## Mathematics- Curriculum Overview

## Year 7

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Ch 1 Whole Numbers and Decimals <br> Ch 2 Measures, Area and Perimeter <br> Ch 3 Expressions and Formulae | Ch 4 Fractions, decimals and percentages <br> Ch 5 2D shapes and Angles Ch 6 Graphs | Ch 7 Whole Number Calculations Ch 8 Statistics | Ch 9 Transformations and Symmetry Ch 10 Equations | Ch 11 Factors and Multiples <br> Ch 12 Constructions and 3D shape <br> Ch 13 Sequences | Ch 14 Decimal Calculations Ch 15 Ratio and Proportion Ch 16 Probability |
| Assessment \& End Points: | Baseline test for those with no KS2 data Ch 3 Expressions and Formulae | Ch 4 test Fractions, decimals and percentages Ch 5 test 2D shapes and Angles | SATS paper 1 and p2 Ch 7 test Whole Number Calculations | Ch 8 test Statistics Ch 9 test | Ch 12 test Constructions and 3D shape SATS paper 3 | Ch 16 test Probability |

## Year 8

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Ch 1 Whole Numbers and Decimals <br> Ch 2 Measures, Area and Perimeter Ch 3 Expressions and Formulae | Ch 4 Fractions, decimals and percentages Ch 5 2D shapes and Angles Ch 6 Graphs | Ch 7 Mental Calculations Ch 8 Statistics Ch 9 Transformations and Symmetry | Ch 10 Equations Ch 11 Written and Calculator methods | Ch 12 Constructions Ch 13 Sequences | Ch 14 3D shapes Ch 15 Ratio and Proportion Ch 16 Probability |
| Assessment \& End Points: | Ch 1 test Whole Numbers and Decimals Ch 2 test Measures, area and perimeter | SATs P1 | Ch 6 Graphs Ch 7 test Mental Calculations | Ch 10 test Equations | SATs p2 and p3 | Ch 15 test ratio and proportion <br> Ch 16 test Probability |

Year 9

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Ch 1 Whole Numbers and Decimals <br> Ch 2 Measures, Area and Perimeter <br> Ch 3 Expressions and Formulae | Ch 4 Fractions, decimals and percentages Ch 5 2D shapes and Angles Ch 6 Graphs | Ch 7 Decimal Calculations Ch 8 Statistics | Ch 9 Transformations and scale <br> Ch 10 Equations <br> Ch 11 Powers and roots | Ch 12 Constructions and Pythagoras Ch 13 Sequences Ch 14 3D shape | Ch 15 Ratio and Proportion Ch 16 Probability |
| Assessment \& End Points: | Ch 2 test Measures, area and shape <br> Ch 3 test Expressions and Formulae | Ch 4 test Fractions decimals and percentages SATs p1 | Ch 8 test Statistics | Ch 9 test Transformations and scale Ch 11 test powers and roots | Ch 12 test Constructions and Pythagoras | SATs p2 <br> SATs p3 <br> Ch 15 test Ratio and Proportion |

## * Mathematics- Curriculum Overview

Year 10

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Topics: | Number 1 Calculations <br> Algebra 1 Expressions <br> Geometry 1 Angles and <br> Polygons | Statistics 1 Handling Data <br> Number 2 Fractions, <br> Decimals and Percentages <br> Algebra 2 Formulae and <br> Functions | Algebra 2 Formulae and <br> Functions <br> Geometry 2 working in 2D <br> Statistics 2 Probability | Number 3 Measures and <br> Accuracy <br> Algebra 3 Equations and <br> inequalities | Geometry 3 Circles and <br> constructions <br> Ratio and Proportion 1 <br> Mock Revision and prep | Number 4 factors, powers <br> and roots <br> Algebra 4 4raphs 1 <br> Geometry 6 Trigonometry <br> and Pythagoras Part 1 |
| Assessment \& End Points: | Baseline test on number <br> and algebra <br> Ch 2 test on Expressions | Chapter 4 test on Statistics <br> GCSE paper 1 | Ch 6 test on Formulae and <br> Functions <br> Ch 7 test on 2D shape | GCSE paper 2 <br> Ch 10 Equations test | Mock paper 1 <br> Mock paper 2 |  |

Year 11

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Geometry 4 working in 3D Statistics 2 Handling data 2 Geometry 6 Trigonometry and Pythagoras part 2 | Algebra 5 Graphs 2 <br> Mock exam preparation | Number 5 Calculations 2 Statistics 4 Probability Algebra 6 Sequences | Ratio and Proportion 2 Exam preparation Revision and reviewing topics. Problem solving and exam technique. | Exam preparation Revision and reviewing topics. Problem solving and exam technique. | Exam preparation Revision and reviewing topics. Problem solving and exam technique. |
| Assessment \& End Points: | Ch 15 Geometry test Ch 19 Trigonometry test | Mock exams - 2 papers | Ch 20 test Probability Mock exams 2 papers | Exam preparation |  |  |

## Year 12 Mathematics

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | T1 Algebra 1 Ch1 <br> T2 Trigonometry Ch 3 T2 Differentiation and integration Ch 4 | T1 Polynomials and Binomial expansion Ch 2 T1 Exponential and logs Ch 5 <br> T2 Differentiation and integration Ch 4 <br> T2 Vectors Ch 6 <br> T2 Exponentials and logs Ch 5 | T1 Data Ch 9 <br> T2 Units and kinematics <br> Ch 7 | T1 Probability Ch 9 <br> T1 Hypothesis testing Ch 10 <br> T2 Forces and Newtons Law Ch 8 | Large Data set Review, recap, exam technique and mock prep | Mock feedback <br> T1 Algebra 2 Ch 12 proof, algebraic fractions, Functions, parametric equations <br> T2- Trigonometry Ch 14, radians, reciprocal and inverse trig functions |
| Assessment \& End Points: | Test 1 Baseline test <br> Test 2 on Ch 1 <br> Test 3 on Ch 3 | $\begin{aligned} & \text { Test } 4 \text { Ch } 2 \\ & \text { Test } 5 \text { Ch } 4 \end{aligned}$ | Test 6 Pure exam Low stakes test on Ch9 \& 7 | Mini low stakes tests teacher will inform | Mock exams | Stats and Mechanics paper Mini low stakes tests teacher will inform |

## Mathematics- Curriculum Overview

## Year 12 Further Mathematics

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Complex Numbers <br> Algebra and Series <br> Algorithms <br> Graphs and networks | Algebra and Series <br> Matrices <br> Route inspection <br> The travelling Salesman Linear Programming | Integration <br> Vectors <br> The Simplex Algorithm Critical path analysis | Vectors - equation of a plane <br> Review, recap, revise | Revision and mock prep | Complex Numbers-Ch6 Exponential form, De'Moivre's theorem, Roots of unity Series-Ch7 Method of differences, Polar Co-ordinates, Hyperbolic functions |
| Assessment \& End Points: | Algorithm assessment Complex numbers assessment | Algebra and series assessment <br> Algorithms on graphs assessment | Integration assessment Pure partial paper | Decision 1 partial paper Simplex test | Mock exams | Mini low stakes tests teacher will inform |

## Year 13 Mathematics

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | T1 Vectors Ch12 <br> T1 Sequences Ch 13 <br> T1 Integration Ch16 <br> T2 Trigonometric <br> identities Ch 14 <br> Differentiation Ch 15 | T2 Differentiation Ch 15 T1 Integration and differential equations Ch 16 <br> T1/2- Numerical methods Ch 17 | T1 revision and mock exam prep - pure T1 Probability and continuous random variables Ch 20 T2 Motion in 2D Ch 18 | T1 Hypothesis testing Ch 21 <br> T2 Motion in 2D Ch 18 Forces Ch 19 | Exam preparation |  |
| Assessment \& End Points: | UCAS Mock <br> Mini assessments on sequences and series | Mini assessment on integration and differentiation. | Pure Mock | Practice exam papers | Practice exam papers |  |

## F Mathematics- Curriculum Overview

## Year 13 Further Mathematics

| Half Term: | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics: | Revision and UCAS mocks Momentum and Impulse Ch1 <br> Work, Energy and Power Ch2 <br> Differentiation and Integration Ch 8 | Elastic strings and springs <br> Ch 3 <br> Elastic collisions in onedimension Ch 4 <br> Differentiation and integration Ch 8 <br> Differential equations Ch 9 | Elastic collisions in 2D Ch 5 Differential equations Ch 9 Revision and prep for mock exam | Elastic collisions in 2D Ch 5 Revision | Exam preparation |  |
| Assessment \& End Points: | UCAS mock | Mini low stakes tests teacher will inform | Mocks | Practice exam papers | Practice exam papers |  |

