

| Department of Mathematics GCSE Mathematics - Higher Tier Two Year Scheme of Work |      |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                  | Week | 10 Higher                                                                                                                                                                                                                  | 11 Higher                                                                                                                                                                              |
| Autumn 1                                                                         | 1    |  UNIT 1                                                                                                                                   | UNIT 1                                                                                                                                                                                 |
|                                                                                  | 2    | Fractions, Types of Numbers, HCF and LCM, Indices, Surds, Decimals                                                                                                                                                         | Advanced Fractions<br>(Rationalise denominator, 4 ops with Algebraic Fracs)                                                                                                            |
|                                                                                  | 3    | (Calculating with FDP, Types of Numbers inc. Primes, Squares, Roots and Cubes, HCF and LCM, Product of Primes, Simplifying Surds, Rationalise the Denominator, Fractional & Neg Indices, Decimal Divisions, Standard Form) | Unit 2                                                                                                                                                                                 |
|                                                                                  | 4    |                                                                                                                                                                                                                            | Area, Volume & Constructions                                                                                                                                                           |
|                                                                                  | 5    |                                                                                                                                                                                                                            | (Circles, Sectors, Segments, Surface Area, Volume, Enlargements in Area and Volume, Congruency, Similarity, Constructions and                                                          |
|                                                                                  | 6    |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
| Autumn 2                                                                         | 7    | Half Paper Calculator ( Week 7 )                                                                                                                                                                                           | Full Paper Calculator ( Week 7 )                                                                                                                                                       |
|                                                                                  | 8    | UNIT 2                                                                                                                                                                                                                     | Unit 3                                                                                                                                                                                 |
|                                                                                  | 9    | Expressions & Identities<br>(Simplifying, Brackets, Factorising, Proof)                                                                                                                                                    | Probability<br>(Probability Recap, Mutually Exclusive Events, Expectation and Estimation, Tree Diagrams Venn Diagrams, And or Or Rule, Harder Tree Diagrams, Probability with Algebra) |
|                                                                                  | 10   |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
|                                                                                  | 11   | Unit 3                                                                                                                                                                                                                     | Trial Exam Paper 1 Non - Calculator ( Week 11 )                                                                                                                                        |
|                                                                                  | 12   | Percentages (Percentage Problems, Financial Maths, Reverse,                                                                                                                                                                | Trial Exam Paper 2 Calculator ( Week 12 )                                                                                                                                              |
| Spring 1                                                                         | 13   | Full Paper Non - Calculator ( Week 13 )                                                                                                                                                                                    | Unit 4                                                                                                                                                                                 |
|                                                                                  | 14   | UNIT 4                                                                                                                                                                                                                     | Equations & Inequalities                                                                                                                                                               |
|                                                                                  | 15   | Statistics<br>(Types of Data, Averages, CF, Box Plots, Histograms)                                                                                                                                                         | (Quadratic Simultaneous Equations, Solving by Iteration, Solving and Representing Inequalities, Graphing Inequalities)                                                                 |
|                                                                                  | 16   | UNIT 5                                                                                                                                                                                                                     |                                                                                                                                                                                        |
|                                                                                  | 17   | Formulae,                                                                                                                                                                                                                  | Unit 5                                                                                                                                                                                 |
|                                                                                  | 18   | Linear Equations and Simultaneous Equations, Sequences                                                                                                                                                                     | Non Linear Graphs & Functions<br>(Types of Graphs, Transformation of Graphs, Inverse, Composite                                                                                        |
| Spring 2                                                                         | 19   |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
|                                                                                  | 20   | Half Paper Calculator ( Week 20 )                                                                                                                                                                                          | Unit 6                                                                                                                                                                                 |
|                                                                                  | 21   | UNIT 6                                                                                                                                                                                                                     | Measures &<br>Real Life Graphs                                                                                                                                                         |
|                                                                                  | 22   | Circle Theorems                                                                                                                                                                                                            | (Speed, Density, Pressure, Speed Time Graphs, Scatter Graphs)                                                                                                                          |
|                                                                                  | 23   | UNIT 7                                                                                                                                                                                                                     | Trial Exam Paper 3 Calculator ( Week 23 )                                                                                                                                              |
|                                                                                  | 24   | Quadratics<br>(Solving 3 ways, Plotting Graphs)                                                                                                                                                                            | Unit 7                                                                                                                                                                                 |
| Summer 1                                                                         | 25   |                                                                                                                                                                                                                            | Vectors                                                                                                                                                                                |
|                                                                                  | 26   | UNIT 8                                                                                                                                                                                                                     | Revision                                                                                                                                                                               |
|                                                                                  | 27   | Co-ordinate Geometry<br>(Parallel, Perpendicular Lines, Circles, Tangent)                                                                                                                                                  |                                                                                                                                                                                        |
|                                                                                  | 28   | Full Paper Calculator ( Week 28 )                                                                                                                                                                                          |                                                                                                                                                                                        |
|                                                                                  | 29   | UNIT 9                                                                                                                                                                                                                     |                                                                                                                                                                                        |
|                                                                                  | 30   | Further Trigonometry<br>( )                                                                                                                                                                                                |                                                                                                                                                                                        |
| Summer 2                                                                         | 31   |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
|                                                                                  | 32   | Unit 10                                                                                                                                                                                                                    | GCSE                                                                                                                                                                                   |
|                                                                                  | 33   | Ratio & Proportion<br>(Ratio Problems, Algebraic Direct & Inverse)                                                                                                                                                         | Exams                                                                                                                                                                                  |
|                                                                                  | 34   |                                                                                                                                                                                                                            |                                                                                                                                                                                        |
|                                                                                  | 35   | Paper 1 - Non Calculator and Paper 2 - Calculator ( Week 35 )                                                                                                                                                              |                                                                                                                                                                                        |
|                                                                                  | 36   | UNIT 11                                                                                                                                                                                                                    |                                                                                                                                                                                        |
|                                                                                  | 37   | Estimating, Error Intervals and Bounds (Significant Figures, Estimating Error Intervals, Bounds of Calcs)                                                                                                                  |                                                                                                                                                                                        |
|                                                                                  | 38   | Unit 12                                                                                                                                                                                                                    |                                                                                                                                                                                        |
|                                                                                  | 39   | Scale Drawings, Conversions and Transformations<br>(Translation, Rotation, Reflection, Enlargement)                                                                                                                        |                                                                                                                                                                                        |