Strand			Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Rationale
Number	Place Value	S	Read numbers to 7 figures Round to any power of 10 Estimation Place value to 3 d.p.	Place Value including decimals Rounding (all multiples) including 1 d.p.	Round to 1 significant figure for numbers greater than 1 Estimation (numbers greater than 1 only)	Significant figures including numbers less than 1 Estimate (including numbers less than 1) Error Intervals for powers of 10	Error intervals from Calculations			Rounding has been done since at least 2000 BCE
		E			Round to 2-3 significant figures	Estimate more complex calculations	Significant figures including numbers less than 1 Estimate (including numbers less than 1)	Error intervals		Understanding the error implicit in a measurement, and how these errors can be compounded by further manipulation is key in both physical and statistical measurement.
	Calculating	S	Add and subtract positive integers multiply THTU by TU Division using factors Long division Equivalent fractions & simplifying Fractions on a number line Compare and order fractions Add and subtract fractions Multiply fractions by integers Multiply fractions by fractions Divide fractions by integers Mixed calculations with fractions Fraction of an amount Reverse fraction of an amount Mult & div by 10, 100, 1000 Mult decimals by integers Divide decimals by integers	Four rules with decimals (multiply & divide by integers only) Add + subtract fractions	Multiply & divide by multiples of powers of 10 Multiply decimals by decimals Add + subtract mixed number fractions (not improper)	Divide by decimals Use fraction, decimal equivalence to calculate efficiently Four rules with fractions	Combo fraction [Multi-step, interleave area & perimeter]	Combo fraction [Multi-step, interleave area & perimeter]		Decimal fractions were first developed in China in the 4th Century BCE
		E			Use fraction, decimal equivalence to calculate efficiently	Four rules with mixed numbers (use improper)	Fraction calculations in reverse Recap 4 rules Four rules with mixed numbers			Multi-base arithmetic reciprocals
	Operations	S	Order of operations (no powers)	Order of operations Basic use of a calculator	Order of operations (including squares and roots) Basic use of a calculator - use of fraction, square (root) keys	Order of operations (Distributive property) Use of fraction, index and negative keys	(Embedded)			
		E			Order of operations (Distributive property)	Use calculator for standard form	Use of calculator Standard form calculations (simple cases)		Modelling	'Precedence' is generally defined so that higher-level operations are performed first The distributive law is one of the 9 Field axioms of mathematics, fundamental to how arithmetic , in all its forms,
	Negatives	S	Use negative numbers in context	Compare and order directed numbers Add and subtract with negatives	Multiply and divide with negatives					Existence of additive inverse
		E			Squaring negatives					
	Factors, Multiples and Primes	S	Common factors Common multiples Squares & Cubes Primes	Division facts Squares and roots Identify factors, multiple and primes by lisiting	HCF & LCM by listing	Prime Factors (calc and non-calc)	Squares with prime factors Surds: simplify expand brackets rationalise denominator	Recap Surds		
		E			HCF & LCM in context	Identify factors from prime factor form	HCF & LCM with prime factors (using a Venn diagram)			Transerable into fractions, algebraic manipulation, proof
	Fractions, Decimals & Percentages	S	Convert between fractions and decimals Convert fractions to percentages Equivalent FDP Order FDP	Convert between fractions, decimals, and percentages (simple cases)	Convert between improper fractions and mixed numbers Compare, and order lists of: fractions, decimals, and percentages (simple cases)	Convert between fractions, decimals, and percentages (including calculator use) Compare, and order lists of: fractions, decimals, and percentages	Convert recurring decimals to fractions and vice versa			Ancient Egyptians could calculate with fractions, though they only used fractions with numerators of 1 (the multiplicative inverses)
		E			Convert between improper fractions and percentages >100%	Convert between improper fractions, decimals, and percentages >100%	Problems that involve combinations of fractions, decimals, and percentages			Proof of limits of series may rely on understanding the effect of multiplying fractions, as does combining probabilities.
	Indices	S		Index notation Squares, cubes and roots	Index Laws (not fractional, negative)	Index Laws (inc negative) Write a number as a power of a base [e.g. $64 = 4^3$]	Index laws for fractional indices standard form add/sub (4 ops)			
		E			Write a number as a power of a base [e.g. $64 = 4^3$]	Convert into Standard Form	Index Laws negative powers Change of base $[8^2 = 4^3]$ Standard Form			

Strand			Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Rationale
Algebra	S	Notation	Form expressions	Vocabulary [expression, term, rule, etc] Form expressions (no division) Simplify by collecting terms (no negative answers)	Expand brackets Factorise to one bracket (number factor) Algebraic index laws	Expand two added brackets and simplify Factorise to one bracket Algebraic index laws	Expand pairs of brackets a>1 factorise quadratics a>1 Expand 3 brackets Complete the square Turning points - translate graphs of quads Alg fractions: simplify add/subtract multiply/divide			Algebra was brought to Europe by Persian mathematician al-Kwarizmi in the 8th Century. The word algebra derives from the islamic word *al-jabr* which means "reunion of broken parts"
	E	Notation			Factorise to one bracket (algebraic factor)	Expand two subtracted brackets and simplify	Simplify alg fractions [(4x + 6)/2] Expand two subtracted brackets and simplify Expand pairs of brackets (a=1) Factorise quadratics (a=1)			
	S	Formulae	Use function machines Substitute into expressions Use formulae	Substitute into simpler formulae Form formulae from contexts Change the subject (1 & 2 step)	Substitute into complex formulae (Powers and roots) Change the subject (2 & 3 step)	Substitute into complex formulae [use kinematics formulae]	Change subject involving factorising			Ancient Greek and Babylonian mathematicians wrote formulas as sentences. As symbolic algebra developed (mainly in the Arab world) it eventually found favour in Europe and was used by Rene Decartes to show that geometric problems could be solved by using algebra (he also popularised the use of *x* as the unknown).
	E	Formulae			Change subject involving fractions	Change subject involving powers and roots	Substitute into complex formulae [use kinematics formulae]	Change the subject involving factorising		As formulas often model real world situations it can be helpful to rearrange them so that the term to be calculated is the subject.
	S	Graphs	Plot coordinates in all four quadrants	Plot horizontal and vertical lines, y=x & y= -x [referring to patterns in coordinates] Plot y=Mx+C using table of values	Solve equations graphically (intersect with x=a, y=a) Gradient & Intercept Equation of a line (pos int gradient)	Plot ax + by = c Equation of a line from two points Solve linear simultaneous equations graphically	Perpendicular lines Solve quadratics graphically Solve sim eq linear and quadratic graphically Draw a line to solve a quadratic Translate graphs		Proof Sequences & Series Functions Parametric Equations Trigonometric Functions Further Algebra Trigonometric Identites Differential Equations Numerical Analysis Polynomials Moments Projectile Motion Modelling Friction	
	E	Graphs			Equation of a line (neg, frac, gradients)	Equations of parallel lines	Plot ax + by = c Equation of a line from two points Equations of parallel lines Solve linear simultaneous equations graphically			The method of graphing functions can be extended to two variables, three dimensions, and even the complex plane in illustrating many areas of mathematics, including the Riemann hypothesis, the 'Holy Grail' of mathematical proof.
	S	Sequences		Generate sequences from term-to-term rule Generate sequences from position-to-term rule Describe patterns with sequences inc triangular and square	Describe using nth term Relate nth terms to patterns Describe and continue geometric sequences and the fibonacci sequence	Quadratic sequences $[n^2 + c]$	Quadratic sequences $[an^2+bn+c]$			
	E	Sequences			Describe and continue fibonacci-type sequences	Nth term of geometric sequence (simple cases)	Quadratic sequences $[n^2 + c]$ Nth term of geometric sequence (simple cases)			Mathematicians work with the sums of sequences, called series and is a major part of calculus. This has led to proofs about infinite sums
	S	Equations	Form equations from word problems Solve 1 and 2 step equations Pairs of values for multi-variable equations	Solve equations [linear, 1 & 2 step, (inc 10 - 2x = 4)] Form equations	Solve equations [linear, 1 & 2 step, 1 bracket] Form equations	Solve equations [inc brackets, fractions with numerical denominators] Solve equations with unknowns on both sides Solve linear simultaneous equations without scaling	Solve quadratics using the formula	Composite functions Inverse functions Trial and improvement Iteration Sim Eq w/ quadratic		The equals sign was invented in 1557 by Welsh mathematician Robert Recorde who said that "nothing can be more equal than two parallel lines of equal length"
	E	Equations			Solve equations [inc fractions with numerical denominators]	Solve equations with unknowns and brackets on both sides Solve linear simultaneous equations where one must be scaled	Equations involving squares and roots	Factorise and solve quadratic equations (a=1) Linear simultaneous equations (link to graphs)		
	S	Inequalities		Notation Represent on a number line not compound)	Solve linear inequalities (1 step, not compound) Represent on a number line (inc compound)	Solve linear inequalities (2 step, inc compound)	Solve 2 variable linear inequalities algebraically Combining regions	Solve 1 variable quadratic inequalities algebraically Solve inequalities graphically		
	E	Inequalities			Solve linear inequalities (2 step, inc compound)	Represent inequalities on a coordinate plane	Solve compound Two variable inequalities [list sets of solutions] Regions for single inequalities			Mathematicians often use inequalities to bound quantities for which exact formulas cannot be computed easily. Some inequalities are used so often that they have names.
	S	Non-Linear Graphs			Plot simple quadratics	Plot simple quadratics & cubics Find approximate solutions	Equation of circles transform graphs	y = a^x trig graphs		
	E	Non-Linear Graphs			Plot simple quadratics Find approximate solutions	Plot $y = ax^2+bx+c$	Speed from distance-time graphs	Plot cubics, y=a^x Recognise non-linear forms sketch filling curves		

Strand			Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Rationale
Ratio, Proportion, & Rates of Change	S	Notation	Use ratio notation	Use ratio notation & simplify Relate ratios to fractions	Share in a given ratio Unit ratio	Solve ratio division where one part is known Divide into 3 part ratio	combo ratio combo questions		Proof Sequences & Series Functions Parametric Equations Trigonometric Functions Further Algebra Trigonometric Identites Differential Equations Numerical Analysis Moments Projectile Motion Modelling Friction	It was thought that all numbers could be written as ratios (and, in fact, an infinite number are). We now know that there are an infinite number of *irrational* numbers that cannot be.
	E	Notation			Share in a given ratio (inc dec ans)	Solve ratio division where one part or difference is known	Solve ratio division where one part or difference is known Divide into 3 part ratio			
	S	Proportion		Scaling (recipes) Equivalence of ratio	Best buy by scaling Solve simple direct proportion problems	Best buy by unit ratio Solve simple direct or inverse proportion problems		Write inverse proportion formulae Solve proportion problems involving 3 variables		
	E	Proportion			Solve simple direct or inverse proportion problems	Write direct (inc squares, roots) proportion formulae	Solve inverse proportion problems 3 part ratio [m : f, f : c, m : c] combo ratio algebraic & graphically	Write direct and inverse proportion formulae (x and x^2)		
	S	Percentage	Percentage of amounts without a calculator Reverse percentage of amount	Percentage of amounts without a calculator Percentage increase/decrease non-calculator	One number as a percentage of another Compare proportions using percentage Calculate percentages of amounts with a multiplier	Reverse percentage of an amount [40% of a number is 60, what is the number?] Percentage change with a multiplier Percentage profit/loss	Reverse percentage change with a multiplier Percentage profit/loss (with repeated percentage change) Consecutive % change [+25% then + 20%, etc] Simple interest			In ancient Rome a tax of 1/100 of every sale at auction was introduced. As denominations of currency grew throughout the Middle Ages, the ability to easily measure 1/100th of an amount (and multiples thereof) became more useful, and led to the decimalisation of most of Europe between the 17th and 18th Centuries.
	E	Percentage			Percentage change with a multiplier	Consecutive % change [+25% then + 20%, etc]	Reverse percentage change with / without a multiplier Percentage profit/loss (with repeated percentage change) Tax			
	S	Rates of Change		Calculate speed in simple cases [Within Distance-Time graphs]	Calculate speed/distance/time	Calculate speed/distance/time in more complex cases (i.e. multiples of 12 mins)	Compound Measures (Density, Pressure) Dimensional Analysis			
	E	Rates of Change			Calculate speed/distance/time with multiples of 15 minutes	Calculate with other rates of change/ compound measures	Convert compound measures [metres/min to Km/hr] {embed in speed unit}	Compound measures (Density, within Volume unit)		
	S	Scale			Scale drawing [1cm = 5m etc] {embed in construction}	Map scales [1 : 50 000] {embed in loci, bearings}				
	E	Scale			Harder scale drawing [2cm = 5m etc] {embed in construction}	Harder map scales [1 : 125 000] {embed in loci, bearings}				
	S	Graphs		Plot and interpret (piece-wise linear) distance-time graphs	Graphs of direct proportion [Use to solve]	Graphs of direct proportion [Use to solve, find gradient and relate to context]	Velocity-time graphs [rate of change, trapezium rule, average speed] Calculate gradients to tangents of curves and interpret in context.	Inverse proportion graphs		
	E	Graphs			Graphs of direct proportion [Use to solve, find gradient and relate to context]	Graphs of inverse proportion	Graphs of direct proportion [inc. squares]			The understanding of rate of change links with acceleration, gradient of a line, conversion rates etc. Graphs of rate of change can be analysed using calculus.
	S	Similarity					Area and Volume scale factors			
	E	Similarity					Find lengths/scale factor			

Strand			Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Rationale
Geometry & Measures	S	Shape	Parts of the circle	Properties of triangles/quadrilaterals (inc symmetry) Parts of the circle	Properties of quadrilaterals (inc symmetry) Parts of the circle (all)	Pythagoras	3D Pythag 3D Trig Non RA Trig	Non calc Trig Applications of Trigonometry [bearings, circle theorems etc.]	Trigonometry Vectors	Classification Projective geometry Topology
	E				Classifying quadrilaterals	3D Pythagoras	Pythagoras & bearings Trigonometry (Right angled only)	Non calc Trig		
	S	Perimeter & Area	Perimeter and area of rectilinear shapes Area of a triangle Area of a parallelogram	Area of parallelogram, triangle, trapezium Area and perimeter of rectilinear shapes	Circumference and area of circles Area of compound shapes (not circles)	Arcs & Sectors (easy fractions of turn)	Reverse arc & sector (find angle) area of segment	Applications of area formulae		
	E				Area of compound shapes (inc circles)	Arcs & Sectors (other fractions of turn)	Arcs & Sectors			Calculating area is a key application of integral calculus, which can be transferred to functions in higher dimensions, probability density theory, and kinematics.
	S	Construction	Triangle constructions ASA and SAS	Triangle construction including SSS Standard constructions	Scale Drawing Recall standard constructions Loci	Combinations of Loci		Review inc scale, bearings		These techniques are a key step in understanding Euclidean Geometry (c. 200 BCE), which is the foundation upon which all modern mathematics
	E				Construct 90°, 45°, 60°, 30° etc	Construction, congruence and proof	Bearings	Construction, scale drawing, combinations of Loci Similarity, congruence (reference enlargement)		
	S	Transformation	Reflection over axes Translation (no vector notation) Enlarge by positive integer sf (no centre)	Reflect (horiz and vert only) Rotate	Translate Scaling translations Enlarge (pos int sf only)	Describe reflections & rotations Enlarge (inc Fractional enlargement)	Transformations inc. negative enlargement	Magnitude of a vector Vector proof [using ratio, prove parallel, etc]		
	E				Enlarge (inc Fractional enlargement)	Combine translations (Vector addition)	Enlarge including fractional Combinations of transformations Combine translations (Vector addition)	Vector addition, multiplication by a scalar Represent a 2-dimensional vector and draw olumn vectors on a square or coordinate grid.		The ideas of transforming shapes on a plane can be extended into higher dimensions. Matrices are often introduced through their ability to perform transformations
	S	Angles	Measure and draw Angle facts Angles in a triangle Angles in a quadrilateral Angles in polygons	Notation Angle facts Angles in triangle, quadrilateral, angle properties Exterior angles of reg polygons	Angles in parallel lines (inc proof tiangle sum is 180°) Draw and calculate bearings	Int angles of polygons Angle proof (congruence, similarity)	Circle theorems			360° was chosen to be the number of degrees (parts) of a full turn by the Babylonians in around 1000 BCE. Other angle measurement systems include radians and gradians, which break the full turn up into different sized degrees.
	E				Back bearings	Angle proof inc Isosceles triangles in circles	Int angles of polygons Angle proof (congruence, similarity)			Geometric proofs were some of the earliest to be formulated, introducing the concept of abstract proof and mathematics as a discipline. Angles can be used to visualise complex numbers in the field of complex analysis.
	S	3D Shape	Volume of cuboids Nets of prisms	Names (+ faces, edges, vertices) Volume of prisms Construct shapes from nets	Plans & elevations Draw isometric Construct shapes from nets	Nets of 3D shapes Surface area of prisms Volume of cylinders	Cones, spheres, frustums, pyramids	Applications of volume formulae		
	E				Volume of cylinders	DONE Vol cylinders SA + Volume of pyramids	Surface area of cylinders Surface Area and Volume of Spheres, Cones, Pyramids and Composite solids Plans & Elevations			Calculating volume by considering small slices was key in the development of integral calculus, which can be transferred to functions in higher dimensions, probability density theory, and kinematics.
	S	Measures	Convert metric measures Calculate with metric measures Miles and kilometres Metric & Imperial measures	Convert metric measures Calculate with time and timetables	Convert between metric area	Convert between metric area and volume				After the French Revolution (1789-99) the opportunity arose for a completely new measurement system. The French Academy of Sciences decided that
	E				Solve problems involving area unit conversion	Solve problems involving volume unit conversion	*See Ratio, Proportion and Rates of Change*			

Strand			Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Rationale
Statistics & Probability	S	Representing	Time series Read and interpret pie charts	Bar charts [compound and comparitive] Time series Timetables	Frequency diagram Frequency polygon Pie charts	Scattergraphs Stem & Leaf	Histograms Box plots	Recap of data		
	E	Representing			Calculating quantities from pie charts	Cumulative Frequency	Scattergraphs	Misleading graphs, sampling bias and questionnaires		Data visualisations have the power to communicate information clearly. However, they can also be manipulated to mislead. Understanding time series graphs helps students to understand the concepts of rate of change, which in turn introduces kinematics, financial rates and derivative calculus.
	S	Probability		Probability scale Probability as a fraction (inc sum to 1) Listing outcomes complete probability space	Two-way tables Venn diagrams Experimental [find P(outcome) from experiment]	Frequency trees Probability tree diagrams [independent only] Set notation inc shading Relative frequency [use past data to make	Probability trees (inc dependent) Venn probability [P out of a subset, not a whole]		Conditional Probability Statistical Distributions Statistical Hypothesis Testing Staistical Sampling	Understanding probability was perhaps initially driven by games of chance, but also has been used in cryptography and cryptanalysis since the 8th century.
	E	Probability			Judge bias	Comparisons with expected values	Frequency trees Probability tree diagrams [independent only] Set notation inc shading Relative frequency [use past data to make predictions] Relative frequency graphs Judge bias			Now used in risk assessment and modelling, in particular in finance, but also in medicine, behavioural science and biology. It is key to understanding quantum theory.
	S	Describing	Mean Mean from frequency table	Averages and range collect data in frequency table Mode from frequency table	Complete data knowing averages Mean from frequency table	Complete grouped frequency Estimate mean from grouped frequency	Interpret cumulative frequency graph (top 10% pass, etc) Compare data sets using box plots Problem solve with averages	Recap Data Handling		The arithmetic mean was developed by astronomers in the 16th Century, knowing that variance in their records was more likely to be errors in measurement than the moon changing size.
	E	Describing			Median from freq table	Identify group containing median	Median from freq table			

A39H	Quadratic Simultaneous Equations	N28H	Rationalising the Denominator	G31H	Applying Geometric Formulae	S17H	Histograms Cumulative Frequency

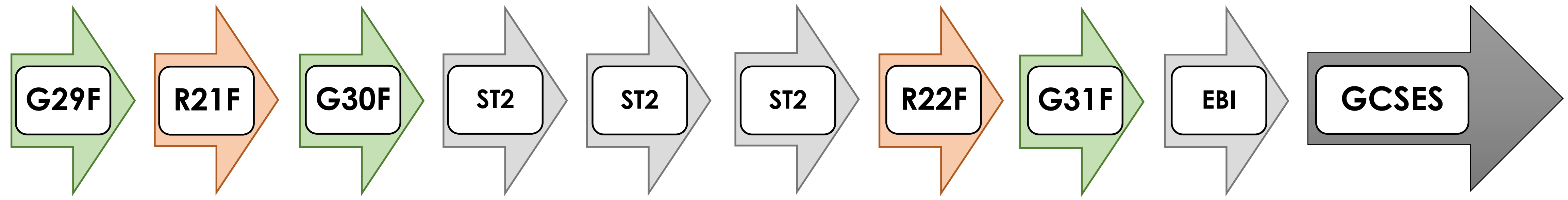
G30H → A39H → N28H → ST2 → ST2 → ST2 → G31H → S17H → EBI → GCSES

A38H	Composite & Inverse Functions	A37H	Inequalities & Regions	A36H	Graphs of Trigonometric Functions	R21H	Direct and Inverse Proportion
G30H	Applying Trigonometry	G29H	Constructions & Loci	G28H	Vector Proof	A35H	Iterative Methods Trial and Improvement

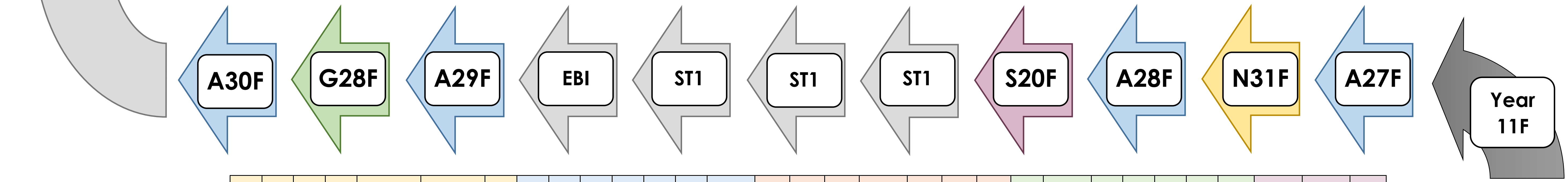
Year 11H → R21H → A35H → A36H → G28H → ST1 → ST1 → ST1 → EBI → A37H → G29H → A38H

NUMBER	Place Value, Calculating, Operations, Negatives, Factors, Multiples, & Primes, Fractions, Decimals & Percentages, Indices
ALGEBRA	Notation, Formulae, Graphs, Sequences, Equations, Inequalities, Non-Linear Graphs
RATIO, PROPORTION & RATES	Notation, Proportion, Percentages, Rates of Change, Scale, Graphs, Similarity
GEOMETRY & MEASURES	Shape, Perimeter & Area, Construction, Transformations, Angles, 3D Shape, Measures
STATISTICS & PROBABILITY	Representing Data, Summarising Data, Probability

R21F	Combining Ratios	**G30F**	Vectors	**R22F**	Equations for Proportionality	**G31F**	Application of Trigonometry



A30F	Factorising Quadratics	**A29F**	Non-Linear Graphs	**A28F**	Simultaneous Equations	**A27F**	Rearranging Formulae
G29F	Constructions, Scale Drawing, and Loci	**G28F**	Enlargement & Similarity	**S20F**	Surveys & Questionnaires	**N31F**	Bounds



NUMBER	Place Value; Calculating; Operations; Negatives; Factors, Multiples, & Primes; Fractions, Decimals & Percentages; Indices
ALGEBRA	Notation; Formulae; Graphs; Sequences; Equations; Inequalities; Non-Linear Graphs
RATIO, PROPORTION & RATES	Notation; Proportion; Percentages; Rates of Change; Scale; Graphs; Similarity
GEOMETRY & MEASURES	Shape; Perimeter & Area; Construction; Transformations; Angles; 3D Shape; Measures
STATISTICS & PROBABILITY	Representing Data; Summarising Data; Probability

A30H	Adding / Subtracting Algebraic Fractions	G27H	Circle Theorems	A33H	Quadratic Simultaneous Equations by Substitution	A34H	Translating Graphs
A31H	Multiplying / Dividing Algebraic Fractions	A32H	Quadratic Simultaneous Equations Graphically	N27H	Bounds		

A30H → A31H → G27H → A32H → A33H → N27H → ST2 → ST2 → ST2 → EBI → A34H → Recall → Year 11H

G25H	Volume of Pyramids, Cones, Frustums	S16H	Cumulative Frequency Histograms	G22H	Trigonometry in non-Right Triangles	G20H	Trigonometry
R20H	Density Similarity in 3D	A29H	Completing the Square Quadratic Formula	G23H	Trigonometry & Bearings	R19H	Velocity/Time Graphs
G26H	Loci Angles in Polygons	G24H	Volume and Surface Area of Prisms	A28H	Equations of Circles	G21H	Proofs of Congruence

G26H ← R20H ← G25H ← G24H ← A29H ← S16H ← A28H ← G23H ← G22H ← G21H ← R19H ← EBI ← G20H ← ST1 ← ST1

A24H	Factorising Quadratics	G19H	Negative Enlargement	R18H	Reverse Percentage Change	N26H	Index Notation Recurring Decimals
A25H	Rearranging Formulae	R17H	Comparing Ratio	S14H	Conditional Probability	A27H	Solving Quadratics Graphically
N24H	Surds	A26H	Parallel & Perpendicular Lines	N25H	Prime Factor Form	S15H	Averages from Grouped Data

Year 10H → A24H → A25H → N24H → G19H → R17H → A26H → R18H → S14H → N25H → N26H → A27H → S15H

NUMBER							ALGEBRA							RATIO, PROPORTION & RATES							GEOMETRY & MEASURES							STATISTICS & PROBABILITY		
Place Value	Calculating	Operations	Negatives	Factors, Multiples, & Primes	Fractions, Decimals & Percentages	Indices	Notation	Formulae	Graphs	Sequences	Equations	Inequalities	Non-Linear Graphs	Notation	Proportion	Percentages	Rates of Change	Scale	Graphs	Similarity	Shape	Perimeter & Area	Construction	Transformations	Angles	3D Shape	Measures	Representing Data	Summarising Data	Probability

G25F	Surface Area, Volume, Density	N29F	Index Laws	S19F	Probability Tree Diagrams	R20F	Best Buys
G26F	Arcs & Sectors	G27F	Trigonometry	N30F	Standard Form		

R19F → S18F → G25F → G26F → N29F → G27F → ST2 → ST2 → ST2 → S19F → N30F → R20F → Year 11

N28F	Rounding & Estimation	S17F	Scatter Graphs Time Series	G22F	Area & Perimeter in Context	S16F	Averages from Tables
G23F	Bearings	R19F	Conversion Graphs	A26F	Expanding and Factorising	G21F	Tessellation Plans & Elevations
G24F	Lengths of Right-Angled Triangles	S18F	Sample Space Venn Diagrams	A27F	Solve Inequalities	R18F	Speed Distance Time

ST1 → S16F → G21F → R18F → G22F → A26F → A27F → S17F → R19F → S18F → N28F → G23F → G24F → S17F → R19F

N24F	Calculations with Decimals	A24F	Substitution and Solving	N27F	Fraction, Decimal Percentage Calculations	A26F	Linear Graphs
N25F	HCF & LCM Using Prime Factors	N26F	Calculations with Fractions	A25F	Nth Term of Sequences	R17F	Repeated Percentage Change
G19F	Congruent Transformations	S14F	Relative Frequency	G20F	Angle Proof	S15F	Data Representation

Year 10F → N24F → N25F → G19F → A24F → N26F → S14F → N27F → A25F → G20F → A26F → R17F → S15F → ST1 → ST1

NUMBER	Place Value; Calculating; Operations; Negatives; Factors, Multiples, & Primes; Fractions, Decimals & Percentages; Indices
ALGEBRA	Notation; Formulae; Graphs; Sequences; Equations; Inequalities; Non-Linear Graphs
RATIO, PROPORTION & RATES	Notation; Proportion; Percentages; Rates of Change; Scale; Graphs; Similarity
GEOMETRY & MEASURES	Shape; Perimeter & Area; Construction; Transformations; Angles; 3D Shape; Measures
STATISTICS & PROBABILITY	Representing Data; Summarising Data; Probability

A21	Solve Simultaneous Equations inc. Graphically	**S12**	Averages for Grouped Frequency Tables	**G18**	Arcs & Sectors	**S13**	Scatter Graphs & Stem-and-Leaf
G17	Construction & Loci	**A22**	Plotting Non-Linear Graphs	**A23**	Solve & Represent Inequalities	**N23**	Prime Factor Form

ST2 → ST2 → A21 → EBI → G17 → S12 → A22 → G18 → A23 → S13 → N23 → Recall / Enrichment → **Year 10H**

S11	Relative Frequency	**R15**	Direct Proportion Formulae	**S10**	Set Notation	**N21**	Standard Form
N23	Use of a Calculator	**A20**	Nth Term of Quadratic Sequences	**R14**	Metric Units for Volume	**A19**	Equations of Linear Graphs
R16	Rates of Change	**G16**	Volume & Surface Area	**N22**	Estimation and Accuracy	**R13**	Similarity in 2D

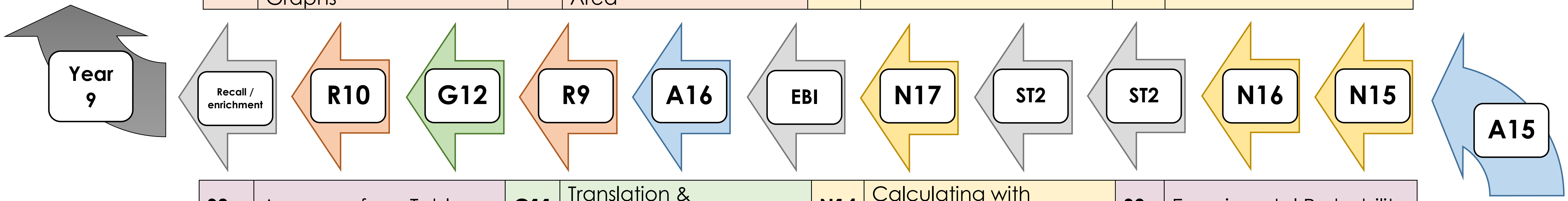
Year 10F → R13 → ST1 → ST1 → S10 → EBI → R14 → N22 → R15 → A20 → G16 → S11 → N23 → R16

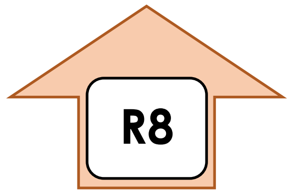
N18	Calculations with Fractions	**G13**	Lengths in Right-Angled Triangles	**A17**	Higher Order Formulae	**G15**	Angles and Polygons
N19	Fraction, Decimal & Percentage Equivalence Calculations	**S9**	Probability of Combined Events	**G14**	Combined Transformations	**N20**	Further Index Laws
A17	Expanding Brackets	**R11**	Percentage Change	**R12**	Dividing into Ratio	**A18**	Solve Equations with Unknowns on Both Sides

Year 9 → N18 → N19 → A17 → G13 → S9 → R11 → A17 → G14 → R12 → G15 → N20 → A18 → N21 → A19 → **Year 10F**

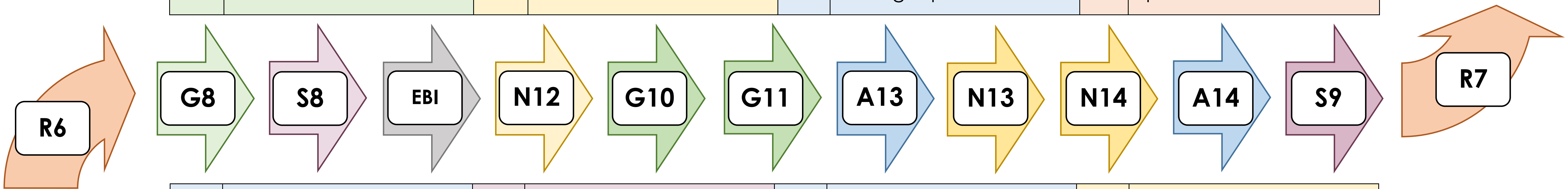
NUMBER	Place Value, Calculating, Operations, Negatives, Factors, Multiples, & Primes, Fractions, Decimals & Percentages, Indices
ALGEBRA	Notation, Formulae, Graphs, Sequences, Equations, Inequalities, Non-Linear Graphs
RATIO, PROPORTION & RATES	Notation, Proportion, Percentages, Rates of Change, Scale, Graphs, Similarity
GEOMETRY & MEASURES	Shape, Perimeter & Area, Construction, Transformations, Angles, 3D Shape, Measures
STATISTICS & PROBABILITY	Representing Data, Summarising Data, Probability

G12	Bearings & Scale Drawing	**A16**	Plotting Quadratics	**N16**	Indices	**A15**	Solve Linear Inequalities
R10	Direct Proportion Graphs	**R9**	Converting Units for Area	**N17**	Multiplying Decimals	**N15**	HCF & LCM

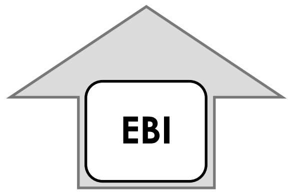


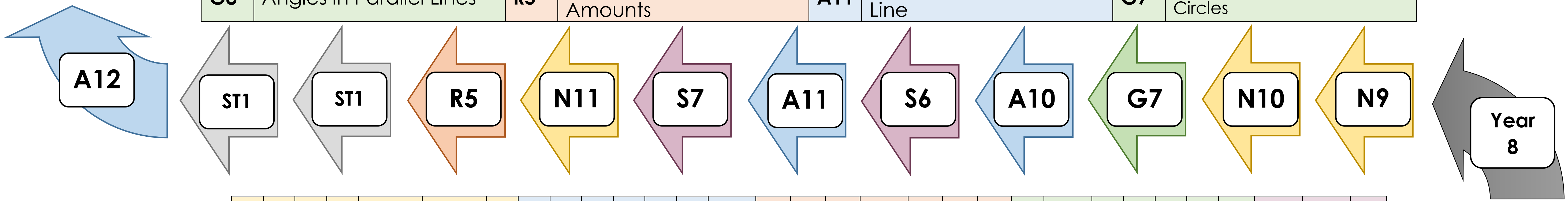


S8	Averages from Tables	**G11**	Translation & Enlargements	**N14**	Calculating with Fractions	**S9**	Experimental Probability
N12	Multiplying and Dividing Negatives	**A13**	Changing the Subject	**G5**	Representing 3D Shapes	**R7**	Direct Proportion Problems
G10	Constructions and Loci	**N13**	Mixed Numbers	**A14**	Solving Equations	**R8**	Speed. Distance, Time



A12	Expanding Brackets and Factorising	**S7**	Two-Way Tables and Venn Diagrams	**A10**	Nth term of a Sequence	**N9**	Use of a Calculator
R6	Sharing in Ratio	**N11**	Rounding and Estimation	**S6**	Representing Continuous Data	**N10**	Order of Operations
G8	Angles in Parallel Lines	**R5**	Percentages of Amounts	**A11**	Equation of a Straight Line	**G7**	Area and Circumference of Circles





NUMBER	Place Value; Calculating; Operations; Negatives; Factors, Multiples, & Primes; Fractions, Decimals & Percentages; Indices
ALGEBRA	Notation; Formulae; Graphs; Sequences; Equations; Inequalities; Non-Linear Graphs
RATIO, PROPORTION & RATES	Notation; Proportion; Percentages; Rates of Change; Scale; Graphs; Similarity
GEOMETRY & MEASURES	Shape; Perimeter & Area; Construction; Transformations; Angles; 3D Shape; Measures
STATISTICS & PROBABILITY	Representing Data; Summarising Data; Probability

R4	Percentages with a Multiplier	S3	Averages for Small Data Sets	A8	Plot Linear Functions	S5	Time Series Graphs
A6	Changing the Subject of a Formula	A7	Representing Inequalities	S4	Tables & Timetables	A9	Distance-Time Graphs

R4 → A6 → S3 → ST2 → ST2 → A7 → EBI → A8 → S4 → S5 → A9 → Recall / Enrichment → Year 8

A5	Generate and Describe Sequences	S2	Theoretical Probability	A4	Plotting Vertical and Horizontal Lines	A3	Formulae & Substitution
N8	Add and Subtract Fractions	G6	Constructions with Compasses	G5	Reflection & Rotation	R2	Converting Metric Units
R3	Proportion Scaling	N7	Fraction, Decimal & Percentage Equivalence	N6	Factors, Multiples & Primes	N5	Rounding to Multiples

G4 → EBI → A3 → R2 → N5 → A4 → G5 → N6 → S2 → G6 → N7 → A5 → N8 → R3

N1	Calculations with Decimals	G1	Measures of 2D Shapes	G2	Properties of 2D Shapes	A2	Forming and Solving Equations
N2	Calculations with Negatives	A1	Introducing Algebraic Notation	S1	Representing Categorical Data	N4	Use of a Calculator
N3	Order of Operations	R1	Ratio and Fractions	G3	Angle Facts	G4	Nets of 3D Shapes

Year 7 → N1 → N2 → N3 → G1 → A1 → R1 → G2 → S1 → G3 → A2 → N4 → ST1 → ST1 → G4

NUMBER	ALGEBRA	RATIO, PROPORTION & RATES	GEOMETRY & MEASURES	STATISTICS & PROBABILITY
Place Value, Calculating, Operations, Negatives, Factors, Multiples, & Primes, Fractions, Decimals & Percentages, Indices	Notation, Formulae, Graphs, Sequences, Equations, Inequalities, Non-Linear Graphs	Notation, Proportion, Percentages, Rates of Change, Scale, Graphs, Similarity	Shape, Perimeter & Area, Construction, Transformations, Angles, 3D Shape, Measures	Representing Data, Summarising Data, Probability