

NAME	Assignment Grade			Review Exercise Grade	
My KS5 Target Grade is	End of Cycle Assessment				
	SAE	AE	E	BE	SBE

YEAR 12 Mathematics		CYCLE 4: Pure Units 6b, 7, 8			
	Knowledge		Chapter	Check	
Differentiation Part 2	I can apply differentiation rules to find gradients, tangents and normal	7.3	12.6		
	I can identify where a function is increasing or decreasing	7.3	12.7		
	I can find the second order derivative of a simple function	7.3	12.8		
	I can find stationary points of functions and determine their nature	7.3	12.9		
	I can use the features of a given function to sketch the corresponding gradient function	7.3	12.10		
	I understand how to model real life situations with differentiation including rates of change	7.3	12.11		
Integration	I understand that integration is the reverse process of differentiation. I can integrate functions in the form x^n	8.1/2	13.1		
	I can use the appropriate symbol to find Indefinite Integrals. I can integrate polynomials.	8.2	13.2		
	I can find the constant of integration to ultimately find $f(x)$ from $f'(x)$	8.2	13.3		
	I can evaluate definite Integrals. I can use appropriate notation to show I am calculating an integral between two limits.	8.3	13.4		
	I can use integration to find the area under a curves and under the x-axis	8.3	13.5-6		
	I can use definite integration with areas of trapeziums and triangles to find areas between curves and lines	8.3	13.7		

Exponentials & Logarithms	I can sketch Exponential Functions and can show transformations of these graphs	6.1	14.1	
	I can differentiate e^{kx} and understand why this result is important	6.2	14.2	
	I can understand and interpret exponential modelling	6.3	14.3	
	I recognise the relationships between exponents and logarithms in the form $a^x = b$. I can recall and apply the laws of logarithms	6.4	14.4-5	
	I can solve equations using the laws of logarithms on my calculator.	6.5	14.6	
	I can describe and use the natural logarithm function	6.6	14.7	
	I can use logarithms to explore trends in non-linear data	6.7	14.8	

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YEAR 12 Mathematics		CYCLE 4: Statistics Unit 5b			
	Knowledge		Chapter	Check	
Hypothesis Testing	I can conduct and interpret a One Tailed Hypothesis Tests of the binomial distribution	5.2	7.3		
	I can conduct and interpret a Two Tailed Hypotheses test of the binomial distribution	5.2	7.4		
YEAR 12 Mathematics		CYCLE 4: Mechanics Unit 8a, 8b, 9			
Forces & Motion	I can draw Force Diagrams and calculate resultant forces and I understand Newton's first Law	8.1	10.1		
	I can calculate resultant forces by adding vectors	8.2	10.2		
	I understand how to use Newton's second law $F=ma$	8.2	10.3		
	I can Apply Newton's second law to vector forces and acceleration Motion in 2 Dimensions	8.2	10.4		
	I understand and can use Newton's third law to solve problems involving Connected Particles	8.4	10.5		
	I understand and can use Newton's third law to solve problems involving Pulleys	8.4	10.6		
Variable Acceleration	I understand that displacement, velocity and acceleration may be given as Functions of Time	7.4	11.1		
	I can use differentiation to solve kinematic problems	7.4	11.2		
	I can use calculus to solve problems involving Maxima and Minima	7.4	11.3		
	I can use integration to solve kinematics problems	7.4	11.4		
	I can use calculus to derive Constant Acceleration Formulae	7.4	11.5		