



Year 11 Preparation for Study at Loreto College

SUBJECT

Mathematics



QUALIFICATION

A Level



PREPARATION TASKS



RESEARCH



Go through all of the higher tier GCSE algebra topics to check which ones you're good at and which ones you need more practice on

- Watch videos
- Practise skills
- Learn any formulas needed
- Test yourself with exam questions

Online possibilities:

- [Mr Barton Maths - GCSE ebook](#)
- [Mr Barton Maths – GCSE takeaway](#)
- [Mathswatch](#) - Your school's login required
- [MyMaths](#) - Your school's login required

Book possibilities - Head Start to A-Level Maths (CGP books)

[Free kindle CGP book](#)

Preparation for AS/A level Maths (alpha workbooks)

Research the careers that follow on from doing Maths A-level – what career do you want to do? How will Maths A-level help?

- Computer programmer
- Engineering
- Finance / accountancy
- Pilot
- Scientist
- Others...

Find out how these Maths A-level topics are used in real life:

- Pure Maths - Calculus
- Mechanics – Newton's Laws of Motion
- Statistics – the binomial distribution

Part of the new A-level is the [Large Data Set](#) (Scroll down to the "xlsx" link). What features and trends can you find? Use the statistical methods from GCSE – mean, median, mode, box plot, scatter diagram...

RECOMMENDED READING



RECOMMENDED WEBSITES



Books

"Humble Pi" by Matt Parker

"Alex through the Looking Glass" – Alex Bellos

"Can you solve my problems?" – Alex Bellos

Various books by Ian Stewart

Sudoku – apps / newspapers [what are they?]

Puzzles / enrichment websites

[Matt Parker maths puzzles](#)

[Senior Maths Challenge](#)

[Nrich](#)

[Area maze](#)

[Mr Barton Maths - GCSE students](#)

[Question pack](#)

[Mathswatch](#) Your school's login required

[MyMaths](#) Your school's login required

[Maths Careers](#)

[STEM – Maths Careers](#)

[Senior Maths Challenge](#)

[Matt Parker maths puzzles](#)

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[Nrich](#)

[Area maze](#)

This research work is really useful to do, as it will help you to explore your options for college study. Please be aware that agreed courses will be finalised at enrolment after students have been awarded their GCSE results.