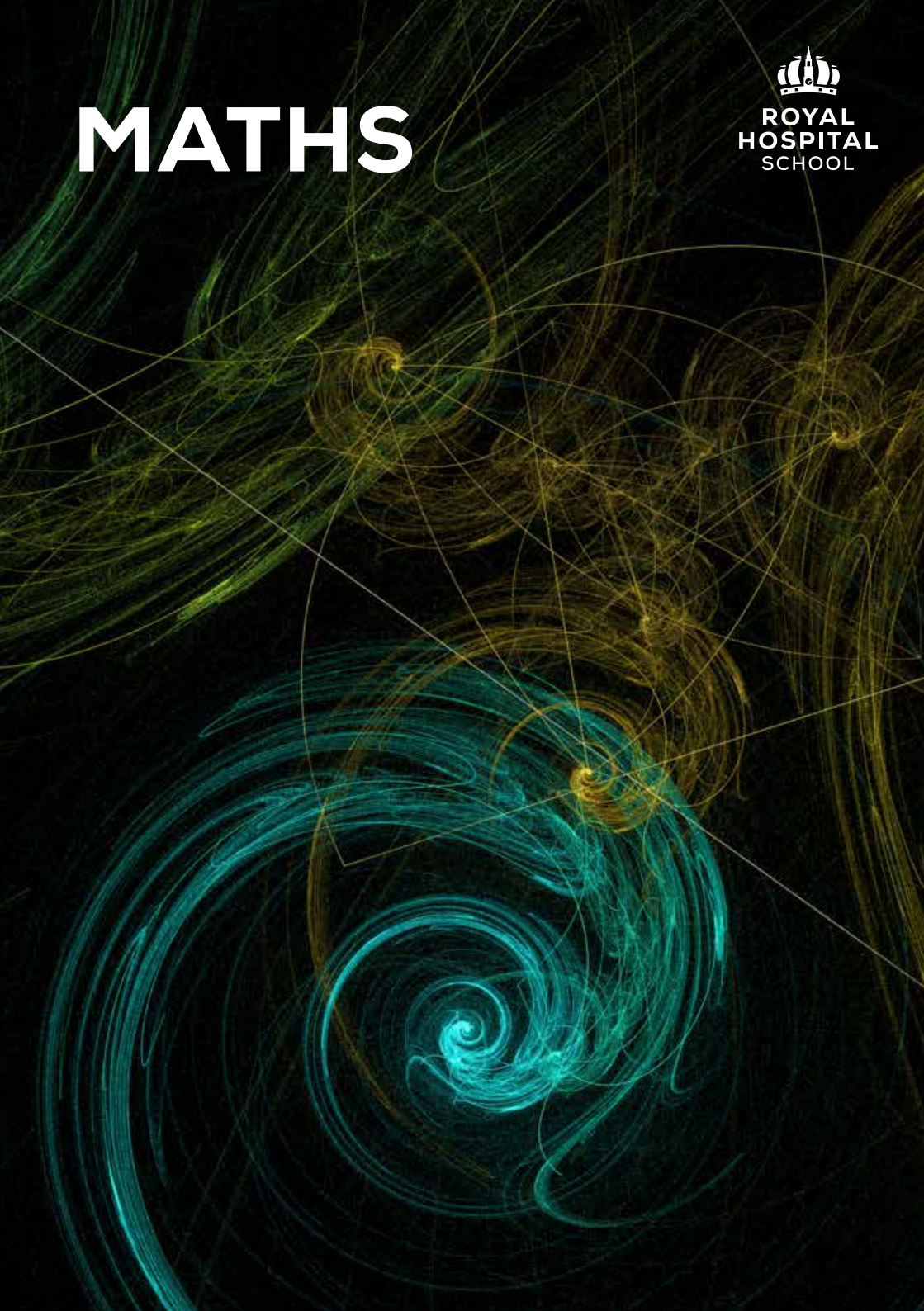


MATHS



ROYAL
HOSPITAL
SCHOOL



MATHS IN THE SIXTH FORM

Mathematics is a difficult subject at A Level unless you have some genuine interest in the subject. The nature of the subject alters in a more fundamental way than most other subjects after GCSE and there is a strong correlation between the results obtained by pupils at GCSE and A Level. Consequently if you do not achieve a pass in GCSE Higher Tier Mathematics at Grade 7, 8 or 9 it would not be advisable to study mathematics at A Level unless there are good reasons for believing that your GCSE result does not give a true picture of your ability and potential.

ESSENTIAL INFORMATION

- All pupils are prepared for the GCE examinations set by Edexcel.
- The course is split into two parts - Pure Mathematics and Applications (incorporating Statistics and Mechanics).
- There will be three examinations, all taken at the end of Year 13: Pure 1, Pure 2 and Mechanics & Statistics.
- Each exam will be 2 hours in length and worth 100 marks; the Mechanics and Statistics paper is split between the 2 disciplines, 50 marks for each, but still 2 hours in length.

WHAT WILL YOU STUDY?

The areas studied during the two year course are as follows:

PURE 1

- Algebra and functions
- Coordinate geometry in the (x,y) plane
- Trigonometry
- Vectors in 2D
- Exponentials and logarithms
- Differentiation
- Integration

PURE 2

- Proof
- Algebra, partial fractions and functions
- Sequences and series
- Parametric equations
- Trigonometry
- Vectors in 3D
- Differentiation
- Integration
- Numerical methods

MECHANICS AND STATISTICS

Section A: Statistics

- Statistical sampling
- Data presentation and interpretation
- Probability
- The normal distribution
- Regression and correlation
- Statistical distributions
- Statistical hypothesis testing

Section B: Mechanics

- Quantities and units in mechanics
- Kinematics
- Forces and Newton's laws
- Moments
- The motion of projectiles



**PURE MATHS
IS, IN ITS WAY,
THE POETRY OF
LOGIC**

- Albert Einstein



CAREERS

Maths can lead to a variety of careers:

ARMY OFFICER PROGRAMMER
INSURANCE BROKER **TEACHER** ACTUARY
HR TECHNICAL SUPPORT
AERONAUTICAL ENGINEER
GEOPHYSICIST PHYSICIST
CONSULTANT STATISTICIAN **PR** RESEARCHER
CHARTERED ACCOUNTANT
SOLICITOR **STOCK TRADER**
CONSULTANT **FINANCIAL RISK ANALYST**
METEOROLOGIST LECTURER

WEB DESIGNER

For more information or if you have any questions please
contact Mr Kevin Reid, Head of Maths

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