

### Scope and Sequence Document for: Mathematics 9

Year:	9	
Tutor	Ann Humphreys	
Tutor qualifications:	B Sc. (hons) Lancaster, PGCE	
Resources required:	Key maths 9/2, (2001), Baker, Hogan, Job and Verity, ISBN 9780748759880, Nelson Thornes; <sup>1</sup> Mathematical instruments; Scientific calculator.	

Module No.	NSW week No.	Week beginning Monday the:	Contents of study
1	1	06/09/21	<b>Pythagoras CH1</b> - Construction of right-angled triangles leading to Pythagorean triples.
	2	13/09/21	Calculation of missing sides. Geometric proof <b>TMA</b>
2	3	20/09/21	<b>Formulas CH2</b> - Extension of work on number patterns leading to the deduction of a rule. Prediction of results <b>TMA</b>
3	4	27/09/21	<b>Circles CH3</b> - Circumference of a circle, by measurement, by calculation, justification of formulae
	5	04/10/21	Area of circle by approximation and calculation Compound shapes <b>TMA</b>
4	6	11/10/21	<b>Statistic1 CH4 (part)</b> - Bar charts for discrete and continuous data. Revision of range and averages, apply to continuous data
	7	18/10/21	<b>TMA</b>
	8	25/10/21	Half Term
5	9	01/11/21	<b>Accuracy CH5</b> - Rounding off numbers to significant figures. Use in estimation. Multiplying and dividing by fractions.
	10	08/11/21	Use of the calculator What is a reasonable answer? Error in measurement Standard form for large numbers <b>TMA</b>
6	11	15/11/21	<b>Volume CH6</b> - Volume and units of capacity. Volume of cuboid
	12	22/11/21	Areas of cross-section Volume of Cylinders and prisms. Flow in pipes. Units of capacity <b>TMA</b>

<sup>1</sup> Out of print but can be purchased from Amazon as pre-used  
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7	13	29/11/21	Number Revision CH7 - Revision of different ways of expressing a fraction. Increase and decrease as a percentage.
	14	06/12/21	Application to ratio and proportion Expression in the form 1: n Distance and speed problems, average speed TMA
8	15	13/12/21	Algebra1 CH8 - Use and expansion of brackets. collecting like terms
	16	20/12/21	Christmas Holiday
	17	27/12/21	Christmas Holiday
	18	03/01/22	Christmas Holiday
8	19	10/01/22	Solution of linear equations TMA
9	20	17/01/22	Statistics2 CH9 & CH4 (part) - Estimation of Range and averages grouped data. Stem & Leaf diagrams.
	21	24/01/22	General use of pie charts and scatter diagrams. Types and strength of correlation. Line of best fit
	22	31/01/22	What we are comparing, when interpreting diagrams. Estimating with more than one pie chart. Simple surveys TMA
10	23	07/02/22	Probability CH10 - Revision of probability – listing equally likely outcomes
	24	14/02/22	Half Term
10	25	21/02/22	Relative frequency and estimation Sample space diagrams TMA
11	26	28/02/22	Algebra2 CH11 - Solution of quadratic equations and inequalities by trial and improvement methods
	27	07/03/22	Relative frequency and estimation Sample space diagrams TMA
12	28	14/03/22	Decimals CH12 – Using a calculator and order of operations BODMAS
	29	21/03/22	Mental work with decimals leading to long multiplication and division TMA
13	30	28/03/22	Angles CH13 - Revision of angle work leading to angles of regular polygons and related formula
	31	04/04/22	Easter Holiday
	32	11/04/22	Easter Holiday
	33	18/04/22	Easter Holiday
13	34	25/04/22	Congruence Repeated geometrical transformations generating patterns. Enlargement with fractional scale factor. TMA
	35	02/05/22	Revision
	36	09/05/22	Exam Year 9
14	37	16/05/22	Algebra3 CH14 - Parallel perpendicular lines, Intersecting lines, leading to the solution of simultaneous equations.
	38	23/05/22	Algebraic solution by elimination. Problems generating simultaneous equations. TMA

	39	30/05/22	Half Term
15	40	06/06/22	<b>Loci CH15</b> - Locus as a set of points which obey a rule. Application to problems of intersecting loci. Paths traced out by rotating objects
	41	13/06/22	Compass constructions of bisectors and perpendiculars. Circles of a triangle by paper folding and by construction <b>TMA</b>
16	42	20/06/22	<b>Shape &amp; Symmetry CH16</b> - Planes of symmetry of solids, nets of solids
	43	27/06/22	Building a shape sorter <b>TMA</b>