solutions to problems are presented
- To provide students with the opportunity to explore areas of maths not in the standard curriculum
- To provide students with the opportunity to study questions from the STEP and the MAT examinations.

#### Who will benefit from attending?

The classes are suitable for any A level Mathematics student with an enquiring mind who wish to develop their problem solving ability at A level and beyond.

They are particularly suitable for those students who are required to sit an admissions test as part of a university offer.

## Content

Students attending the classes will encounter problems covering a variety of topics. These include:

- Working with integers
- Reasoning and logic
- Sequences and series
- Induction
- Curve sketching and identification
- Coordinate geometry
- Vectors
- Trigonometry
- Complex numbers
- Integration
- Differential equations

## Materials and Equipment

If the classes are being held online, you will need access to suitable equipment. You are advised to use a headset or headphones with an inline microphone to provide the best sound quality and to prevent audio issues for other users. A laptop with a built-in webcam and microphone may be sufficient if you're in a quiet area but please take the time to check this before the session. BBB is designed to be used on a variety of platforms but you will get the best experience via a desktop or laptop computer, running either Google Chrome or Mozilla Firefox as the browser.

Note: Internet Explorer and Edge are not suitable currently.

Access to GeoGebra or desmos will also be useful.

## Study Schedule

A series of problem solving events aimed at Year 13 students, particularly those considering applying to study mathematics, or a related field, at university. The events will be particularly useful for those considering sitting the MAT, the TMUA or a similar admissions test in October/November 2021, and also for those intending to sit the STEP papers in the Summer of 2022. We recognise that not every student will be able to attend every session, but will expect students to attend the majority of sessions.

**Face to face sessions will run on Saturday mornings at the University of East Anglia for 3 hours from 09:30 until 12:30.**

**Online sessions will be on Wednesday evenings from 17:00 until 18:30.**

25th of September at UEA Concentrating on MAT/TMUA

6th October Online Concentrating on MAT/TMUA

16th October as Saturdays at UEA Concentrating on MAT/TMUA

27th of November at UEA STEP Preparation

8th December Online

12th January Online

22nd of January at UEA

9th February Online

26th of February at UEA

9th of March Online

26th of March at UEA

23rd of April at UEA

11th of May Online

21st of May at UEA

## Key Facts

<b>Event ref:</b>	#8754
<b>Audience:</b>	Students
<b>Target year:</b>	Year 13
<b>Curriculum focus:</b>	University admissions tests, A level Mathematics, A level Further Mathematics
<b>Mathematical focus:</b>	Pure, Problem solving
<b>Event format:</b>	Student course
<b>Event length:</b>	20 hours
<b>Region:</b>	East of England
<b>Venue:</b>	UEA / Online, Norwich Research Park, Norwich, Norfolk, NR4 7TJ
<b>Next session:</b>	Sat 21st May 2022
<b>Course times:</b>	09:30 - 12:30

## Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/8754>