

## Mathematics - Year 9

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Integers, powers and roots; Fractions, decimals, percentages; Calculations and Accuracy; Probability (Pythagoras and Trigonometry; Area and Perimeter*)	Volume and Surface Area; Lines, angles and shapes; Integers, powers and roots; Fractions, decimals and percentages; Probability (Measures*)	Simplifying and Substitution; Forming and Solving Equations; (Inequalities*) Ratio and Proportion	Measures; Sequences and Functions; Area and Perimeter (Simplifying and Substitution, Calculations and Accuracy, Ratio and Proportion*)	Statistical Inquiry; Data and Interpreting Results; Transformations (Constructions and Loci*)	Pythagoras and Trigonometry; Constructions and Loci (Algebra Revision, and Inequalities*)
Assessment	Written test	Written test	Written test	Written test	Written test	Written test and end of year PPE

\* Only covered by some groups

Building on Prior Learning	Maths builds knowledge by revisiting sequenced topics. Recapping prior learning before further teaching ensures that students link ideas and see how lessons fit together in a logical manner.
Links with other subjects	The department has close links with other subjects, particularly science, music, P.E., and subjects such as Economics, Engineering and Business Studies. Topics include the use of fractions, decimals and percentages; measures; proportion; graphical representations; standard form; order of operations; accuracy and interpreting data; statistical inquiry.
Extracurricular opportunities	Count Me In runs every week. Students are encouraged to participate in House competitions run throughout the year. The School participates in the National School Maths Challenge, giving our best mathematicians the opportunity to compete against others from schools nationally.
A successful learner in this subject will demonstrate	Successful maths students will be able to demonstrate fluency with the use of times tables, and their understanding of small and large numbers of bonds. Students will show resilience when applying prior knowledge to new problems, and be able to make connections with previously covered topics. They will be able to reflect on their own work and that of others, in order to identify areas for improvement.
Impact on personal development	Maths will help students to become logical thinkers and problems solvers at a deeper level. This will help them to develop resilience, as well as the ability to use mathematics in real-life situations.



Ways to support student learning in this subject

- Students must be fluent in using their times tables up to 12.
- Ensure that the students can identify squares, cubes and roots up to 100, and prime numbers up to 30.
- Encourage the students to learn the names and properties of different shapes and apply the formulae for their areas.
- Making sure homework is completed on time and to a high standard. Encourage students to attempt homework early so they have time to ask for help if required.
- Encourage a positive attitude towards maths by refraining from using negative vocabulary towards the subject.