HUB: Maths

Subject: Maths Year 13

Autumn 1	Spring 1	Summer 1
Pure Core 3 (continued) Exponentials and Logarithms Graphs. Using Exponentials and Logarithms. Differentiation. Chain Rule. Differentiation of e to the power x and in x. Differentiating of Trigonometry Functions Product and Quotient Rules. Integration by inspection, and by reversing the chain rule. Integration of Trigonometric Functions. Integration by Substitution and by Parts. Volumes of Revolution by integration methods. Integrating Duration 2 hours Be able to integrate products of the form using the chain rule in reverse. Know and be able to use a result for integrating products of the form Integration by Substitution Duration 3 hours	Year 13 Mock Exam Statistics 1 (continued) The Normal Distribution The Standard Distribution, Normal Distributions and Z-Tables. Estimation. Populations and Samples. Confidence Intervals. Central Limit Theorem. Large Samples and Estimating the Standard Error. Correlation and Regression. Also Core 4 (see Spring 2 term for content details). Content will be delivered between Stats and C4 in parallel, weighted according to need and aptitude.	Revision Period prior to external examinations. Pure Core 3, Pure Core 4 and Statistics 1 as well as any Year 12 re-sits. Summer term 1 is a buffer to allow for in-depth review of topics seen earlier in the year as well as extensive training for exams.

Parents can help by:• Provide a peaceful location for homework and study (without distractions) for at least an hour a day.

Autumn 2	Spring 2	Summer 2
Assessment Pure Core 3 A Numerical Methods Location of Roots and Iterative Methods. Numerical Integration Use Simpson's Rule and the Mid-Ordinate Rule to estimate area. Proof Methods Assessment Pure Core 3B Statistics 1 Numerical Measures . Mean, Median and Mode. Dispersion, variance and standard deviation. Probability Elementary Probability. Solving Probability Problems . Laws of Probability , including Conditional Probability. Probability Distributions, including the Binomial Distribution. Mean and Variance. Modelling Real Problems Assessment Statistics 1A	Pure Core 4 Algebra and Functions. Simplifying Expressions. Algebraic Division . Partial Fractions. Exponential Growth and Decay. Trigonometry. The Addition Formulas. The Double Angle Formulas. The R Addition Formulas. The Factor Formulas. Coordinate Geometry in the (x,y) Plane. Parametric Equations of Curves. Parametric and Cartesian Equations. Sequences and Series. The Binomial Expansion. Using the Binomial Expansion as an Approximation. Binomial Expansion and Partial Fractions. Assessment Pure Core 4A Differentiation and Integration. Differentiation with Parametric Equations. Implicit Differentiation. Integration Using Partial Fractions. Using Trigonometric Identities in Integration. Differential Equations. Vectors. Magnitude of Vectors. Vector Equations of Lines. Scalar Product. Assessment Pure Core 4B	Revision Period.

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