



Mathematics Department – Lower Sixth FP1 Scheme of Work

Textbook: Edexcel Further Pure FP1

Unit 1: Background Knowledge

- 1.1 Solving polynomial equations
- 1.2 Trigonometric ratios and rules
- 1.3 Sketching curves
- 1.4 Sequences and Series
- 1.5 Differentiation, tangents and normals

Test on unit 1

Unit 2: Complex Numbers

- 2.1 The imaginary number i
- 2.2 Complex numbers
- 2.3 The arithmetic of complex numbers
- 2.4 Real parts, imaginary parts and complex conjugates
- 2.5 Representing complex numbers geometrically
- 2.6 The modulus and argument of a complex number
- 2.7 The modulus-argument form for complex numbers
- 2.8 Roots of polynomial equations
- 2.9 Complex roots and conjugate pairs

Test on unit 2

Unit 3: Numerical solution of equations

- 3.1 Intervals and roots
- 3.2 Interval Bisection
- 3.3 Linear Interpolation
- 3.4 Newton-Raphson

Unit 4: Coordinate Systems

- 4.1 The parabola
- 4.2 The rectangular hyperbola
- 4.3 Cartesian and parametric equations

4.4 Tangents and Normals

Test on units 4 and 5

Unit 5: Matrices

5.1 Definition of a matrix

5.2 Matrix Algebra

5.3 The determinant of a 2x2 matrix

5.4 The inverse of a 2x2 matrix

5.5 Matrices and linear transformations in the x-y plane

5.6 Combined and inverse transformations

Test on unit 5

Unit 6: Series

6.1 Summation of finite series

Unit 7: Proof

7.1 Proof by induction

Test on units 6 and 7