

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Similarity						Developing Algebra					
	Congruence, similarity and enlargement			Trigonometry			Representing solutions of equations and inequalities			Simultaneous equations		
Spring	Geometry						Proportions and Proportional Change					
	Angles & bearings		Working with circles		Vectors		Ratios & fractions		Percentages and Interest		Probability	
Summer	Delving into data						Using number					
	Collecting, representing and interpreting data						Non-calculator methods		Types of number and sequences		Indices and Roots	

Autumn Half Term 1 – Similarity	
Block 1 – Weeks 1 to 3	Block 2 – Weeks 4 to 6
Congruence, similarity and enlargement. <ul style="list-style-type: none"> Understand the difference between congruence and similarity Enlarge a shape about a given point; understand and use similarity Find missing sides in similar shapes including pairs of similar triangles Understand and use the conditions for a pair of congruent triangles 	Trigonometry <ul style="list-style-type: none"> Understand trigonometric ratios Work out missing lengths and angles in right-angled triangles Know and use the exact values of key angles
Notes/Links/Interleaving <ul style="list-style-type: none"> Revisit angle rules, including angles in parallel lines Revisit equations, especially variants of $ax = b$ Revisit Pythagoras' theorem 	Additional Higher Content <ul style="list-style-type: none"> Area and volume of similar shapes Formal proof of congruency of triangles Enlarge a shape by a negative scale factor Use trigonometry in 3-D shapes Derive and use the sine and cosine rules Use the formula $\frac{1}{2}ab\sin C$ to find the area of non-right angled triangles.

Autumn Half Term 2 – Developing Algebra	
Block 3 – Weeks 7 to 9	Block 4– Weeks 10 to 12
Representing solutions of equations and inequalities <ul style="list-style-type: none"> Form and solve equations and inequalities in a variety of contexts, including with unknowns on both sides Represent solutions to inequalities on a number line Represent solutions to equations graphically 	Simultaneous equations <ul style="list-style-type: none"> Understand the meaning of solution, appreciating that some equations have multiple solutions Form and solve a pair of linear simultaneous equations graphically Form and solve a pair of linear simultaneous equations algebraically
Notes/Links/Interleaving <ul style="list-style-type: none"> Context for equations to include probability, area, angles, ratio problems etc. 	Additional Higher Content <ul style="list-style-type: none"> Use set notation for solutions Solve Inequalities in two variable, identifying regions Solve quadratic equations and inequalities (by factorisation only) Solve simultaneous equations with one linear and one quadratic

Spring Half Term 1 – Geometry		
Block 1 – Weeks 1 and 2	Block 2 – Weeks 3 and 4	Block 3 – Weeks 5 and 6
Angles and bearings <ul style="list-style-type: none"> Review KS3 angles rules Understand and use bearings 	Working with circles <ul style="list-style-type: none"> Review area and circumference Name parts of a circle and perform related calculations Find areas and volumes related to circles – cylinder, cone, sphere etc. 	Vectors <ul style="list-style-type: none"> Understand vector notation Vector arithmetic – addition, subtraction and multiplication by a scalar Vectors and translations
Notes/Links/Interleaving <ul style="list-style-type: none"> Revisit trigonometry Revisit area and volumes of other shapes, and compound shapes Estimation, rounding and significant figures 		Additional Higher Content <ul style="list-style-type: none"> Derive, use and prove first four circle theorems (Note: The rest are covered in Y11) Understand and use the equation of a circle Construct geometric proofs with vectors

Spring Half Term 2 – Proportions and proportional change		
Block 4 – Weeks 7 and 8	Block 5 – Weeks 9 and 10	Block 6 – Weeks 11 and 12
Ratio and fractions <ul style="list-style-type: none"> Use ratios, including with mixed units Fractions in ratios Fractions from ratios Combining ratios Unit pricing ('best buys') Currency conversions 	Percentages and interest <ul style="list-style-type: none"> Convert fractions, decimals and percentages Find percentages and percentage changes Find one number as a percentage of another Calculate simple and compound interest Evaluate exponential change e.g. depreciation Find original values 	Probability <ul style="list-style-type: none"> Review of single event probability – comparing theoretical and experimental Understand and work with mutually exclusive and independent events Construct and interpret tree diagrams Find probabilities from frequency trees, tables and Venn diagrams
Notes/Links/Interleaving <ul style="list-style-type: none"> Revisit formal methods of calculation (also Summer 2) Revisit fraction arithmetic 		Additional Higher Content <ul style="list-style-type: none"> Revise area and volume ratios Use iterative methods Calculate and interpret conditional probabilities

Summer Half Term 1 – Delving into data

Block 1 – Weeks 1 to 6

Collecting, representing and interpreting data

- Understand sampling, including the possible limitations
- Construct and interpret tables and line graphs for time series data
- Understand and represent with grouped data
- Understand and identify correlation
- Use lines of best fit, understanding the dangers of extrapolation
- Construct and interpret frequency polygons
- Evaluate measures of location and dispersion
- Use statistical diagrams and measures to compare distributions

Notes/Links/Interleaving

- Use equations e.g. solving problems about the mean
- Use non-calculator methods when appropriate

Additional Higher Content

- Construct and interpret cumulative frequency diagrams, box-plots and histograms
- Understand quartiles; use and interpret the inter-quartile range

Summer Half Term 2 – Using Number

Block 2 – Weeks 7 and 8

Non-calculator methods

- Use four operations with integers (positive and negative), decimals and fractions with and without context (include all areas of previous study)
- Work with exact answers e.g. area and volume
- Evaluate calculations involving percentages

Block 3 – Weeks 9 and 10

Types of number and sequences

- Use factors, multiples, primes and prime factorisation
- Recognise arithmetic and geometric sequences
- Recognise and use other sequences

Block 4 – Weeks 11 and 12

Indices and roots

- Work out powers and roots
- Use the rules of indices
- Calculate with numbers in standard index form

Notes/Links/Interleaving

- Convert FDP
- Revisit exact trigonometrical values
- Revisit area and volume formulae (without a calculator)
- Find exact answers in terms of π
- Solve problems involving financial mathematics

Additional Higher Content

- Calculate with surds
- Find the rule for the n^{th} term of a quadratic sequence
- Understand and use fractional indices
- Work with rational and irrational numbers, including recurring decimals
- Work with limits of accuracy, including upper and lower bounds