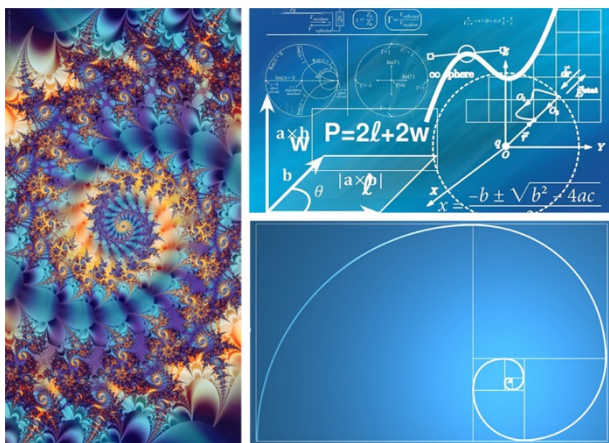


GCSE Mathematics

Exam Board: Edexcel

Aims:

GCSE Mathematics encourages students to develop confidence in, and a positive attitude towards, mathematics and to recognise the importance of mathematics in their own lives and to society.



GCSE Mathematics should enable students to:

- develop fluent knowledge, skills and understanding of mathematical methods and concepts
- acquire, select and apply mathematical techniques to solve problems
- reason mathematically, make deductions and inferences and draw conclusions
- comprehend, interpret and communicate mathematical information in a variety of forms appropriate to the information and context.

Course Content & Structure:

There are two levels of entry at GCSE level (Foundation and Higher). Each student will be entered for the one which is appropriate for their ability in Mathematics at the end of Year 11.

Foundation Tier	leads to GCSE grades 5, 4, 3, 2, 1
Higher Tier	leads to GCSE grades 9, 8, 7, 6, 5, 4

The Foundation tier includes content such as fractions, decimals, and percentages, simplifying algebraic expressions by expanding brackets collecting like terms, using ratio notation, solving problems involving area and volume, and probability. The Higher tier also includes content such as laws of indices, solving simultaneous equations, using inverse proportion, proving circle theorems, solving quadratic equations and constructing histograms with unequal class intervals.

It is important that pupils are entered for a tier which they can cope with as failure to gain the pass mark in any tier will leave them without a GCSE grade.

Assessment:

Assessment is 100% by terminal examination taken at the end of Year 11. Students will sit three papers, one without a calculator and two where a calculator is allowed, all equally weighted.

For further information, contact Mrs D Shaw

GCSE Statistics

Exam Board: Edexcel

Aims:

Statistics will give students the opportunity, not only to embed their existing maths knowledge, but build on it.

Students will study a GCSE in Statistics, a key component of maths that is relevant to everyday life. Based on the principles of the statistical enquiry cycle, students gain a rounded understanding of how to interpret and apply data to a number of scenarios, both across subjects and in the real world. Students will gain transferable skills and understanding that is applicable to the study of a wide range of other subjects at A-level and beyond, including the Sciences, Psychology, Geography, Business and Economics.



GCSE Statistics Course Content:

The course contains three key areas:

- The collection of data – here students explore planning a statistical enquiry. Specifying a hypothesis and minimising the constraints that may be faced in designing an investigation to test a hypothesis. They also look at the types of data, how it can be sampled and collated.
- Processing, representing and analysing data – here students study the statistical techniques that will be learnt in GCSE Mathematics, such as Averages, Statistical Diagrams, but they will extend this to looking Geometric mean, standard deviation, Spearman's rank correlation
- Probability – here students build upon the work on Theoretical Probability, Tree diagrams, Venn diagrams. They start to explore probability distributions like the Binomial and Normal Distribution.

Assessment:

At the end of the course students will be assessed by exams. Students will take two written papers, both calculator and both 90 minutes long. The papers contain short, medium and extended response questions.

Questions cover statistical methods, familiar and unfamiliar contexts and the component parts if the statistical enquiry cycle.

Note: Due to the high proportion of applied mathematics, this course is only suited to those who are strong mathematicians and as such may not appear on all student option forms.

For further information, contact Mr T Allen