

**N. C. JINDAL PUBLIC SCHOOL PUNJABI BAGH, NEW DELHI ANNUAL CURRICULUM**

Class : IX	Subject : Mathematics	Subject Teacher (Prepared by): Vidyotma Dhand		Designation: TGT(Maths)		
Preferred Text Book / Material	Chapter's Name	Chapter Topic / Sub Topic	Term	Start Date	End Date	No.of Periods
	<b>Number System</b>	Review of representation of natural numbers, integers, and rational numbers on the number line. Rational numbers as recurring/ terminating decimals. Operations on real numbers.	1	04/01/2024	04/06/2024	6
		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. Explaining that every real number is represented by a unique point on the number line and conversely, viz. every point on the number line represents a unique real number.		04/08/2024	4/19/24	8
		Definition of nth root of a real number. Rationalization (with precise meaning) of real numbers of the 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.		4/22/24	4/26/24	5
		Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particular cases, allowing learner to arrive at the general laws.)		4/29/24	05/03/2024	4.5
	<b>Co-ordinate geometry</b>	The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations.	1	05/06/2024	05/10/2024	5
				5/13/24	5/17/24	4.5
	<b>linear equations in two variables</b>	Recall of linear equations in one variable.		07/01/2024	07/06/2024	6
		Introduction to the equation in two variables. Focus on linear equations of the type $ax + by + c=0$ .		07/08/2024	07/12/2024	5

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Mathematics Text Book for class IX	<b>variables</b>	.Explain that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they lie on a line.	1	7/15/24	7/20/24	5
	<b>Heron's Formula</b>	Area of a triangle using Heron's formula (without proof)	1	7/22/24	7/26/24	5
	<b>Introduction to Euclid's geometry</b>	History - Geometry in India and Euclid's geometry. Euclid's method of formalizing observed phenomenon 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) 1. Given two distinct points, there exists one and only one line through them. (Theorem) 2. (Prove) Two distinct lines cannot have more than one point in common.	1	7/29/24	08/03/2024	5.5
	<b>Statistics</b>	Bar graphs, histograms (with varying base lengths),	1	08/05/2024	08/09/2024	5
		frequency polygons.		08/12/2024	8/17/24	5
	<b>lines and angles</b>	(Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180° and the converse.	1	8/20/24	8/23/24	4
		(Prove) If two lines intersect, vertically opposite angles are equal.		8/27/24	8/30/24	4
		(Motivate) Lines which are parallel to a given line are parallel.		09/02/2024	09/06/2024	4
	<b>Revision</b>		1	09/09/2024	09/11/2024	3
	<b>Half Yearly/ Mid Term Exam</b>		1	9/13/24	9/27/24	11
	<b>polynomials</b>	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.	2	9/30/24	10/05/2024	5
		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 $ax^2 + bx + c$ , $a \neq 0$ where $a$ , $b$ and $c$ are real numbers, and of cubic polynomials using the Factor Theorem.		10/07/2024	10/19/24	8

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	<p>Recall of algebraic expressions and identities. Verification of identities:</p> $(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$ $(x \pm y)^3 = x^3 \pm y^3 \pm 3xy(x \pm y)$ $x^3 \pm y^3 = (x \pm y)(x^2 \mp xy + y^2)$ $x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$ <p>and their use in factorization of polynomials</p>		10/21/24	10/25/24	5
<b>triangles</b>	<p>(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).</p> <p>(Motivate) Two triangles are congruent if the three sides of one triangle are equal to 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)</p>	2	11/04/2024	11/08/2024	4
	<p>(Prove) The angles opposite to equal sides of a triangle are equal. (Motivate) The sides opposite to equal angles of a triangle are equal.</p>		11/11/2024	11/16/24	5
	<p>(Prove) The angles opposite to equal sides of a triangle are equal. (Motivate) The sides opposite to equal angles of a triangle are equal.</p>		11/18/24	11/22/24	5
	<p>(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.</p>		11/25/24	11/30/24	6

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<b>quadrilaterals</b>	(Motivate) A quadrilateral is a parallelogram if a pair of its 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 mid points of any two sides is parallel to the third side and in half of it and (motivate) its converse.	2	12/02/2024	12/07/2024	6
<b>circles</b>	(Prove) Equal chords of a circle subtend equal angles at the center and (motivate) its converse (Motivate) The perpendicular from the center of a circle to a chord bisects the chord and conversely, the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.	2	12/09/2024	12/12/2024	4
	(Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers) and conversely. (Prove) The angle subtended by an arc at the center is double the angle subtended by it at any point on the remaining part of the circle.		12/16/24	12/21/24	6
	(Motivate) Angles in the same segment of a circle are equal. (Motivate) If a line segment joining two points subtends equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle. (Motivate) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is $180^\circ$ and its converse.		12/23/24	12/31/24	5.5
<b>surface areas and volumes</b>	Surface areas and volumes of spheres (including hemispheres)	2	1/16/25	1/24/25	8
	right circular cone		1/27/25	1/31/25	4.5
<b>Revision</b>		2	02/03/2025	02/07/2025	5
			02/10/2025	2/15/25	6
<b>Annual Exam</b>		2	2/17/25	2/21/25	5

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Subject Co-ordinator : Name \_\_\_\_\_ Mr. K.K.Jha \_\_\_\_\_ Sign \_\_\_\_\_

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MARKING SCHEME OF CLASS IX, TCHR: VD

S.NO.	PERIODIC EXAMINATIONS	CHAPTER/TOPIC	MAXIMUM MARKS
	<b>PERIODIC TEST 1</b>	NUMBER SYSTEM	20
		<b>TOTAL</b>	20
	<b>HALF YEARLY EXAM/MIDTERM EXAM</b>	NUMBER SYSTEM	18
		LINES AND ANGLES	20
		HERONS FORMULA	8
		EUCLIDS GEOMETRY	5
		COORDINATE GEOMETRY	8
		LINEAR EQUATIONS	12
		STATISTICS	9
		<b>TOTAL</b>	80
	<b>PERIODIC TEST 2</b>	COORDINATE GEOMETRY	6
		LINEAR EQUATIONS	7
		<b>HERONS FORMULA</b>	7
		<b>TOTAL</b>	20
	<b>PERIODIC TEST 3</b>	POLYNOMIAL	20
		<b>TOTAL</b>	20

Co-ordinator Name : \_\_\_\_\_ Sign \_\_\_\_\_

Subject Teacher :

Name : \_\_\_\_\_ Sign \_\_\_\_\_

Name : \_\_\_\_\_ Sign \_\_\_\_\_

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Name : \_\_\_\_\_ Sign \_\_\_\_\_



<b>Class 9<sup>th</sup> Mathematics</b>		<b>Annual Exam Syllabus</b>		
<b>Serial No.</b>	<b>Unit</b>	<b>Chapter No</b>		<b>Marks</b>
1	<b>Number System</b>	<b>1.Number system</b>	10	<b>10</b>
2	<b>Algebra</b>	<b>2. Polynomial 4.L.Eq.in two variable</b>	20	<b>20</b>
3	<b>Co-ordinate Geometry</b>	<b>3.Co.ordinate</b>	4	<b>4</b>
4	<b>Geometry</b>	<b>5.Euclid geometry  6.Lines and angles  7.Triangles  8.Quadrilaterals  9.Circles</b>		<b>27</b>
5	<b>Mensuration</b>	<b>10.Heron's formula 11. surface area &amp;volume</b>	13	<b>13</b>
6	<b>Statistics</b>	<b>12.statistics</b>	6	<b>6</b>

**Total=80**