# KS5 | Curriculum
# Mathematics

THE WALDERSLADE & GREENACRE SCHOOLS PARTNERSHIP

## Qualification type / Exam Board

A-Level / Pearson Edexcel

## What will I learn about?

- Pure Mathematics, including algebra, functions, coordinate geometry, calculus, trigonometry, sequences and series.
- Statistics, including data presentation, probability distributions, hypothesis testing and statistical problem-solving.
- Mechanics, including forces, motion, kinematics, moments and mathematical modelling.
- Develop problem-solving, mathematical reasoning and communication skills.
- Apply mathematical techniques to real-life situations and unfamiliar contexts.
- Use mathematical models and interpret results critically.

## How is my work assessed?

The course is assessed through three written examinations at the end of Year 13.

| Assessment | Weighting | Details |
|---|---|---|
| Paper 1: Pure Mathematics 1 | 33.3% | 2-hour written examination assessing Pure Mathematics content. |
| Paper 2: Pure Mathematics 2 | 33.3% | 2-hour written examination assessing further Pure Mathematics content. |
| Paper 3: Statistics and Mechanics | 33.3% | 2-hour written examination assessing Statistics and Mechanics. |

All examinations are taken at the end of Year 13 and are externally assessed by Pearson Edexcel.

## What should I consider before starting this subject?

- You should enjoy solving problems and working with numbers.
- The course builds directly on GCSE Mathematics, so a strong foundation is important.
- You will need to be comfortable with algebraic manipulation and mathematical reasoning.
- Independent study and regular practice are essential for success.
- Mathematics requires persistence and resilience when tackling challenging problems.
- Good organisation and revision habits will help you manage the demands of the course.

## Why is this course useful and what might it lead to?

- Develops analytical thinking, problem-solving and logical reasoning skills valued by universities and employers.
- Supports progression to degree courses including Mathematics, Engineering, Physics, Computer Science, Economics, Data Science and Finance.

- Highly regarded by universities and often required for STEM-related courses.
- Can lead to careers in engineering, actuarial science, finance, accounting, teaching, technology, data analysis and scientific research.
- Provides excellent preparation for apprenticeships and higher-level professional qualifications.

## Entry requirements

- A minimum Grade 7 in GCSE Mathematics.
- Strong algebraic, numerical and problem-solving skills.
- A willingness to complete regular independent study and practice outside lessons.
- An interest in mathematical reasoning and applying mathematics to real-world situations.
- Students considering degrees in Mathematics, Engineering, Physics, Economics or related STEM subjects will find this course particularly valuable.

## Where can I find more information?

- Pearson Edexcel A-Level Mathematics Specification: https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html
- Speak to the Mathematics department or sixth-form subject teachers.
- Visit UCAS and university websites to explore related degree courses and career pathways.