The Orchid School
Baner
Syllabus Overview 2015- 2016
Std IX
Subject : MATHS

Month	Lesson / Content / Name of the Book	Expected Learning Objective	Activities/FAs Planned
	Number Systems - Types of numbers,Irrational numbers,Real numbers and their decimal expansions	The students will identify rational and Irrational Numbers	FA1 Test 1 planned
MARCH/APRIL	Number Systems-Representing real numbers on a number line,Operations on real numbers,Laws of exponents for real numbers	The students will represent Real numbers on a Number line by square root spiral and successive magnification method. To simplify the following expressions using laws of exponents.	Square root - spiral Activity FA1 Test 2 planned
	Polynomials-Introduction,Polynomials in one variable	Students will know the basic concept of - variable,coefficient and constant.They will recall the standard identities.	
	Polynomials-Zeroes of a polynomial,Remainder Theorem	Students will find the zero (value) of the polynomial and also will verify whether the given value are the zeroes of the polynomial.They will be able to find the remainder using the remainder theorem or division method.	Exercise questions
	Polynomials-Factorisation of Polynomial,Algebraic Identities	Students would factorise the given expression using the Factor theorem and by splitting the middle term.They will evaluate or factorise the given expression using identities.	Exercise questions

JUNE	Co-ordinate Geometry- Introduction,Cartesian System,Plotting a point in the plane if its Co-ordinates are given	Students will know the basic concepts - number line,coordinate axes,origin, quadrants,abscissa,ordinate. Students will plot the co-ordinates of the given points in the plane.	Exercise questions Weekly Test
	Introduction to Euclid's geometry - Introduction,Euclid's definitions,Axioms and Postulates,Equivalent versions of Euclid's Fifth Postulate	Students will define Euclid's five postulates.Students will understand the difference between Axioms and postulates and their relevance in Geometry and mathematics.Students will rewrite Euclid's Fifth Postulate	Exercise questions Weekly Test
	Revision	Students will discuss and solve the given worksheet and extra questions	
	Exams		
FA 1			
	Lines and Angles-Introduction,Basic terms and definitions,Intersecting lines and non-intersecting lines,pairs of angles	Students will state the different properties, define the terms and use them to solve the questions.	Exercise questions

Month	Topic	Learning Outcome	Activity/Assessment
JULY	**Lines and Angles-Pairs of angles,parallel lines and a transversal,line parallel to the same line,angle sum property of a triangle**	**All Students will apply the learnt properties and concepts and solve questions.**	
	Triangles-Introduction,Congruence of triangles,criteria for congruence of triangles.	**Students will understand the proofs of congruency tests.**	**Activity on proof of SAS test**
	Triangles-Properties of triangles, More criteria for congruence of triangles.	**Students will state and apply the different properties of a triangles.**	**Exercise questions**
	Triangles-Inequalities in a triangle	**Students will understand inequalities in triangles and theorem related to the sides of triangles and angles of a triangle.**	**Weekly test**
AUG	**Heron's formula- Introduction,Area of a Triangle -by Heron's formula**	**Students state the Heron's formula for area of a triangle.**	
	Heron's formula - Application of Heron's formula in finding areas of quadrilaterals.	**Students apply the Heron's formula to solve problems**	**Weekly test**
	Quadrilaterals - Introduction,Angle sum property of a quadrilateral,Types of quadrilaterals,properties of a parallelogram	**All students state and apply properties of a quadrilateral.**	
	Quadrilaterals - Another condition for a quadrilateral to be a parallelogram,The mid-point theorem	**Students prove the mid point theorem.**	**Activity to prove Mid Point Theorem**

FA 2			
SEPT	Linear Equations in two variables - Introduction,Linear equations,Solution of a linear equation	Students find different solutions for a given equation.	Activity- To obtain a linear equation and draw a graph which represents the linear equation.
	Linear Equations in two variables- Graph of a linear equation in two variables	Students find and plot the solution of a given linear equation graphically.	
	Linear Equations in two variables Equations of lines parallel to x-axis and y-axis.	Students solve the given equation and represent the solution on a number line and a cartesian plane.	Weekly test
	Revision		
	Revision		
SA 1			

OCT	**Areas of Parallelograms Triangles- Introduction ,Figures on the same base and between the same parallels, parallelograms on the same base and between the same parallels.**	**Students understand and analyse geometrical figures and application of theorem**	**Activity to prove Parallelograms based on same base and between same parallels are equal in area**
	Areas of Parallelograms Triangles - Triangles on the same base and between the same parallels.	**To understand and analyse geometrical figures and application of theorems**	**Weekly Test**
	Circles- Introduction,Circles and its related terms,Angle subtended by a chord at a point	**Students prove theorems and apply them in problem solving**	
	Circles - Perpendicular from the centre to a chord,circle through three points,Equals chords and their distances from the centre	**All students prove theorems and apply them in problem solving**	
NOV	**Circles- Angle subtended by an arc of a circle,Cyclic quadrilaterals**	**Students state the properties of Cyclic Quadrilateral and apply it to solve problems**	**Proof of Cyclic Quadrilateral properties through Math lab activity**
	Constructions - Introduction,basic constructions	**Students will do some basic angle constructions.**	
FA 3			

DEC	**Constructions - Some Constructions of triangles**	**Students will construct triangles when certain conditions are given.**	**To construct a triangle for the given conditions.**
	Statistics - Introduction,collection of data,presentation of data	**Students will gather and present data in an organized manner.**	
	Statistics - Graphical representation of data , measures of central tendency	**Students will measure central tendencies (Mean , Median ,Mode) of the given data**	
	Probability	**All students will find the probability of a given event.**	**Exercise questions**
JAN	**Surface Areas and Volumes - Introduction, Surface area of a cuboid and a cube**	**Students will apply the learnt concepts and formulas to find the surface area of a cuboid and a cube.**	**Exercise questions**
	Surface Areas and Volumes - Surface area of a right circular cylinder	**Students apply the learnt concepts and formulas in day to day scenarios to solve questions.**	
	Surface Areas and Volumes - Surface area of a right circular cone	**Students will apply the learnt concepts and formulas to find the surface area of a right circular cone to solve questions.**	**Exercise questions**
	Surface Areas and Volumes - Surface area of a sphere	**Students apply the learnt concepts and formulas to find the surface area of a spherical object.**	**Weekly test**

FA 4			
FEB	**Surface Areas and Volumes - Volume of a Cuboid and a cylinder**	**Students will apply the learnt concepts and formulas to find volume of a cuboidal or cylindrical object.**	
	Surface Areas and Volumes - Volume of a right circular cone and sphere	**All Students will apply the learnt concepts and formulas to find volume of a spherical object or a right circular cone.**	**Weekly test**
	Revision		
SA 2			