RIPLEY ST THOMAS
A CHURCH OF ENGLAND ACADEMY

Key Stage: 5

Subject: A2 Mathematics (2017-18)

Aims of the subject:

- To develop mathematical knowledge and skills which encourages confidence and provides satisfaction and enthusiasm
- To develop an understanding of mathematical principles and an appreciation of the subject of mathematics as logical and coherent
- To acquire a range of mathematical skills which could be applied in the context of everyday situations and across other subjects
- To develop the ability to analyse problems logically, recognise when and how a situation may be represented mathematically and select an appropriate method to solve the problem
- To secure the mathematical background necessary for further study in this or related subjects

A-Level Examination Board: AQA

Assessment Overview:

Course	What will I study?	Assessment
A2 (2018)	Term 1: ➢ **Core 3** ➢ Differentiation ➢ Integration and Differentiating & Integrating Trigonometric Functions ➢ Integration by substitution and by parts ➢ Volumes of Revolution ➢ Sec, Cosec and Cot ➢ Further Graph Transformations ➢ Numerical Methods ➢ Review of Core 3	Formal Tests: Test 1: Functions Test 2: Exponentials and natural logarithms, differentiation, integration, differentiating and integrating trigonometric functions Test 3: Integration by substitution & parts, volumes of revolution Test 4: Inverse trig functions, graph transformations, numerical methods

	➢ **Statistics 1** ➢ Numerical Methods ➢ Binomial Distribution ➢ Normal Distribution ➢ The Sample Mean Distribution & Estimating Population Parameters ➢ Confidence Intervals ➢ Probability Term 2: ➢ Correlation ➢ Regression ➢ **Core 4** ➢ Rational Functions & Partial Fractions ➢ Binomial Series Expansions ➢ Further Trigonometry ➢ Parametric Equations ➢ Exponential Growth & Implicit Differentiation ➢ Differential Equations ➢ Vector Geometry Term 3: ➢ Review of Core 3, Core 4 and Statistics 1	Formal Tests: Test 1: Numerical Measures and binomial distribution Test 2: Normal Distribution and confidence intervals test Test 3: Probability, correlation and regression Mock Exam in Core 3 Formal tests: Test 1: Algebra, Further Trig and parameters Test 2: Exponential growth, implicit differentiation and differential equations Mock Exams Statistics 1 exam: 6th June 2018 Core 3 exam: 13th June 2018 Core 4 exam: 15th June 2018

Enrichment opportunities

UKMT Senior Maths Challenge

Revision website:

https://www.vle.mathswatch.com/vle/

http://www.examsolutions.net/maths-revision/syllabuses/AQA/period-1/specification.phpk

http://www.examsolutions.net/maths-revision/syllabuses/AQA/period-1/C3/module.php

http://www.examsolutions.net/maths-revision/syllabuses/AQA/period-1/C4/module.php

http://www.examsolutions.net/maths-revision/syllabuses/AQA/period-1/S1/module.php

Student resources on the nrich website:

http://nrich.maths.org/8650 http://nrich.maths.org/9011

Suggestions for wider reading

AQA Core 3&4: Advanced Mathematics for AQA Core 3 & 4, Oxford
SMP AS/A2 Core 3 and 4 for AQA
SMP Statistics 1 for AQA
Advanced Maths for AQA, Statistics S1, Upton and Cook