Year 10	
Trigonometry (any triangle)	Sine rule. Cosine rule. Area of a triangle using $^1/_2$absinC. Using the sine and cosine rules (bearings, angle of elevation, problem solving). 3-D calculations including finding the angle between a line and a plane.
Test 1	
Quadratics equations	Recap**:** Solving by quadratic equations by factorising. Problems leading to quadratic equations. Completing the square to solve quadratic equations and finding turning points. Quadratic equations – solving with the formula. More problems leading to quadratic equations (formulate then solve by choosing appropriate method).
Arcs, sectors, segments	Arcs of circles. Areas of a sectors and segments (using $^1/_2\mathbf{r^2}\sin\Theta$).
Test 2	
Simultaneous equations	Solving linear simultaneous equations using substitution. Linear and non-linear simultaneous equations. Distance between 2 points.
Inequalities	Linear inequalities. Set notation for inequalities. Shading regions given by inequalities. Quadratic inequalities.
Proportion	Recognising direct proportion. Equations for direct proportion. Recognising inverse proportion. Equations for inverse proportion.
Ratio	Ratio hard GCSE two way table.
Test 3	
Surds and recurring decimals	Convert recurring decimals into fractions. Surds recap (rules, simplifying, expanding brackets). Rationalising denominators.
Indices	Rules of indices. Finding indices from equations. Estimating powers and roots. Mixed problems involving indices. Compound/simple interest.
Algebraic fractions	Cancelling. Multiplying and dividing. Adding and subtracting algebraic fractions. Equations containing algebraic fractions.
Test 4	
Changing the subject of a formula	Changing the subject of formulae involving fractions, powers, roots. Changing the subject of a formula when collecting from both sides.
Functions	Function notation. Inverse functions. Composite functions.
Probability	Recap: Product rule for counting. Venn diagrams including set notation. Recap: Probability trees. Conditional probability.
Graphs	Areas under graphs (trapezium rule). Instantaneous and average rates of change. Distance/time, velocity/time graphs.
Iteration	Recap: Trial and improvement. Recap: Fixed point iteration. Interval bisection.
Summer Exam	
Trigonometry(advanced)	sin, cos, tan for 30, 45, 60. Mixed trigonometry problems**.** Trigonometry for angles of any size. Solving equations involving sin, cos or tan.
Standard form	Changing ordinary numbers into standard form and vice versa. Using standard form numbers without a calculator. Using standard form numbers with a calculator.

Assessment Procedure

- Autumn grade will be based on the results of Year 9 exam and Tests 1 and 2
- Spring grade will be based on the results of Year 9 exam and Tests 1,2, 3 and 4
- Summer grade will be based on the summer exam (Paper 1 = non-calc Paper 2 = calc)