A-Level Maths

Welcome to A Level Maths - and congratulations on successfully completing your GCSEs! You've already built a strong foundation, and now it's time to take your mathematical skills to the next level.

A Level Maths will challenge you in new and exciting ways. You'll explore deeper concepts in algebra, calculus, statistics, and mechanics, and learn how to apply them to real-world problems. It's a step up from GCSE, but with the right mindset and consistent effort, you'll find it incredibly rewarding.

Expect to think more critically, solve more complex problems, and develop a level of mathematical confidence that will benefit you far beyond the classroom.

We're looking forward to a fantastic year of learning and achievement.

Mrs E Morgan – Head of Maths

Understanding the course

Specification	Edexcel A Level Maths (9MA0)
Exams	All exams are at the end of Y13. **Paper 1**: **Pure Mathematics 1** 2-hour written examination 33.33% of the qualification 100 marks Calculator may be used **Paper 2: Pure Mathematics 2** 2-hour written examination 33.33% of the qualification 100 marks Calculator may be used *Paper 1 and Paper 2 may contain questions on any topics from the Pure Mathematics content* **Paper 3**: **Statistics and Mechanics**(Calculator may be used) 2-hour written examination 33.33% of the qualification 100 marks Calculator may be used *Paper 3 will contain questions on topics from the Statistics content in Section A and Mechanics content in Section B.*
Teacher	Mrs E Morgan emorgan@yateacademy.co.uk

Course requirements

Please come prepared to your first lesson with the following materials:

- Pencil case with black pens, pencils, ruler, rubber
- A Casio FX-991 CW calculator (has extra functions that help at A-Level)
- 1 lever arch folders
- 1 blank, lined exercise book for independent study
- A diary or planner to record homework requirements

Summer bridging work

To ensure you start the year as successfully as possible, please come to your first lesson having completed the following tasks.

Consolidate Task *(Max 300 words)*

- How would you expand $(x+3)^2$?
- How would you expand $(x+y)^2$?
- How would you expand $(x+3)^3$?
- How would you expand $(x+y)^3$?
- Do you think the same method would be effective in expanding $(x+y)^4$? How about expanding $(x+y)^7$ or $(x+y)^{11}$? Why? Why not?

Apply Task

Task Instructions:

Please complete all questions in the SPARX GCSE to A-Level Transition Workbook.

While the answers are provided, you **must show full workings** for every question in the booklet. You may use a calculator throughout.

You are required to bring your fully worked solutions to class during the **first week of September**, so your teacher can check that the work has been completed.

Useful Resources to help:

If there are any topics you're not fully confident with, you can strengthen your understanding by watching the **Hegarty Maths A-Level Preparation** videos, available here:
Hegarty Maths A-Level Preparation Playlist

Why is this important:

During the first three weeks of September, you will sit an in-class assessment designed to test your prior knowledge and initial progress in the subject. This will help us evaluate your readiness and suitability for the course.

To prepare effectively, it is essential that you complete the **Transition Workbook** in full before this assessment.

Extension Task

- Watch this Ted Ed video about Pascal's triangle.

The mathematical secrets of Pascal's triangle - Wajdi Mohamed Ratemi
https://youtu.be/XMriWTvPXHI

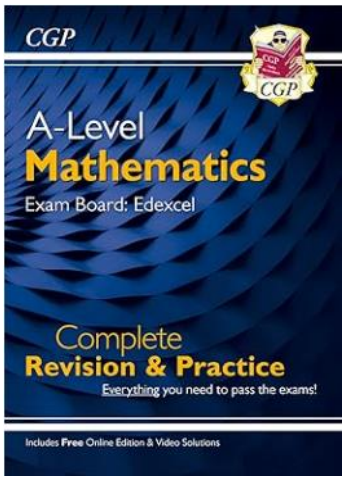
- Read this article about the construction, notation and patterns of Pascal's triangle.

https://brilliant.org/wiki/pascals-triangle/

Recommended Reading

I would highly recommend purchasing each of the book below:

CGP Revision Guide



CGP Workbook