JINDAL VIDYA MANDIR, JSW HILLSIDE TOWNSHIP
Syllabus Bifurcation: 2025-26

Subject: Mathematics **Class: IX**

Term: I

Sl No.	Month	WD	ID	ID	No. of Periods	Chapter/Units	Learning Objectives	Activities	Assessment Methods	Portion for WT/PT/Term /AE
1.	March	5	5	5	6	1.Number Systems	-Define of natural number, whole numbers, Integers, rational numbers, irrational numbers, Real numbers, odd numbers, even numbers, prime numbers, co-prime numbers, and composite numbers. -Representing irrational numbers on the number line.	-Representation of rational & irrational numbers on a number line -Square root spiral,.	-Worksheets – -Weekly Test -Conceptual Understanding Assessment	
2	April	13	13	9	11	1.Number Systems Contd.	-Rationalize the denominator of the given real number. -Solve the problems with exponents and radicals. -Describe two key mathematical ideas developed by R Dedekind, G Cantor & Archimedes			WT-11/4/25 Number Systems-Ex 1.1 to 1.3
				4	4	2.Polynomials (Upto Ex. 2.2)	-Define polynomial in one variable, with examples and counter examples -Identify coefficients of polynomial, terms of polynomial and zero polynomial -State the degree of polynomial -Define constant, linear, quadratic and cubic polynomials monomials, binomials and trinomials, factors, multiples and zeroes of polynomials		-Worksheets -MCQ test	
3	June	20	20	11	13	2.Polynomials (Ex. 2.3 & 2.4)	-State the remainder theorem and factor theorem with examples and solve related problems. -Factorization of $ax^2 + bx + c$, $a \neq 0$ where a, b, c are real numbers and factorization of cubic polynomial by using factor theorem.	Verification of identities: a^3+b^3 a^3-b^3 $(a+b)^3$ $(a-b)^3$ $(a+b+c)^2$	Worksheets	

							-Prove algebraic expressions & identities -Factorise polynomials using identities.	Factorisation of polynomials of the form x^2+bx+c		
				4	5	3. Coordinate Geometry	-Define a Coordinate System -Reinforce the plotting of points in two dimensional Cartesian Coordinate System -Identify quadrants of a given point -Name Coordinates of a point, and terms associated with the coordinate plane. -Describe two key mathematical ideas developed by René Descartes.	To find the values of abscissa and ordinates of various points in a Cartesian plane.	Flipped classroom	
				5	6	4. Linear Equation in Two Variables	-Recall linear equation in one variable and its method of solving. -Articulate the relationship between the variables in a linear equation of the form ax + by + c = 0 -Explain how the linear equations in two variables have infinite number of possible (x, y) pairs that satisfy the equation.	Plotting graph of linear equations in two variables	Worksheets	
4	July	25	20	6	7	5. Introduction to Euclid's Geometry	-Differentiate between Euclid's axioms and postulates -Correctly identify and apply axioms and postulates in the context of solving or explaining a geometrical problem. -Describe two key mathematical ideas developed by Euclid		Worksheets	PT-1-10/7/25 Number Systems & Polynomials
				11	13	6. Lines and Angles	-Explain, using logical reasoning and examples, why when a ray stands on a line, the sum of the two adjacent angles formed is 180° and vice-versa. -Prove, using geometric	To divide a given strip of paper into a specified number of equal parts using a ruled paper.	-Think pair share -Worksheets	

							reasoning, that if two lines intersect, then the vertically opposite angles formed are equal. -Explain and illustrate, with diagrams and logical arguments, why when two parallel lines are intersected by a transversal: (a) corresponding angles are equal, (b) alternate interior angles are equal, and (c) interior angles on the same side of the transversal are supplementary. -Justify, using logical deduction, why lines that are parallel to the same line are also parallel to each other.			
				3	3	7. Triangles	-Define triangles and their basic components. -Explain the SSS, SAS, ASA, AAS, RHS congruence rule using informal reasoning. -Prove that angles opposite equal sides of a triangle are equal -Explain why sides opposite equal angles of a triangle are equal. -Explain and apply triangle inequalities and the relationship between angles and opposite sides.	To verify the different criteria for congruency of triangles using triangle cut outs.	-Open Book Test -Exit tickets -Worksheets	
5.	August	20	20	10	12	7. Triangles				WT-7-8-25 Coordinate Geometry, Linear Equation in Two Variables, and Introductio n to Euclid's Geometry.

				10	12	8. Quadrilaterals	-Prove that a diagonal of a parallelogram divides it into two congruent triangles. -State and apply the key properties of a parallelogram. -State and apply the properties of the diagonals of a rectangle, square, rhombus. -State and apply the Midpoint Theorem and its converse.	-To obtain a parallelogram by paper folding. -To explore similarities and differences in properties with respect to diagonals of parallelogram, square , rectangle and square. -To verify midpoint theorem for a triangle using paper cutting and pasting.	Quiz Worksheets	
6.	September	20	12	5	6	10. Heron's Formula	-Classify triangles based on their sides and angles. -Recall and apply various formulas for the area and perimeter of different types of triangles. -Calculate the area of a triangle using Heron's formula. -Apply Heron's formula to find the area of a quadrilateral by dividing it into triangles.		Case Studies	
				7	9	Revision	Chapter wise revision and test.			
				8	8	Term I Examination				Term-I - 22/9/25 Ch- 1,2,3,4,5,6,7

Sub Tr **Sub I/C** **VP** **Principal**

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Term II

Sl No	Month	WD	ID	ID	No. of Periods	Chapter/Units	Learning Objectives	Activities	Assessment Methods	Portion for WT/PT/Term/AE
1	October	19	19	12	15	9. Circles	-Prove that equal chords of a circle subtend equal angles at the center. -Prove the converse: If angles subtended by chords at the center of a circle are equal, then the chords are equal. -Prove that the perpendicular from the center of a circle to a chord bisects the chord. -Prove the converse: The line drawn through the center of a circle to bisect a chord is perpendicular to the chord. -Explain why one and only one circle can pass through three given non-collinear points. -Prove that equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers). - Prove the converse: Chords of a circle (or congruent circles) that are equidistant from the center (or their respective centers) are equal. -Prove that the angle subtended by an arc at the center is double the angle	To verify that the angle subtended by an arc at the centre is double the angle subtended by the same arc at any other point on the remaining part of the circle. The angles in the same segment of a circle are equal. To verify that: (i) the angle in a semi-circle is a right angle. (ii)the angle in a major segment is acute (iii)the angle in a minor segment is obtuse. (iv) the sum of either pair of opposite angles of a cyclic quadrilateral is 180^0 (v) in a cycle quadrilateral the exterior angle is equal to the interior opposite angle	-Class Test -Problem solving tasks	

							subtended by it at any point on the remaining part of the circle. Prove that angles in the same segment of a circle are equal. -Prove that if a line segment joining two points subtends equal angles at two other points lying on the same side of the line containing the segment, the four points lie on a circle. -Prove that the sum of either pair of opposite angles of a cyclic quadrilateral is 180°. Prove the converse: If the sum of either pair of opposite angles of a quadrilateral is 180°, then the quadrilateral is cyclic.			
				7	9	11. Surface Areas & Volumes	-Calculate the curved surface area, total surface area, and volume of a cone. -Calculate the surface area and volume of a sphere. -Calculate the curved surface area, total surface area, and volume of a hemisphere	To form a cone from a sector of a circle and to find the formula for its curved surface area. To find the relationship between volume of a cone & a cylinder. To obtain formula for surface area of a sphere.	-Error analysis -Open response questions	WT-30/10/25-Heron's Formula & Quadrilateral

2	November	22	22	7	9	12. Statistics	-Define statistics. -Explain the bar graph. -Explain histogram with varying base lengths. -Explain frequency polygon. -Interpret graphs -Graphically represent data in the form of bar graph, histogram & frequency polygon.	To draw histogram and frequency polygon for classes of equal widths and varying widths	Worksheets	
				15	18	Revision & Mock Test-1				
3	December	26	26	26	24	Revision of Chapters	Chapter wise revision and test			WT-19/12/25-Circles & Surface Areas and Volumes
4	January	24	17	20	10	Revision and PT-II	Chapter wise revision and test		Sample Question Papers	PT-II-8/1/26 Circles, Surface Areas & Volumes, Statistics
	February	23	23	23	30	Revision and Term II			Mock Test	
5	March					Annual Examination				Annual Examination: 2/3/26 Ch-1 to 12

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