



RUBY PARK PUBLIC SCHOOL

SYLLABUS FOR THE ACADEMIC SESSION 2022-23

Subject - Mathematics

CLASS - IX

Month	Unit	Topic	Sub - Topic	Activity
April	1.	Number system	<ul style="list-style-type: none"> 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, 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. Definition of nth root of a real number. Rationalization (with precise meaning) of real numbers of the type $\frac{1}{a+b\sqrt{x}}$ and $\frac{1}{\sqrt{x}+\sqrt{y}}$ (and their combination) where x and y are natural numbers & a, b are integers. 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.) 	Square Root Spiral
	2.	Polynomials	<ul style="list-style-type: none"> Polynomials in one variable Zeroes of a polynomial Remainder theorem Factor theorem Factorisation of polynomials Algebraic Identities. 	

May	3.	Introduction to Euclid's geometry	<p>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.</p> <ul style="list-style-type: none"> • (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. 	
Periodic Test 1				
June	4.	Lines & Angles	<ul style="list-style-type: none"> • If a ray stands on a line, then the sum of the two adjacent angles so formed is 180° and the converse • If two lines intersect, vertically opposite angles are equal. • Lines which are parallel to a given line are parallel 	
July	5.	Triangles	<ul style="list-style-type: none"> • Criteria for congruence of triangle • The angles opposite to equal sides of a triangle are equal. • The sides opposite to equal angles of a triangle are equal. 	
	6.	Coordinate Geometry	<ul style="list-style-type: none"> • The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notation. 	Street Plan
	7.	Linear Equation in Two variables	<ul style="list-style-type: none"> • Recall of linear equations in one variable. • Introduction to the equation in two variables. • Solution of a Linear Equation • Graph of a Linear Equation in Two Variable. 	
August	8.	Statistics	<ul style="list-style-type: none"> • Bar graphs, histograms (with varying base lengths), and frequency polygons. 	
	9.	Quadrilaterals	<ul style="list-style-type: none"> • The diagonal divides a parallelogram into two congruent triangles. • In a parallelogram opposite sides are equal, and conversely • In a parallelogram opposite angles are equal, and conversely. • A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal • In a parallelogram, the diagonals bisect each other and conversely . 	Mid Point Theorem
September	10.	Quadrilaterals Continued	<ul style="list-style-type: none"> • Mid-Point theorem and its converse. 	
Periodic Test 2				
October	11.	Heron's Formula	<ul style="list-style-type: none"> • Area of a triangle. 	
November	12.	Surface Area and Volume	<ul style="list-style-type: none"> • Surface areas and volumes of spheres (including hemispheres) and right circular cones 	

Periodic Test 3

December & January	13.	Circles	<ul style="list-style-type: none"> • Theorems : Equal Chords subtend equal angles at the centre. Angle subtended by an arc at the centre is double the angle subtended by it at the circumference. • Other theorems. • Sums based on the theorems taught. • REVISION 	Angle subtended at the centre of the circle
February	Revision Annual Examination			

Syllabus for Annual Examination : Entire syllabus as prescribed by CBSE

