## Topic List

Below is a list of all of the available topics.
For each topic there is a lesson (plus link to the relevant video) and an accompanying worksheet (with QR code for the same video).

Grey topics are being created and will be published shortly.

Each topic is colour coded...
Green for approx. GCSE grades 1-3
Blue for approx. GCSE grades 4\&5
Purple for approx. GCSE grades 6-9

Green \& Blue topics for FOUNDATION tier Blue \& Purple topics for HIGHER tier

| NUMBER |  |  |
| :---: | :---: | :---: |
| Chapters | Titles | $\frac{\text { Lesson }}{\text { Code }}$ |
| Chapter 1 - Integers | Part 1: Adding Integers | N 1.1 |
|  | Part 2: Subtracting Integers | N 1.2 |
|  | Part 3: Multiplying Integers | N 1.3 |
|  | Part 4: Dividing Integers | N 1.4 |
|  | Part 5: Order of Operations | N 1.5 |
|  | Part 6: Prime Numbers \& Prime Factor Decomposition | N 1.6 |
|  | Part 7: Factors \& Highest Common Factor (HCF) | N 1.7 |
|  | Part 8: Multiples \& Lowest Common Multiple (LCM) | N 1.8 |
| Chapter 2 - Negative Numbers | Part 1: Adding \& Subtracting Negative Numbers | N 2.1 |
|  | Part 2: Multiplying \& Dividing Negative Numbers | N 2.2 |
| Chapter 3 - Decimals | Part 1: Place Value \& Ordering Decimals | N 3.1 |
|  | Part 2: Multiplying \& Dividing by 10, 100, 1000 | N 3.2 |
|  | Part 3: Adding \& Subtracting Decimals | N 3.3 |
|  | Part 4: Multiplying Decimals | N 3.4 |
|  | Part 5: Dividing Decimals | N 3.5 |
|  | Part 6: Related Calculations | N 3.6 |
| Chapter 4 - Fractions | Part 1: Equivalent Fractions | N 4.1 |
|  | Part 2: Mixed Numbers \& Improper Fractions | N 4.2 |
|  | Part 3: Ordering Fractions | N 4.3 |
|  | Part 4: Adding \& Subtracting Fractions | N 4.4 |
|  | Part 5: Multiplying Fractions | N 4.5 |
|  | Part 6: Dividing Fractions | N 4.6 |
|  | Part 7: Fractions of an Amount | N 4.7 |


| Chapter 5 - Fractions, Decimals \& Percentages | Part 1: Converting between Fractions, Decimals \& Percentages | N 5.1 |
| :---: | :---: | :---: |
|  | Part 2: Ordering Fractions, Decimals \& Percentages | N 5.2 |
|  | Part 3: Recurring Decimals | N 5.3 |
| Chapter 6 - Percentages | Part 1: Expressing One Quantity as a Percentage of Another | N 6.1 |
|  | Part 2: Percentages of an Amount (Non-Calculator) | N 6.2 |
|  | Part 3: Percentages of an Amount (Calculator) | N 6.3 |
|  | Part 4: Percentage Increase/ Decrease | N 6.4 |
|  | Part 5: Percentage Change | N 6.5 |
|  | Part 6: Reverse Percentages | N 6.6 |
|  | Part 7: Compound Interest | N 6.7 |
| Chapter 7 - Rounding | Part 1: Rounding - Nearest 10, 100, 1000 | N 7.1 |
|  | Part 2: Rounding - Nearest Whole Number \& Decimal Places | N 7.2 |
|  | Part 3: Rounding - Significant Figures | N 7.3 |
|  | Part 4: Truncating | N 7.4 |
|  | Part 5: Estimation | N 7.5 |
|  | Part 6: Error Intervals | N 7.6 |
|  | Part 7: Calculating with Upper \& Lower Bounds | N 7.7 |
| Chapter 8 - Indices | Part 1: Indices - Squares, Cubes \& Powers | N 8.1 |
|  | Part 2: Laws of Indices | N 8.2 |
|  | Part 3: Fractional Indices | N 8.3 |
| Chapter 9 - Standard Form | Part 1: Standard Form | N 9.1 |
|  | Part 2: Calculating with Standard Form | N 9.2 |
| Chapter 10 - Surds | Part 1: Surds | N 10.1 |
|  | Part 2: Rationalising the Denominator | N 10.2 |
| Chapter 11-Calculations | Part 1: Using a Calculator | N 11.1 |


|  | Part 2: Time | N 11.2 |
| :--- | :--- | :---: |
|  | Part 3: Money | N 11.3 |
|  | Part 4: Exchange Rates | N 11.4 |

## RATIO, PROPORTION \& RATES OF CHANGE

| Chapters | Titles | Lesson Code |
| :--- | :--- | :---: |
| Chapter 1 - Ratio | Part 1: Introduction to Ratio | R 1.1 |
|  | Part 2: Simplifying Ratio | R 1.2 |
|  | Part 3: Sharing in a Ratio | R 1.3 |
|  | Part 4: Ratio Problems | R 1.4 |
| Chapter 2 - Proportion | Part 1: Introduction to Proportion | R 2.1 |
|  | Part 2: Direct \& Inverse Proportion | R 2.2 |
|  | Part 3: Direct Proportion (Algebra) | R 2.3 |
|  | Part 4: Inverse Proportion (Algebra) | R 2.4 |
| Chapter 3 - Compound Measures | Part 1: Speed | R 3.1 |
|  | Part 2: Density | R 3.2 |
|  | Part 3: Pressure | R 3.3 |
| Chapter 4 - Real-Life Graphs | Part 1: Conversion Graphs | R 4.1 |
|  | Part 2: Other Real-Life Graphs | R 4.2 |
|  | Part 3: Distance-Time Graphs | R 4.3 |
|  | Part 4: Speed-Time Graphs (Straight Lines) | R 4.4 |
|  | Part 5: Speed-Time Graphs (Curves) | R 4.5 |


| ALGEBRA |  |  |
| :---: | :---: | :---: |
| Chapters | Titles | Lesson Code |
| Chapter 1 - Co-ordinates | Part 1: Co-ordinates | A 1.1 |
|  | Part 2: Midpoint of a Line | A 1.2 |
|  | Part 3: 3D Co-ordinates | A 1.3 |
| Chapter 2 - Linear Graphs | Part 1: $\mathrm{x}=\mathrm{a}, \mathrm{y}=\mathrm{b}$ Graphs | A 2.1 |
|  | Part 2: Plotting Linear Graphs ( $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ ) | A 2.2 |
|  | Part 3: Equations of Linear Graphs ( $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ ) | A 2.3 |
|  | Part 4: Using $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ to Draw Linear Graphs | A 2.4 |
|  | Part 5: Using $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ to Solve Problems | A 2.5 |
|  | Part 6: Using Gradients and Co-ordinates to find $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ | A 2.6 |
|  | Part 7: Parallel \& Perpendicular Lines | A 2.7 |
| Chapter 3 - Algebra | Part 1: Algebraic Notation | A 3.1 |
|  | Part 2: Collecting Like Terms | A 3.2 |
|  | Part 3: Multiplying Terms | A 3.3 |
|  | Part 4: Dividing Terms | A 3.4 |
|  | Part 5: Expanding Single Brackets | A 3.5 |
|  | Part 6: Factorising into Single Brackets | A 3.6 |
|  | Part 7: Laws of Indices (Algebra) | A 3.7 |
|  | Part 8: Function Machines | A 3.8 |
|  | Part 9: Substitution | A 3.9 |
|  | Part 10: Solving Linear Equations | A 3.10 |
|  | Part 11: Solving Linear Equations (with the unknown on both sides) | A 3.11 |
|  | Part 12: Changing the Subject | A 3.12 |
|  | Part 13: Changing the Subject (Advanced) | A 3.13 |


| Chapter 4-Quadratics | Part 1: Expanding Double Brackets | A 4.1 |
| :--- | :--- | :---: |
|  | Part 2: Factorising Quadratics | A 4.2 |
|  | Part 3: Factorising Quadratics (Advanced) | A 4.3 |
|  | Part 4: Completing the Square | A 4.4 |
|  | Part 5: Plotting Quadratic Graphs | A 4.5 |
|  | Part 6: Solving Quadratics - Graphically | A 4.6 |
|  | Part 7: Solving Quadratics - Graphically (Advanced) | A 4.7 |
|  | Part 8: Solving Quadratics - Factorising | A 4.8 |
|  | Part 9: Solving Quadratics - Factorising (Advanced) | A 4.9 |
|  | Part 10: Solving Quadratics - Quadratic Formula | A 4.10 |
|  | Part 11: Solving Quadratics - Completing the Square | A 4.11 |
|  | Part 12: Solving Quadratics - All Methods | A 4.12 |
|  | Part 13: Sketching Quadratic Graphs | A 4.13 |
| Chapter 5 - Cubics | Part 1: Expanding Triple Brackets | A 5.1 |
|  | Part 2: Cubic Graphs | A 5.2 |
| Chapter 6 - Other Graphs | Part 1: Reciprocal Graphs | A 6.1 |
|  | Part 2: Exponential Graphs | A 6.2 |
|  | Part 3: Equations of Tangents to Circles | A 6.3 |
|  | Part 4: Trigonometric Graphs | A 6.4 |
|  | Part 5: Transformations of Graphs | A 6.5 |
|  | Part 1: Inequalities on a Number Line | A 7.1 |
|  | Part 2: Solving Linear Inequalities | A 7.2 |
|  | Part 3: Solving Linear Inequalities Graphically | A 7.3 |
|  | Part 4: Solving Quadratic Inequalities | A 7.4 |
|  | A 8.1 |  |
|  | Chapter 8 - Iteration | Part 1: Trial \& Improvement |
| Chapter 9 - Simultaneous Equations | Part 1: Simultaneous Equations - Linear | A 9.1 |


|  | Part 2: Simultaneous Equations - Non-Linear | A 9.2 |
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| Chapter 10 - Sequences | Part 1: Linear Sequences | A 10.1 |
|  | Part 2: Quadratic Sequences | A 10.2 |
|  | Part 3: Geometric \& Fibonacci Sequences | A 10.3 |
| Chapter 11 - Algebraic Fractions | Part 1: Algebraic Fractions - Simplify | A 11.1 |
|  | Part 2: Algebraic Fractions - Add/Subtract | A 11.2 |
|  | Part 3: Algebraic Fractions - Multiply/Divide | A 11.3 |
| Chapter 12 - Functions | Part 1: Functions | A 12.1 |
| Chapter 13 - Proof | Part 1: Algebraic Proof | A 13.1 |


| Chapters | GEOMETRY |  |
| :--- | :--- | :---: |
| Titles | Lesson Code |  |
| Chapter 1 - Shapes | Part 1: 2D Shapes - Properties | G 1.1 |
|  | Part 2: Symmetry | G 1.2 |
|  | Part 3: 3D Shapes - Properties | G 1.3 |
|  | Part 4: Plans \& Elevations | G 1.4 |
| Chapter 2 - Perimeter \& Area | Part 1: Perimeter | G 2.1 |
|  | Part 2: Area of Rectangles | G 2.2 |
|  | Part 3: Area of Parallelograms | G 2.3 |
|  | Part 4: Area of Triangles | G 2.4 |
|  | Part 5: Area of Trapezia | G 2.5 |
| Chapter 3 - Circles | Part 1: Circumference | G 3.1 |
|  | Part 2: Arc Length | G 3.2 |
|  | Part 3: Area of Circles | G 3.3 |
|  | Part 4: Area of Sectors | G 3.4 |


| Chapter 4 - Surface Area \& Volume | Part 1: Surface Area - Prisms \& Cylinders | G 4.1 |
| :--- | :--- | :---: |
|  | Part 2: Surface Area - Spheres, Pyramids \& Cones | G 4.2 |
|  | Part 3: Volume - Prisms \& Cylinders | G 4.3 |
|  | Part 4: Volume - Spheres, Pyramids \& Cones | G 4.4 |
| Chapter 5 - Units | Part 1: Reading Scales | G 5.1 |
|  | Part 2: Converting Metric Units | G 5.2 |
|  | Part 3: Converting Units - Area/Volume | G 5.3 |
| Chapter 6 - Angles | Part 1: Angles - Types, Measure \& Draw | G 6.1 |
|  | Part 2: Calculating Angles - Straight Lines \& Full Turns | G 6.2 |
|  | Part 3: Calculating Angles - Parallel Lines | G 6.3 |
|  | Part 4: Calculating Angles - Triangles | G 6.4 |
|  | Part 5: Calculating Angles - Polygons | G 6.5 |
| Chapter 7- Constructions | Part 6: Bearings | G 6.6 |
|  | Part 1: Perpendicular Bisector \& Angle Bisector | G 7.1 |
|  | Part 2: Loci | G 7.2 |
| Chapter 8 - Congruence \& Similarity | Part 3: Constructing Triangles | G 7.3 |
|  | Part 1: Congruence | G 8.1 |
| Chapter 9 - Transformations | Part 2: Similarity | G 8.2 |
|  | Part 1: Reflection | G 9.1 |
|  | Part 2: Rotation | G 9.2 |
|  | Part 3: Translation | G 9.3 |
|  | Part 4: Enlargement | G 9.4 |
|  | Part 5: Enlargement (Negative Scale Factors) | G 9.5 |
|  | Part 1: Pythagoras' Theorem | G 10.1 |
|  | Part 2: Trigonometry - Introduction | G 10.2 |
|  | Part 3: Trigonometry - Further | G 10.3 |


|  | Part 4: Trigonometry - Exact Values | G 10.4 |
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|  | Part 5: Sine Rule | G 10.5 |
|  | Part 6: Cosine Rule | G 10.6 |
|  | Part 7: Area of a Triangle | G 10.7 |
| Chapter 11 - Vectors | Part 1: Vectors - Introduction | G 11.1 |
|  | Part 2: Vectors - Advanced | G 11.2 |
| Chapter 12 - Circle Theorems | Part 1: Circle Theorems | G 12.1 |
|  | Part 2: Further Circle Theorems | G 12.2 |


|  | STATISTICS |  |  |
| :---: | :---: | :---: | :---: |
| Chapters | Titles | Lesson Code |  |
|  |  |  |  |
| Chapters | $\underline{\text { PROBABILITY }}$ | Lesson Code |  |

