

MATHEMATICS: rberry@rushcliffespencer.org.uk

MATHEMATICS (A LEVEL)

AIMS OF THE COURSE

The aims of the course include encouraging students to:

- understand mathematics and mathematical processes in a way that promotes confidence, fosters enjoyment and provides a strong foundation for progression to further study
- extend their range of mathematical skills and techniques
- understand coherence and progression in mathematics and how different areas of mathematics are connected
- apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general.
- use their mathematical knowledge to make logical and reasoned decisions in solving problems both within pure mathematics and in a variety of contexts, and communicate the mathematical rationale for these decisions clearly.

COURSE OUTLINE AND CONTENT

Assessment	Overview	Marks	%
2:00	Pure Mathematics	100	33.3
2:00	Pure & Mechanics Mathematics	100	33.3
2:00	Pure & Statistics Mathematics	100	33.3

The mathematics course covers pure mathematics, mechanics and statistics. Students will develop knowledge across these branches, with content including topics like algebra, trigonometry, kinematics, forces and Newton's laws, probability and statistical sampling.

WHAT SKILLS WILL I LEARN?

The course content develops skills in Mathematical argument, language and proof, e.g. to construct and present mathematical arguments through appropriate use of diagrams; Mathematical

problem solving, e.g. to construct extended arguments to solve problems presented in an unstructured form, including problems in context, and Mathematical modelling, e.g. to translate a situation in context into a mathematical model making simplifying assumptions.

POSSIBLE CAREER PATHS

Mathematics is a 'facilitating subject' and therefore opens many doors in Higher Education and beyond. In particular, it is needed for Mathematics and related degrees including Engineering, Sciences, Computing, Finance and Economics. It is important for careers in finance and banking, natural and life sciences, operational research, mathematics and statistical research, engineering, insurance, information technology, education, medicine, defence and the military, space and astronomy, and intelligence services.

ADDITIONAL EXAM BOARD DETAILS

<https://shorturl.at/eVcxh>

PREVIOUS GRADES

Exam Board: AQA

	A*	A	B	C	D	E	U	X	Totals
2023	8	20	11	8	6	1	1	0	55
2024	9	19	16	8	10	6	1	0	69
2025	16	19	21	10	8	3	1	0	78

ENTRY REQUIREMENTS

- 5 GCSE grades 4-9 including Mathematics and English Language
- Grade 6 in Mathematics

QUOTE

"A level Maths will take your learning experience to another level. You will be tested with difficult yet engaging topics which will intrigue your mind."