

N. C. JINDAL PUBLIC SCHOOL PUNJABI BAGH, NEW DELHI ANUUAL 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
	Number System	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	4/1/2023	4/6/2023	4
		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.		4/10/2023	4/15/2023	6
		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.		4/17/2023	4/21/2023	7
		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.)		4/24/2023	4/28/2023	7
	Co-ordinate geometry	The Cartesian plane, coordinates of a point,	1	5/1/2023	5/6/2023	6
		names and terms associated with the coordinate plane, notations.		5/8/2023	5/12/2023	7
	linear equations in two variables	Recall of linear equations in one variable.		5/15/2023	5/18/2023	4
		Introduction to the equation in two variables. Focus on linear equations of the type $ax + by + c = 0$.		7/1/2023	7/7/2023	8

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Mathematics Text Book for class		.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	7/10/2023	7/15/2023	8
	Heron's Formula	Area of a triangle using Heron's formula (without proof)	1	7/17/2023	7/21/2023	7
	Introduction to Euclid's geometry	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	7/24/2023	7/28/2023	7
	Statistics	Bar graphs, histograms (with varying base lengths),	1	31--07-2023	8/5/2023	8
		frequency polygons.		8/7/2023	8/11/2023	7
	lines and angles	(Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180° and the converse.	1	8/14/2023	18-08-2023	7
		(Prove) If two lines intersect, vertically opposite angles are equal.		8/21/2023	25-08-2023	7
		(Motivate) Lines which are parallel to a given line are parallel.		8/28/2023	9/2/2023	5
	Revision		1	9/4/2023	9/14/2023	8
	Half Yearly/ Mid Term Exam		1	9/15/2023	9/30/2023	HY
	polynomials	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	10/3/2023	10/6/2023	4
		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.		10/9/2023	10/13/2023	7

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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>		10/16/2023	11/3/2023	15
triangles	<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>	2	11/6/2023	11/10/2023	7
	<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>		11/16/2023	11/24/2023	10
	<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>		11/28/2023	12/5/2023	9
	<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>		12/11/2023	12/15/2023	7

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	quadrilaterals	(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	12/18/2023	12/22/2023	7
	circles	(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	12/26/2023	12/30/2023	7
		(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.		1/15/2024	1/20/2024	8
		(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° and its converse.		1/22/2024	1/25/2024	4
	surface areas and volumes	Surface areas and volumes of spheres (including hemispheres)	2	1/29/2024	2/2/2024	5
		right circular cone		2/5/2024	2/9/2024	7
	Revision		2	2/12/2024	2/17/2024	7
	Annual Exam		2	2/19/2024	2/28/2024	AE

Subject Co-ordinator : Name Mr. P.C Jha Sign _____

N.C. JINDAL PUBLIC SCHOOL
MARKING SCHEME OF CLASS IX, TCHR: VD

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

Co-ordinator Name : _____ Sign _____

Subject Teacher :

Name : _____ Sign _____

Name : _____ Sign _____

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Name : _____ Sign _____

Class 9 th Mathematics Annual Exam Syllabus				
Serial No.	Unit			Marks
1	Number System			10
2	Algebra			20
3	Co-ordinate Geometry			4
4	Geometry			27
5	Mensuration			13
6	Statistics			6

Total=80