

## Course title: Mathematics A Level Pearson

<b>Academic year:</b>	2025
<b>Course Venue:</b>	Blessed William Howard Catholic High School
<b>Course Type:</b>	A Level
<b>Duration:</b>	2 years

**Course Description:** This course is for students who enjoy a challenge. They will build on work introduced at GCSE but also experience new concepts that have been produced by some of the greatest minds of the millennium. It serves as a very useful support of many other qualifications, as well as being a much sought after qualification for the work place and courses in higher education. The course followed at Blessed William Howard is divided into Pure Mathematics and Applications. Pure Mathematics develops knowledge of such topics as algebra, trigonometry and calculus. The Applications paper is divided equally between Statistics and Mechanics. Topics such as statistical analysis and probability will be assessed alongside kinematics and moments.

### Course Content:

Pure maths: - Topic 1 – Proof ● Topic 2 – Algebra and functions ● Topic 3 – Coordinate geometry in the  $(x, y)$  plane ● Topic 4 – Sequences and series ● Topic 5 – Trigonometry ● Topic 6 – Exponentials and logarithms ● Topic 7 – Differentiation ● Topic 8 – Integration ● Topic 9 – Numerical methods ● Topic 10 – Vectors

Applied maths - : Statistics ● Topic 1 – Statistical sampling ● Topic 2 – Data presentation and interpretation ● Topic 3 – Probability ● Topic 4 – Statistical distributions ● Topic 5 – Statistical hypothesis testing Section B: Mechanics ● Topic 6 – Quantities and units in mechanics ● Topic 7 – Kinematics ● Topic 8 – Forces and Newton’s laws ● Topic 9 – Moments

**Entry requirements:** To study Mathematics in the sixth form you need a 9-4 in at least seven different subjects, including English and mathematics, which would usually be at grade 4 or above.

To study mathematics, you will be required to have achieved a grade 6 at GCSE.

### Assessment:

All exams will be sat at the end of the second year of study

Paper 1: Pure Mathematics 33.3%

Paper 2: Pure Mathematics 2 33.3%

Paper 3: Statistics and Mechanics 33.3%

### Financial Information: Nil





**Future opportunities:** Mathematics serves as a very useful support for many other qualifications, as well as being a much sought after qualification for the work place and courses in higher education.

**Further Information:** Students may use a calculator in all A Level Mathematics examinations.

Calculators used must include the following features:

- an iterative function
- the ability to compute summary statistics

For more detailed content please see the online specification at Pearson qualifications.

