# Maths

A Level

ST. MARY MAGDALENE
C OF E SIXTH FORM
PENINSULA CAMPUS
*Excellence through innovation, founded in faith since 1840.*

Exam Board: **Edexcel**

## What is Maths?

A level Mathematics gives students the opportunity to study topics such as geometry, calculus and trigonometry (pure mathematics) and to use these ideas within the 'applied' topics such as mechanics and statistics. The subject requires students to extend their range of mathematical skills and techniques.

## What will I study?

**Paper 1 & Paper 2 - Pure Mathematics:**

Proof, Algebra and functions, Coordinate geometry in the (x, y) plane, Sequences and series, Trigonometry, Exponentials and logarithms, Differentiation, Integration, Numerical methods and Vectors

**Paper 3 - Statistics and Mechanics:**

***Statistics:*** Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions and Statistical hypothesis testing

***Mechanics:*** Quantities and units in mechanics, Kinematics, Forces and Newton's laws and Moments

## What entry requirements will I need?

In addition to the general entry requirements you will need a grade 7 or above in Maths.

## How will I be taught?

Students will learn through a variety of methods including independently working, discussion and group work. Students will be encouraged to take increasing responsibility for their own learning and the evaluation of their own mathematical development. They will be taught to 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.

## How will I be assessed?

**Paper 1:** Pure Mathematics 1 - 2 hour written paper (worth 33.3% of the A Level)
**Paper 2:** Pure Mathematics 2 - 2 hour written paper (worth 33.3% of the A Level)
**Paper 3:** Statistics and Mechanics - 2 hour written paper (worth 33.3% of the A Level)

## What career opportunities does this open up?

Mathematics plays an integral part of many careers, and can provide numerous opportunities, both academically and career-wise. In particular those that study it can go into careers in: accounting, medicine, engineering, forensic pathology, finance, business, consultancy, education, IT, games development, scientific research, programming, the civil service, design, construction and astrophysics to name a few. Specific job roles include actuary, business analyst, software engineer, technology analyst, information engineer, speech technology researcher, and maths teacher.