



FURTHER MATHS SCHEME
CLASS: SS3

SN	TOPICS	BREAKDOWN
1	INTEGRATION	Definition of integration as a reverse problem of differentiation - Definite and indefinite integrals -integration of simple functions i.e. using $\int x^n dx = \frac{x^{n+1}}{n+1} + c$
2	INTEGRATION	Integration of trigonometrical functions e.g. $\cos x$, $\sin x$, $\sec^2 x$ etc
3	TECHNIQUES IN INTEGRATION	Substitution technique of integration. - The use of partial fraction in integration of functions
4	APPLICATION FOR INTEGRATION	Application in motion i.e. Velocity = \int acceleration - Integration as an area under a curve - Volumes of resolution
5	MATRICES	- Definition of matrices - Terms used in matrices - Dimensions and order of matrices -Equality of matrices Matrices - Matrices of order 2 and order 3
6	MATRIX 2	-Addition and subtraction of matrices - Multiplication of matrices - Conformability of matrices for addition, subtraction and multiplication
7	DETERMINANT	- Determinants of matrices
8	APPLICATION TO MATRICES	_ Solving systems of equations using -Crammers rule - Inverse method

9	FORCES AND EQUILIBRUM OF FORCES	- Definition of force - Classification of force as a vector - Resolution of forces *Parallelogram law * Triangular law
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		* Lam's theorem
10	NEW LAW AND CONSEQUENCES	<ul style="list-style-type: none"> - Inertia of a body - 1st laws - 2nd laws 3rd laws -Problems involving Newton's laws -Frictions
11	LINEAR TRANSFORMATIONS	<ul style="list-style-type: none"> - Definition and concepts - types of transformations * Identity * Rotation * Reflection etc -Reduced to matrix form -Related problems
12	STATISTICS 1	<ul style="list-style-type: none"> - Basic concepts, calculations of mean, using assumed mean - Variance and standard deviation
13	ADVANCED PROBABILITY	<ul style="list-style-type: none"> Tree diagrams, selection with replacement laws of probability *Experimental probability * Classical probability - Binomial probability theory - Poisson probability theory
14	REGRESSION AND CORRELATION	<ul style="list-style-type: none"> - Regression analysis - fitting a straight line - Method of least square in curve fitting - Ranks correction (Spearman)