## Year 10 Overview

| Week Number | 10 Higher | Chapter | 10 Foundation | Chapter |
| :---: | :---: | :---: | :---: | :---: |
| Week 1 | Estimating, HCF, LCM, Calculating Indices | 1 | Four Operations inc Negatives | 1 |
| Week 2 | Fractional \& Negative Indices, Standard Form |  | Factors and Multiples, HCF \& LCM |  |
| Week 3 | Surds, Rationalise the Denominator, Brackets |  | Powers, Roots, Indices and Prime Factors |  |
| Week 4 | Algebraic Indices, Expand \& Factorise Singles | 2 | Algebraic Expressions and Simplifying | 2 |
| Week 5 | Expand \& Factorise Doubles inc. Coefficients |  | Substitution and Formulae |  |
| Week 6 | Formule - Substitute \& Rearrange Basic |  | Expanding Brackets and Quadratics |  |
| Week 7 | Linear \& Non Linear Sequences inc. Special |  | Factorising Brackets and Quadratics |  |
| Week 8 | Stem \& Leaf, Frequency Polygons | 3 | Frequency Tables and Pie Charts | 3 |
| Week 9 | Time Series, Scatter Graphs, Line of Best Fit |  | Bar Charts, Pictograms, Time Series |  |
| Week 10 | Averages inc. Grouped Data Tables |  | Scatter Graphs, Line of Best Fit |  |
| Week 11 | Two Way Tables, Pie Charts |  | Stem and Leaf, Two Way Tables |  |
| Week 12 | Calculations with Fractions inc. Mixed Numbers | 4 | Calculations with Fractions inc. Mixed Numbers | 4 |
| Week 13 | Ratio - Sharing, 1:n, Convert Currency |  | Fraction, Decimal, Percent Conversions |  |
| Week 14 | Direct \& Inverse Proportion, \% Change |  | Fraction \& Percentage of an Amount, Perc Change |  |
| Week 15 | FDP Conversions inc. Recurring |  | Solve One and Two Step Equations | 5 |
| Week 16 | Int \& Ext Angles, Pythagoras | 5 | Equations with Brackets and Unknowns on both sides |  |
| Week 17 | Trigonometry |  | Inequalities - Solving, Writing and Drawing |  |
| Week 18 | Sketch, Plot, Find $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ | 6 | Continue Sequences, Find and Use nth Terms |  |
| Week 19 | Draw Quadratic, Cubic, Reciprocal, Circles |  | Angles - Straight Line, Point, Triangle, Quadrilaterals | 6 |
| Week 20 | Speed, Distance and Velocity Time Graphs |  | Alternate and Corresponding Angles |  |
| Week 21 | Perimeter, Area, Compound \& Trapezium | 7 | Interior and Exterior Angles in Polygons |  |
| Week 22 | Area, Circumference, Sectors \& Arcs |  | Forming and Solving Equations in Angle Problems |  |
| Week 23 | Cylinders, Spheres, Cones, Pyramids |  | Mean, Median, Mode, Range and Stem and Leaf | 7 |
| Week 24 | Transformations inc Negative \& Fractional | 8 | Averages From Tables |  |
| Week 25 | Bearings, Constructions, Loci |  | Perimeter and Area of Triangles, Rectangles, Trapeziums | 8 |
| Week 26 | Solving Quadratics, Completing the Square | 9 | Perimeter and Area of Compound Shapes |  |
| Week 27 | Simultaneous Linear \& Quadratics |  | Volume and Surface Area of Prisms |  |
| Week 28 | Inequalities - Regions, Solving, Quadratic |  | Plot Linear Graphs and Calculate $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ | 9 |
| Week 29 | Probability Trees inc. Conditional | 10 | Real Life Graphs inc Distance Time Graphs |  |
| Week 30 | VENN Diagrams inc. Notation |  | Translations and Rotations | 10 |
| Week 31 | Compound Increase \& Decrease | 11 | Englargements and Reflections |  |
| Week 32 | Compound Measures |  | Understand, Write and Simplify Ratio | 11 |
| Week 33 | Congruence \& Geometric Proof | 12 | Solve Problems Using Ratio |  |
| Week 34 | Similarity in 2D and 3D Shapes |  | Best Value and Problem Solving |  |
| Week 35 | MOCK WEEKS | MOCK WEEKS |  |  |
| Week 36 | MOCK WEEKS |  | MOCK WEEKS |  |
| Week 37 |  |  |  |  |
| Week 38 |  |  |  |  |

## Term 2A - Foundation

| Topic | Small Steps |
| :---: | :---: |
| Solve One and Two Step Equations | Understand and use inverse operations |
|  | Rearrange simple linear equations |
|  | Solve simple liner equations |
|  | Solve two step equations |
| Equations with Brackets and Unknowns on both sides | Solve linear equations with brackets |
|  | Solve linear equations with unknowns on both sides |
| Inequalities - Solving, Writing and Drawing | Use correct notation to show inclusive and exclusive inequalities |
|  | Write down whole numbers which satisfy an inequality |
|  | Represent inequalities on a number line |
|  | Solve two sided inequalities |
| Formula | Substitute values into formulas and solve equations |
|  | Change the subject of a formula |
|  | Know the difference between an expression, equation and formula |
| Continue Sequences, Find and Use nth Terms | Recognise and extend sequences |
|  | Use the nth term to generate terms of a sequence |
|  | Find the nth term of a linear sequence |
| Angles - Straight Line, Point, Triangle, Quadrilaterals | Solve geometric problems involving side and angle properties of quadrilaterals |
|  | Identify congruent shapes |
|  | Solve angles problems in triangles |
|  | Know and use angles around a point and on a line facts to calculate missing angles |
| Alternate and Corresponding Angles | Understand and use the angle properties on parallel lines |
|  | Find missing angles using corresponding and alternate angles |
| Interior and Exterior Angles in Polygons | Calculate the interior and exterior angles of regular polygons |
|  | Explain why some polygons tesselate and other do not |
| Forming and Solving Equations in Angle Problems | Solve angle problems using equations |
|  | Solve geometric problems showing reasoning |

Term 2A - Higher

| Topic | Small Steps |
| :---: | :---: |
| Int \& Ext Angles, Pythagoras | Derive and use the sum of angles in a triangle and in a quadrilateral |
|  | Derive and use the fact that the exterior angle of a triangle is equal to the sum of the two opposite interior angles |
|  | Calculate the sum of the interior angles of a polygon |
|  | Use the interior angles of a polygon to solve problems |
|  | Know the sum of the exterior angles of a polygon |
|  | Calculate the length of the hypotenuse in a right angled triangle |
|  | Calculate the length of a shorter side in a right angled triangle |
|  | Solve problems using Pythagoras theorem |
| Trigonometry | Use trigonometric ratios to find lengths in a right angled triangle |
|  | Use trigonometric ratios to solve problems |
|  | Use trigonometric ratios to calculate an angle in a right angled triangle |
|  | Find angles of elevation and depression |
|  | Know the exact values of sin cos and tan for 0, 30, 45, 60, 90 degrees |
| Sketch, Plot, Find y = mx + c | Find the gradient and y intercept from a linear equation |
|  | Rearrange an equation into the form $\mathrm{y}=\mathrm{mx}+\mathrm{c}$ |
|  | Compare two graphs from their equations |
|  | Plot graphs with equations ax+by=c |
|  | Sketch linear graphs using the gradient and y intercept |
|  | Find the equation of a line, given its gradient and one point on the line |
|  | Find the gradient of a line passing through two points |
|  | Find the coordinates of the midpoint of a line segment |
|  | Find the gradient and length of a line segment |
|  | Find the equations of lines perpendicular or parallel to a given line |
| Draw Quadratic, Cubic, Reciprocal, Circles | Draw quadratic graphs |
|  | Solve quadratic equations using graphs |
|  | Identify the line of symmetry on a quadratic graph |
|  | Interpret quadratic graphs relating to real life situations |
|  | Draw graphs of cubic functions |
|  | Solve cubic equations using graphs |
|  | Draw graphs of reciprocal functions |
|  | Recognise a graph from its shape |
|  | Interpret linear and non-linear real life graphs |
|  | Draw the graph of a circle |
| Speed, Distance and Velocity Time Graphs | Draw and interpret distance time graphs |
|  | Calculate average speed from a distance time graph |
|  | Understand velocity time graphs |
|  | Find acceleration and distance from velocity time graphs |
|  | Draw and interpret real life linear graphs |
|  | Recognise direct proportion |
|  | Draw and use a line of best fit |

