

### Mathematics

A Level/Edexcel

**Entry requirements:** Overall plus Grade 7 in Mathematics. Students will sit an algebra test in September and be given additional support if required.

**Contact:** Mrs N Manan by e-mail [nmanan.pingle@deferrerstrust.com](mailto:nmanan.pingle@deferrerstrust.com)

#### What will I learn on this course?

In Year 12, students study topics from three main mathematical strands. In pure Mathematics, they will cover topics including algebra, graphing, functions, basic calculus, trigonometry, exponentials, logarithms and co-ordinate geometry. In statistics they will learn about the use of large data sets, sampling, measures of spread and averages, probability and basic hypothesis testing. In mechanics, topics studied include kinematics, forces and Newton's Laws.

In Year 13, students study the same three main strands. Pure Mathematics includes the study of trigonometric identities, the modulus function, parametric equations, numerical methods, further study of calculus and differential equations. Statistics includes the normal distribution and associated hypothesis testing and more advanced methods of assessing probability. Mechanics extends the use of Newton's Laws and looks at the application of vectors and frictional forces.

#### How will I be assessed?

Paper 1	Pure	2hrs (33%)
Paper 2	Pure	2hrs (33%)
Paper 2	Statistics and Mechanics	2hrs (33%)

Formal assessment takes place at the end of Year 13 and takes the form of three two-hour examinations in May/June. In addition, your progress is closely monitored through classwork, homework and assessment tasks during the course.

#### Why choose Mathematics?

Having completed study at this level, you may then move on to either university education, Higher Education or into an employment such as manufacturing.

Mathematics is an essential underpinning skill in most university courses and skilled occupations. Surveying, accountancy, manufacturing, medicine, business and engineering are careers for which Mathematics is useful.

#### Additional information

A requirement to study the new Mathematics specification will be that all students own their own 'graphic calculator'.