

Mathematics

In Year 7, students are taught in mixed ability classes and study topics from each of the areas, Number, Algebra, Geometry & Measures, Probability and Statistics. Problem-solving skills and mathematical literacy are developed through investigative tasks. Mental arithmetic skills are further developed and all work is expected to be completed without reliance on a calculator. Students are tested regularly, approximately every three weeks, to allow staff to assess their progress. In Years 8 & 9, students are taught in sets, initially determined by performance in Year 7, but progress is monitored carefully and movement between sets is made when necessary. The system of regular testing at the end of each topic is maintained. Some topics are revisited and studied in greater depth and new mathematical skills and knowledge are introduced and developed. The use of calculators is now encouraged for appropriate topics.

At GCSE, students are taught content from each of the areas listed above. Students learn to use and apply standard mathematical techniques, reason, interpret and communicate mathematically and solve problems within mathematics and other contexts. Students are taught in one of eight sets, allocated according to achievement at Key Stage 3.

Students are assessed by three written papers (one non-calculator and two calculator) at the end of the course. The examination is offered at Higher Tier and Foundation Tier; the vast majority of students are entered for the Higher Tier.

Students in the top sets are taught beyond the GCSE specification in preparation for A Level.

The department has a traditional approach to teaching Mathematics, clearly demonstrating and explaining methods, showing proofs where appropriate and ensuring that students apply their learning to a wide range of questions so that they become confident at applying mathematical techniques. This has been shown to produce consistently high results at all levels.

Students are encouraged to extend their enjoyment and understanding of Mathematics by participating in activities such as the Mathematics Challenge, Team Challenges, Master Classes and Sixth Form study groups.