Bhartiya Vidya Mandir Sen. Sec. School,Sector 39, Chandigarh Road, Ludhiana

CLASS - XII SYLLABUS – MATHS Session 2025-2026

BOOK: NCERT

Month	Unit/Chapter/Topic	Learning Objective	Resources/Art-Integrated Pedagogy Tools Used/E-Resources	Learning Outcomes/Skills Learnt by Students
APRIL	MATRICES	Definition and concept of matrix,types of matrices addition and multication of matrices,transpose of matrix ,symmetric and skew symmetric matrix	https://epathshala.nic.in/topic.php?id=12079CH03	Student will be able to familiarze with matrix, understand the type of matrix,perform operation like addition and multication,identify the example of symmetric and skew symmetric
	DETERMINANT	Determinant of a square matrix (up to 3 x 3 matrices), Applications of determinants in finding the area of a triangle. Adjoint of a matrix and inverse of a matrix,Minors, Co-factors,Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.	https://epathshala.nic.in/topic.php?id=12079CH04	Students will be able to associate a number called determinant to square matrix,understand and apply determinants in finding out area of triangle.Evaluate Minors, Co-factors & finding Adjoint and inverse of a square matrix, identify consistent and inconsistent equations,develop ability to solve equations using matrix method .
MAY	INVERSE TRIGONOMETRY	Definition of inverse trigonometric functions,range, domain, principal value branch. &Graphs of inversetrigonometric functions.	https://epathshala.nic.in/topic.php?id=12079CH02	Students will be able to appreciate the need for principal value for a given inverse trigonometric function,comprehend the meaning of various inverse trigonometric formulae ,finding suitable substituion to simplify. Students will be able to relate the domain and range of various trigonometric functionswith principal value apply the various formulae connecting them.

	CONTINUITY & DERIVATIVES	Basic definition of continuity and differentiation.Derivative of composite functions, implicit functions, inverse trigonometric functions, logarithmic functions, functions in parametric form,Second order derivatives of functions.	https://epathshala.nic.in/topic.php?id=12079CH05	Students will be able to analyze and find whether the given functions are continuous, differentiable at given points.Develop skills in finding derivatives of various functions like logarithmic functions, implicit functions etc. Comprehend the meaning Of second derivative.
	INTEGRATION	Integration as an inverse process of differentiation. Integration using substitution method.Integration of trigonometric functions Integrals formula etc. Integration by partial fractions and by parts.Properties of integral.	https://epathshala.nic.in/topic.php?id=12080CH07	Students will be able to recognizethe integration formula as anti-derivative.` evaluate the given by using suitable substitutions. Perform the integration after observing the given function and simplifying it by applying the trigonometric formula .Identify and arrange the given functions into these special integrals form and apply the formulae.
AUGUST	**APPLICATION OF DERIVATIVE**	Rate of change of quantities,Increasing and decreasing functions, Finding points of local maxima and minima, Finding maximum and minimum values of a function and application in real life	https://epathshala.nic.in/topic.php?id=12079CH06	Students will be able to comprehend the meaning of derivatives as rate of change of quantities,visualize increasing and decreasing functions graphically. find local maxima and local minima,analyze and apply first and second derivative test, critical points and points of inflection
	APPLICATION OF INTEGRATION	Application in finding area under simple curves.Area of the region bounded by a curve and a straight line	https://epathshala.nic.in/topic.php?id=12080CH08	Students will be able to appreciate the need of integration in finding area under the given curves.Visualize and and shade the required region between a given line and a curve and find its area.
	DIFFERENTIAL EQUATION	Definition of differential Equation, order and degree of a differentialequation. Various methods of solving first order, first degree differential equations,Variable separable method, homogenous equations	https://epathshala.nic.in/topic.php?id=12080CH09	Students will be able to demonstrate the basic understanding of differential equation, select a suitable strategy and apply an appropriate method to obtain its solution
OCTOBER	**VECTOR**	Definition of vector, types of vectors, position vector of a point, properties of vectors addition, components ofa vector,Vector joining two points, section formula.Scalar product of two vectors,	https://epathshala.nic.in/topic.php?id=12080CH10	Students will be able to create real life examples of vector and scalar quantities and understand propertiesof a vector.Appreciate the geometrical meaning of scalar product and

		projectionof a vector on a line, cross productof two vectors and their geometrical meaning		cross product of two vectors.Translate the given situation into the corresponding scalar and cross product.
NOVEMBER	**THREE DIMENSIONAL**	Direction cosines, direction ratios of a line in space passing through two points.Equation of a line in space, angle between two lines, the concept of skew lines in space and shortest distance between them, distance between two parallel lines.	https://epathshala.nic.in/topic.php?id=12080CH11	Students will be able to explorethe fundamentals behind D. R and D. C and able to apply them.Visualize lines, skew lines in space and find their equations using given data and transforming them to standard form.
DECEMBER	**PROBABILITY**	Probabilitiesof events associated with discrete random variable.Conditional probability of an event.Bayes theorem,multiplication theorem of probabilityand independent events.Random variable and its probability distribution	https://epathshala.nic.in/topic.php?id=12080CH13	Students will be able to assimilate the concept of conditional probability as probability of an event when another event has already occurred.Appreciate Bayes theorem and the conditions necessary to apply it .Calculate mean after forming probability distribution.
JANUARY	**RELATION AND FUNCTION**	Recall the concepts of Cartesian product, domain and range of a function and types of relations.Identify Reflexive,symmetric, transitive and equivalence relation*One-one and onto functions.	https://epathshala.nic.in/topic.php?id=12079CH01	Students will be able to recall the concepts of function and types of relations, domain and range,justify whether the given relation is an equivalence relation or not,justify whether the given function is one-one ,onto or not