

Year 13 Pure Maths Scheme of Learning

	Week	Topic	Notes	Specification ref.	
Term 1	1	Differentiation (2)	Cover the chain, product and quotient rules and implicit differentiation. Differentiate trigonometric functions. Inc. rates of change and modelling (growth/kinematics)	7.1, 7.2, 7.3, 7.4	
	2				
	3				
	4	Parametric equations	Plotting curves, parametric differentiation and converting to Cartesian form. Inc. modelling	3.3, 3.4, 7.5	
	5	ASSESSMENT 5 revision, exam, review			
	6	Partial fractions and binomial expansion	Expanding with negative and fractional powers (old Core 4 style). Inc. using to approximate values and finding the range of validity	2.10, 4.1	
	7				
	8	Integration (2)	Integration by inspection and trigonometric functions	8.1, 8.2, 8.3	
	HALF TERM				
	9	Integration (2)	Integration by substitution and by parts. Inc. standard integrals and parametric integration. Integrate functions that need to be split into partial fractions first	8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7	
	10				
	11				
	12	Review point 3			
	13	ASSESSMENT 6 revision, exam, review			
	14	ASSESSMENT 6 revision, exam, review			
15	Numerical methods	Change of sign method (inc. understanding of how this can fail). Cobweb/staircase diagrams	9.1, 9.2		
CHRISTMAS					
Term 2	16	Numerical methods	Newton-Raphson method and review trapezium rule from year 12	9.3, 9.4, 9.5	
	17	Differential equations	First order differential equations only. Separation of variables method, inc. sketching members of the family of solution curve. Solve differential equations in context and focus on modelling	2.11, 6.7, 7.6, 8.8	
	18				
	19	Vectors in 3D	Use of i, j, k notation. Calculate the magnitude of a vector. Use position vectors and solve problems	10.1, 10.2, 10.3, 10.4, 10.5	
	20	Go over previous topics			
	21				
	HALF TERM				
	22	ASSESSMENT 7 revision, exam, review (IN HALL)			
	23	ASSESSMENT 7 revision, exam, review (IN HALL)			
	24	Revision and exam papers			
	25				
	26				
	27				
28					