



YEAR 13

Autumn Term	Spring Term	Summer Term
<p>Differentiate and integrate e^{ax}. Know and use the fact that exponential and natural log are inverse functions. Differentiate trigonometrical functions. Use product chain, product and quotient rules. Use numerical methods to solve equations. Use cobweb and staircase diagrams. Use integration by inspection Integrate trigonometric expressions. Understand and calculate measures of average and spread. Use probability for independent and mutually exclusive events</p>	<p>Express functions using partial fractions and use to solve problems. Integrate functions expressed implicitly. Find the equation of tangents and normals of implicit functions. Transform parametric to Cartesian equations. Differentiate parametric equations and use to solve problems. Know the properties of normal distribution. Calculate probabilities of standardised normal distribution functions. Find the mean and standard deviation of normal distributions.</p>	<p>Use scalar products. Find the vector equation of two lines. Find the distance between two points. Calculate the equation of the line of best fit. Calculate residuals Revision and exam practice.</p>
HALF TERM		
<p>Integrate by parts and substitution. Use standard integrals. Find volumes of revolution. Use mid ordinate and Simpsons rules. Use binomial expansions to solve problems. Solve problems using factor and remainder theorems. Solve problems involving rational functions. Know the conditions of binomial distribution. Calculate probabilities using binomial distributions using the formula and tables.</p>	<p>Know and use trigonometric identities for proofs and solving equations. Solve problems involving exponential growth and decay. Solve differential equations by separating the variables. Use vectors in 2 and 3 Dimensions. Understand position vectors. Find confidence intervals. Find and use the product moment correlation coefficient .</p>	

Bishop Milner Catholic College

