Y10 Autumn

A - B1 - Trigonometry	A - B2 – Indices and roots	A - B3 – Equations and inequalities	A - B4 – Non-calculator methods	Sp - B1 – Simultaneous equations
- Recap similar triangles - Recap Pythagoras - Right angled trigonometry - Exact trigonometric values - **3D Pythagoras & trigonometry (H)** - **Sine rule (H)** - **Cosine rule (H)** - **Area of a triangle (H)**	- Types of number (powers and square/cube roots) - Laws of indices - Negative indices - Write numbers in standard form - Calculations with numbers in standard form - **Simplifying surds (H)** - **Fractional indices (H)** - **Changing the base (H)**	- Form simple expressions - Solve equations 2 step, brackets, unknowns both sides - Represent inequalities on a number line - Solve inequalities 2 step, brackets, unknowns both sides - Form and solve inequalities and equations - Recap linear graphs - **Factorise quadratics a = 1 and a > 1 (H)** - **Quadratic formula (H)** - **Represent inequalities using set notation (H)** - **Represent inequalities graphically (H)** - **Solve quadratic inequalities (H)**	- Rounding - Four operations with integers and decimals - Four operations with fractions - Worded, multi-step problems - Money problems - Estimating - Rational and irrational numbers - Exact answers - Error intervals - **Converting a recurring decimal to a fraction (H)** - **Surds: four operations & expanding brackets (H)** - **Bounds calculations (H)** - **Rationalising the denominator (H)**	- Solve simultaneous equations using graphs - Solve linear simultaneous using elimination - Solve simultaneous by substituting - **Solve linear and non-linear simultaneous (H)**

Y10 Spring

Sp – B1 – Ratios and fractions	Sp – B2 – Percentages and interest	Sp – B3 – Collecting, representing and interpreting data	Sp – B4 - Types of number and sequences
- Recipes - Best buy - Currency conversion - Compare quantities using ratio - 1:n and n:1 - Share in a ratio (including problems where you know part or difference) - Link ratios, fractions and percentages - Combine ratios - Link ratio and algebra - **Use ratio with area and volume problems (similar shapes) (H)**	- FDP equivalence - Percentage of an amount - Percentage increase and decrease - Percentage change - Reverse percentages - Mixed percentage problems - Simple and compound interest - Repeated percentage change - Solve problems involving growth and decay - **Iterative processes (H)**	- Scatter graphs - Interpret pictograms, line graphs, time series and bar charts - Averages including from tables - Stem and leaf diagrams - Interpret and draw pie charts - Frequency polygons - Types of data - **Box plots and cumulative frequency (H)** - **Histograms (H)** - **Sampling (capture / recapture) (H)**	- Factors and multiples - Product of primes - HCF and LCM - Continue arithmetic and geometric sequences - Sequences from pictures - nth term of a linear sequence - **nth term of a quadratic sequence (H)** - **Sequences involving surds (H)**

Y10 Summer

Su - B1 – Changing the subject	Su – B2 – Probability	Su – B3 – Angles and bearings (& revision)	Su - B4 – Graphs
- Solve equations and inequalities - Change the subject of a formula - Use a range of formulae; rearranging to use them eg. Speed, density, pressure, area of circle etc **- Change the subject where the subject appears more than once (H)** **- Solve quadratic equations (H)** **- Solve equations by iteration (H)**	- Single event probability - Relative frequency / expected outcomes - Probability from tables, frequency trees and Venns - Sample space diagrams - Tree diagrams - Relative frequency / experimental /expected outcomes **- Dependent tree diagrams (H)** **- Product rule (H)** **- Algebraic probability (H)**	- Angles rules - Angles in parallel lines - Scale drawings - Bearings - Pythagoras and trigonometry - Bearings problems involving Pythagoras and trigonometry **- Bearings problems using sine / cosine (H)** **- Circle theorems: Angles at the centre and circumference, angles in a semi-circle, angles in the same segment, angles in a cyclic quadrilateral (H)**	- Plot and read quadratic graphs - Plot and read cubic graphs - Reciprocal graphs - Recognise different graph shapes - Conversion graphs - Distance time graphs - Speed time graphs - Graphs of inverse and direct proportion **- Exponential graphs (H)** **- Equation of a circle centre 0 (H)** **- Area under a curve (H)**