Y9 Scheme of Work – AQA GCSE Maths 8300

Foundation Tier

Term	Week	Lessons	Coding refers to AQA Teaching Guidance Sections.
Autumn 1	1	3	**Angles: G1, G3**
			Language, notation, labelling, drawing from descriptions
			Angles at a point, line, vertically opposite
			Alternate and corresponding angles on parallel lines
	2	4	**Factors and Multiples: N4, N5**
			Vocabulary of prime, factor, multiple. Find multiples
			Find common multiples, factors, common factors
			Prime factor decomposition, product written in index form
			KPI Task: C1 (E1 if accessible to group)
	3	3	**Basic Number: N1, N2, N3, N14**
			Order positive and negative numbers. Use < ≤ ≥ > = ≠ symbols, link inequality symbols on number line
			4 operations with integers. Include use of financial context. Know opposite operations.
			Estimate answers
	4	3	**Scale Diagrams and Bearings: R2, G15**
			Measure line segments, measure angles
			8 compass points, 3 figure bearings
			Use / interpret maps, scale factors and scale diagrams
	5	3	**Basic Algebra Expressions: A1, A3, A4**
			Use and interpret algebraic notation. BIDMAS to include powers, roots and reciprocals
			Understand expression, equation, formulae, identity, <u>inequality</u>, term, factor. Collect like terms.
			Multiply single term over a bracket, take out common factor
	6	3	**Basic Fractions: N1, N2, N8**
			Order positive and negative fractions. Convert between mixed / improper
			Adding / subtracting fractions, include negative and improper
			Multiply / divide fractions, include negative and improper
	7	3 or 4	EXAM WEEK

Autumn 2	8 and 9	6	**Collecting and Representing Data: S2, S4**
			Primary data, secondary data, discrete data, continuous data. Construct frequency tables.
			Interpret and construct pictograms and bar charts
			Interpret and construct vertical line charts for ungrouped discrete numerical data
			Interpret construct and compare pie charts
			Interpret analyse and compare distributions. Including grouped and continuous data
			Tables and line graphs for time series data
	10	4	**Coordinates and Linear Graphs: A8, G11, A9**
			Use coordinates in all 4 quadrants. Solve geometric problems on coordinate grid.
			Recognise / draw common lines y=n, x=n, y=x y=-x Find coordinates for a straight-line graph.
			Plot graphs of equations that are straight lines
			KPI task: C2 (E2 if accessible to the group)
	11	3	**Basic Decimals: N1, N2, N10**
			Order positive and negative decimals, understand place value. Add and subtract decimals
			Multiply and divide decimals, formal written methods. (include negatives)
			Work interchangeably with terminating decimals and fraction equivalents, include ordering.
	12	3	**Rounding: N15, N16**
			Recap rounding to 10, 100, integer. Rounding using decimal places. Include values in context.
			Rounding with significant figures. Include in context.
			Inequality notation for error intervals, apply limits of accuracy
	13	3	**Sequences: A23, A24**
			Recognise sequences of triangular number, squares, cubes, simple arithmetic, Fibonacci
			Generate terms from term to term rule. Generate terms from position to term rule.
			Recognise quadratic sequences, simple geometric progressions
	14	3 or 4	**Financial Maths**
			Includes one Pod lesson

Spring 1	15 and 16	5 or 6	**Basic Percentages: R9, N12 remember to always include percentages > 100%**
			Know that percentage is parts per 100. Express one quantity as a percentage of another.
			Convert percentage to decimal to find a percentage of an amount
			Convert percentage to decimal to perform simple percentage changes using multipliers
			Compare two quantities using percentages
			Work interchangeably with fractions and percentages as operators
			KPI task: C3 (E3 if accessible to the group)
	17 and 18	5 or 6	**Introduction to Perimeter and Area: G12, G17, G16, G17**
			Recognise cubes, cuboids, prisms, cylinders, cones and spheres. Identify faces, edges and vertices.
			Perimeter of 2D shapes, including composite shapes
			Area of a triangle and parallelogram
			Area of a trapezium
			Area of composite shapes
			KPI task: C4 (E4 if accessible to the group)
	19 and 20	6	**Real Life Graphs: A14, R14**
			Read / interpret information from graphs representing real life situations. E.g. cost of bills
			Conversion graphs
			Plot and interpret distance time graphs.
			Interpret non-linear graphs of real-life situations.
			Interpret the gradient of a straight line as a rate of change

Autumn 2	21 and 22	6: 3 either side of HT	**Introduction to Circumference and Area: G9, G17**
			Identify: centre, radius, chord, diameter, circumference, tangent, arc, sector, segment Discuss Pi
			Find the circumference of a circle
			Find the perimeter of part circles
			Find the area of a circle
			Find the area of part circles
			Find perimeter and area of composite shapes
	23 and 24	7	**Equations: A2, A17**
			Substitute values into formulae and expressions
			Substitute values into scientific and unfamiliar formulae
			Recap solving single and 2 step equations
			Solve equations that include a bracket
			Solve equations that include a fraction
			Solve equations with unknowns on both sides
			KPI task: C5 (E5 if accessible to the group)
	25 and 26	6	**Ratio and Proportion: N11, R3, R4, R5, R6, R7, R8**
			2 lessons on understand ratio notation, interpret ratio as a fraction. Express one quantity as fraction of another
			Simplify a ratio, and write as 1: n

			2 lessons on divide a quantity into two parts using ratio, apply to real life contexts
			Introduce 3-part ratios

Summer 1	27	4	**Scatter graphs: S6**
			Interpret a scatter graph and recognise correlation, know that is does not mean causation
			Draw a scatter graph and an estimated line of best fit
			Make predictions, interpolation and extrapolation
			KPI task: C6 (E6 if accessible to the group)
	28	4 or 5	**Indices: N6, N7**
			Squares, cubes and roots, notations and positive/negative roots. Squares / roots up to 15x15
			Powers of 2, 3, 4 and 5. Powers of 10 to include $10^3 = 1000$ and $10^6 = 1$ million
			Understand and use index notation. Index rule for multiplying
			Index rule for division
			Index rule with brackets
	29 and 30	6	**Pythagoras: G20**
			Know and use the formula to calculate the hypotenuse
			Know and use the formula to calculate a shorter side
			Make links to area: find height of isosceles triangle and then find area
			Pythagoras questions in context
			Distance between two coordinates
			More complex problem solving
	31 and 32	4 or 5	**Standard Form: N2, N9**
			Place value with very large /small numbers
			Large numbers into / out of standard form
			Small numbers into / out of standard form
			Interpret a calculator display
			Calculations with standard form

Summer 2	33 and 34	6	**Transformations: G7, G24**
			Recap common lines on axes: x=n, y=n, y=x Reflections on a coordinate grid
			Describe reflection
			Perform and describe translations using column vector
			Perform and describe rotations
			Perform and describe enlargements, include fractional scale factor
			Link the transformations to congruence and similarity
	35 and 36	6	**Introduction to trigonometry: G20, R12**
			Know and use the trigonometric ratios, find missing side
			Practise finding missing side
			Find missing angle
			Solve problems where the right-angled triangle is implicit, e.g. splitting isosceles triangle, hexagon
			2D questions in context
			Compare lengths using ratio notation, link to similar shapes, perimeter and area
	37 and 38	4 or 5	**Basic Probability: P1, P4, P7**
			Record, describe, analyse frequencies from experiments. Write probabilities as fraction, decimals, %
			Understand mutually exclusive events and know that probabilities add up to 1
			List outcomes of 1 or 2 events in systematic way. Use to find probabilities.
			Complete and use a frequency tree
			Design and use a two-way table
	39	3 or 4	**Financial Maths**
			Resources in Course materials. Includes one Pod lesson