BAGARIA BAL VIDYA NIKETAN

LAXMANGARH-SIKAR

SYLLABUS & LESSON PLANNER-2025-26

Class:-	IX
Subject:-	MATHEMATICS
Teacher Name:-	VIRENDRA KUMAR SONI

SYLLABUS

Ch.No	Name of Chapter	working day	Period	Topic	Month	Week
CH 1 CH 2	NUMBER SYSTEMS POLINOMIALS	23	34	CH 1 Review of representation of natural numbers, integers, and rational numbers on the number line. Rational numbers as recurring/ terminating decimals. Operations on real numbers, Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) such as $\sqrt{2}$, $\sqrt{3}$ and their representation on the number line. Definition of the nth root of a real number., Rationalization (with precise meaning) of real numbers of type $1/(a+b\sqrt{x})$ and $1/(\sqrt{x}+\sqrt{y})$ (and their combinations) where x and y are natural numbers and a and b are integers. CH 2 Definition of a polynomial in one variable, with examples and counter examples. Coefficients of a polynomial, terms of a polynomial and zero polynomial. Degree of a polynomial. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and multiples. Zeros of a polynomial. Motivate and State the Remainder Theorem with examples. Statement and proof of the Factor Theorem. Factorization of $ax2 + bx + c$, $a \neq 0$ where a, b and c are real numbers, and of cubic polynomials using the Factor Theorem. Recall of algebraic expressions and identities.	April	1 2 3 4
CH 3	COORDINATE GEOMETRY	13	19	CH 3 The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, and notations.	May	1,2
CH 4	LINEAR EQUATION IN TWO VARIABLES	11	16	CH 4 Recall of linear equations in one variable. Introduction to the equation in two variables. Focus on linear equations of the type $axe + by + c=0$. Explain that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting	June	1

				infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they lie on a line.		2
CH 5 CH 6	INTRODUCTION TO EUCLID'S GEOMETRY LINES AND ANGLES	27	40	CH 5 History – Geometry in India and Euclid's geometry. Euclid's method of formalizing observed phenomena into rigorous Mathematics with definitions, common/obvious notions, axioms/postulates and theorems. The five postulates of Euclid. Showing the relationship between axiom and theorem, for example: (Axiom), Given two distinct points, there exists one and only one line through them. (Theorem), (Prove) Two distinct lines cannot have more than one point in common CH 6 (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180O and the converse., (Prove) If two lines intersect, vertically opposite angles are equal. , (Motivate) Lines which are parallel to a given line are parallel.	July	1 2 3 4
CH 7 CH8	TRIANGLES QUADRILATERALS	24	36	CH 7 (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence)., (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence)., (Motivate) Two triangles are congruent if the three sides of one triangle are equal to the three sides of the other triangle (SSS Congruence)., (Motivate) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle. (RHS Congruence). CH 8 (Prove) The diagonal divides a parallelogram into two congruent triangles., (Motivate) In a parallelogram opposite sides are equal, and conversely., (Motivate) In a parallelogram opposite angles are equal, and conversely., (Motivate) A quadrilateral is a parallelogram if a pair of opposite sides is parallel and equal., (Motivate) In a parallelogram, the diagonals bisect each other and conversely., (Motivate) In a triangle, the line segment joining the midpoints of any two sides is parallel to the third side and in half of it and (motivate) its converse.	August	1 2 3 4
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CH 9	CIRCLES	22	33	(Prove) Equal chords of a circle subtend equal angles at the centre and (motivate) its converse., (Motivate) The perpendicular from the centre of a circle to a chord bisects the chord and conversely, the line drawn through the centre of a circle to bisect a chord is perpendicular to the chord., (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the centre (or their respective centres) and conversely., (Prove) The angle subtended by an arc at the centre is double the angle subtended by it at any point on the remaining part of the circle., (Motivate) Angles in the same segment of a circle are equal.	September	2 3 4
Syllabus Break due to Exam Period and Holidays in the month of October						
CH 10 CH 11	HERON'S FORMULA SURFACE AREAS AND VOLUMES	24	36	CH 10 Area of a triangle using Heron's formula (without proof). CH 11 Surface areas and volumes of spheres (including hemispheres) and right circular cones.	November	1 2 3 4
CH 12	STATISTICS	21	31	CH 12 Bar graphs, histograms (with varying base lengths), and frequency polygons.	December	1,2,3,4