Year 9 Pathways Assembly

GCSE Mathematics

**Welcome To
Mathematics
Year 9 Pathways Assembly**

What you need to know

- You will leave Sale High School with 1 GCSE in Mathematics

- There are 2 Tiers
  - Foundation Grades 1 to 5
  - Higher Grades 3 to 9

- This is a core subject which means you have to do it.

In 2025:

26% of students gained a grade 7 or better.

73% of students gained a grade 4 or better.

Mathematics

Exam board at a glance: Pearsons GCSE Mathematics
1MA1, https://qualifications.pearson.com/content/dam/pdf/GCSE/mathematics/2015/specification-and-sample-assesment/gcse-maths-2015-specification.pdf

Exam: 100% exam.

3 Papers

- Paper 1 – Non-Calculator 80 Marks

- Paper 2 – Calculator 80 Marks

- Paper 3 – Calculator 80 Marks

Make sure you have your own calculator

University courses

The follow degrees require a strong mathematical level.

- **Engineering** (all branches) – e.g., mechanical, civil, aerospace, electrical.
- **Economics** – most universities expect Maths A-level.
- **Finance** – quantitative courses heavily rely on Maths.
- **Accountancy** – often asks for Maths due to numerical focus.
- **Computer Science** – especially at top universities.
- **Physics** – mathematically intensive (implied in subject lists).
- **Data Science & Statistics** – specialist degrees based on Maths.
- **Actuarial Science** – very Maths-heavy.

University courses

The follow degrees do not require Maths, but many universities prefer it!

- **Chemistry**
- **Business / Management**
- **Geography**
- **Psychology**

Mathematics career opportunities

- **Actuary** – assessing financial risk using models. [prospects.ac.uk], [totaljobs.com]

- **Statistician / Medical Statistician** – analysing data in health, government, business. [prospects.ac.uk]

- **Data Scientist / Data Analyst** – interpreting complex datasets for insights. [prospects.ac.uk]

- **Operational Researcher** – solving organisational and logistics problems using maths. [prospects.ac.uk]

- **Mathematician / Research Scientist** (Maths) – academic or applied research. [prospects.ac.uk]

- **Astronomer** – applying physics and math to study space. [prospects.ac.uk]

- **Software Engineer / Programmer** – roles suited to mathematically strong thinkers. [prospects.ac.uk]

- **Secondary School or Further Education Maths Teacher** – teaching KS3–KS5. [prospects.ac.uk]

- **Private Tutor** – 1:1 or small-group tuition. [prospects.ac.uk]

- **Investment Analyst** – using statistical models to guide investment decisions. [prospects.ac.uk]

- **Quantitative Analyst (Quant)** – finance modelling, often in banks or hedge funds. [mathscareers.org.uk]

- **Cryptographer** – designing secure encryption systems. [thecomplet...uide.co.uk]