



Mathematics Department – Lower Sixth C2 Scheme of Work

Textbook: Edexcel Modular Mathematics Core Mathematics 2

Unit 1: Trigonometry

- 2.1 Using the sine rule to find missing sides
- 2.2 Using the sine rule to find unknown angles
- 2.3 Ambiguous Case of the Sine Rule
- 2.4 Using the cosine rule to find missing sides
- 2.5 Using the cosine rule to find unknown angles
- 2.6 Using the cosine rule, sine rule and Pythagoras' Theorem
- 2.7 Area of a triangle

Unit 2: Radian Measure

- 6.1 Using radians to measure angles
- 6.2 The length of the arc of a circle
- 6.3 The area of a sector of a circle
- 6.4 The area of a segment of a circle

Test on units 1&2

Unit 3: Trigonometry

- 8.1 Sine, cosine and tangent functions
- 8.2 CAST Diagram for angles in four quadrants
- 8.3 Exact values and surds for trigonometrical functions
- 8.4 Graphs of $\sin\theta$, $\cos\theta$ and $\tan\theta$
- 8.5 Simple transformations of trigonometric graphs
- 10.1 Simple trigonometrical identities
- 10.2 Solving simple trigonometric equations
- 10.3 Solving more difficult trigonometric equations
- 10.4 Solving quadratic trigonometric equations

Unit 4: Algebra and Functions

- 1.1 Simplifying algebraic fractions by division
- 1.2 Dividing a polynomial by $x \pm p$
- 1.3 Factorising a polynomial using the Factor Theorem
- 1.4 Using the remainder Theorem

Test on units 3&4

Unit 5: Exponentials and Logarithms

- 3.1 The function $y = a^x$
- 3.2 Writing expressions as a logarithm
- 3.3 Calculating using logarithms to base 10
- 3.4 Laws of Logarithms
- 3.5 Solving equations of the form $a^x = b$
- 3.6 Changing the base of logarithms

Unit 6: Coordinate Geometry of the Circle

- 4.1 The midpoint of a line
- 4.2 The distance between two points on a line
- 4.3 The equation of a circle

Test on units 5&6

Unit 7: Geometric Sequences and Series

- 7.1 Geometric sequences
- 7.2 Geometric progressions and the n^{th} term
- 7.3 Using geometric sequences to solve problems
- 7.4 The sum of a geometric series(The proof of the sum formula should be known)
- 7.5 The sum to infinity of a geometric series

Unit 8: The Binomial Expansion

- 5.1 Pascal's triangle
- 5.2 Combinations and factorial notation
- 5.3 Using nCr notation in the binomial expansion
- 5.4 Expanding $(a+bx)^n$ using the binomial expansion

Test on units 7&8

Unit 9: Differentiation

- 9.1 Increasing and decreasing functions
- 9.2 Stationary points, maximum, minimum and points of inflexion
- 9.3 Solving practical problems using differentiation

Unit 10: Integration

- 11.1 Simple definite integration
- 11.2 Area under a curve
- 11.3 Area under a curve that gives negative values
- 11.4 Area between a straight line and a curve
- 11.5 The trapezium rule

Test on units 9&10