



Further Maths A Level

Transition Materials: Year 11 - 12

Further Maths is designed for students who enjoy mathematics and want to explore ideas in greater depth. The summer is an opportunity to strengthen your algebra and experience some of the topics that make Further Maths unique.

Essential Preparation

- Master all A Level Maths transition topics before September.
- Complete Higher GCSE papers aiming for consistently high grades.
- Develop fast and accurate algebraic manipulation.

DR Frost Maths Tasks

- Functions and transformations
- Proof
- Algebraic fractions
- Binomial expansion
- Sequences and series
- Coordinate geometry
- Radians
- Introduction to matrices
- Complex number basics (enrichment)
- Vectors (enrichment)

Recommended Videos (TLMaths)

- Functions
- Proof
- Binomial Expansion
- Sequences and Series
- Vectors
- Matrices
- Complex Numbers
- Introduction to Further Mathematics

Enrichment

- UKMT Senior Maths Challenge problems

- NRICH investigations
- MEI mA*ths resources
- Read Fermat's Last Theorem (Singh) or Alex's Adventures in Numberland (Bellos).

Summer Programme

- Week 1: Higher GCSE paper and algebra review.
- Week 2: Functions and proof.
- Week 3: Binomial expansion and sequences.
- Week 4: Vectors and matrices enrichment.
- Week 5: Further problem solving and UKMT questions.
- Week 6: Produce a revision booklet summarising the key ideas studied.

September Ready Checklist

- Confident algebra manipulation
- Comfortable with function notation
- Can construct mathematical proofs
- Understands sequences and patterns
- Enjoys tackling unfamiliar problems
- Can explain mathematical reasoning clearly