

Subject : Math
 Grade : X
 Year : 2019-20



Year Planner

Text book used: NCERT Mathematics Textbook

Month & No. of Teaching Days	Units	Sub- Units	Objectives	Activities Planned	Assessment / Recap
Feb/ March/ April (30)	Polynomials	*Zeroes of Polynomial *Relationship between zeroes and coefficients of quadratic polynomials *Division Algorithm	Students will be able to *Recall the concepts of zeroes of a polynomial, value of a polynomial, types of polynomials, *Find relation between zeroes and coefficients of Quadratic and cubic polynomials *Solve problems on division algorithm.		Worksheet -1 Slip test-1
	Quadratic Equations	*Standard Form *Solutions of Quadratic Equations by Factorization & by quadratic formula *Relation between Discriminant and nature of roots.	Students will be able to: *Solve problems. *Apply Quadratic equations in real life situations.		
	Trigonometry	*Trigonometric Ratios * Trigonometric Identities	Students will be able to *Acquire knowledge of Trigonometric ratios, * Find values of Standard angles & Complementary angles. * Solve problems on Identities.	Activity to find Trigonometric Ratios using different triangles Short cuts to find ratios of standard angles - 0° , 30° , 45° , 60° , 90° .	Worksheet-2
June (16)	Application of Trigonometry	*Heights & Distances	Students will be able to *Apply knowledge of standard values of	Students make clinometer & demonstrate its usage	Worksheet-3 Slip test-2

Month & No. of Teaching Days	Units	Sub- Units	Objectives	Activities Planned	Assessment / Recap
			trigonometric ratios and solving problems of Heights & Distances	in calculating the heights of objects around them.	
	Triangles	*Similar figures *Similarity of Triangles * Theorems	Students will be able to *Identify similar triangles. *Solve problems to find unknown sides of similar triangles. *Apply BPT, Areas theorem and Pythagoras theorem to solve problems.	Activity on Basic Proportionality Theorem, Pythagoras theorem Activity on proving Pythagoras Theorem	
July (24)	Statistics	*Mean *Median * Mode * Cumulative frequency distribution Graphs – Ogives * Empirical relationship	Students will be able to * Apply the knowledge of calculating measures of central tendency of grouped data using formulae of Mean, Median & Mode in solving problems. * Draw ogives for more than and less than type frequency distribution tables. *	Graphical representations of data – Ogives Finding median using Ogives	PT-1 (Chapters:2,4,8,9) Slip test-3 PORTFOLIO -1 Worksheets 4 & 5
	Probability	*Theoretical Approach	Students will be able to *Learn importance of probability in daily life. *Solve problems on probability.	Activity to prove that the sum of the Probabilities of all elementary events is one.	
	Real Numbers	*Euclid's Division Lemma *Fundamental Theorem of arithmetic * Proofs of irrationality of $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ * Decimal representation of numbers as terminating	Students will be able to *Understand Euclid's Division Lemma * Understand Euclid's division Algorithm *Apply the lemma and algorithm to find HCF of numbers.		

Month & No. of Teaching Days	Units	Sub- Units	Objectives	Activities Planned	Assessment / Recap
		or non-terminating decimals.	* Solve problems on irrationality proofs and decimal representations.		
	Pair of Linear Equations of 2 variables	* Solving linear Equations in 2 variables - Algebraic Methods of substitution, Elimination and Cross Multiplication.	Students will be able to *Solve Pair of Simultaneous Equations by the three methods. *Identify the conditions of consistency and inconsistency *Solve word problems.		
August (22)	Pair of Linear Equations of 2 variables(contd..)	*Graphical Method	Students will be able to *Solve equations graphically.	Solving simultaneous equations using graphs	Slip test-4 Worksheets-6 & 7
	Arithmetic Progressions	*A. P * nth Term derivation * Sum of n terms - S_n	Students will be able to * Identify whether a given sequence is in A.P. * Find the nth term. * Calculate sum of n terms of an A.P * Applying knowledge of A.P. in solving problems in daily life	Activity to prove the given series is in AP Finding sum of 'nth' term of A.P.graphically.	MA -1
	Co-ordinate Geometry	*Distance Formula *Section formula *Area of triangle formula	Students will be able to * Find distance between 2 points *Calculate Area of a Triangle given vertices. * Find the ratio in which a point divides a given line.	Activity on finding the distance between 2 points using graph sheet	
September (7)	Revision	-----	-----	-----	Revision Worksheet-1 Half Yearly exam/ (PT-2) Chapters:2,4,6,8,9,14,15
October (17)	Circles	*Tangents to a circle.	Students will be able to *Identify properties of Circles	Proving that lengths of tangents to a circle	Worksheet -8 Slip test-5

Month & No. of Teaching Days	Units	Sub- Units	Objectives	Activities Planned	Assessment / Recap
		*Number of Tangents at different points on and outside the circle.	*Prove theorems on tangents of circles. *Solve problems on circles and tangents to a circle.	from an external point are equal by paper folding method.	
	Constructions	*Division of Line Segment *Construction of Tangents *Construction of a triangle similar to a given triangle.	Students will be able to *Divide a line segment in a given ratio. *Construct tangents to a circle. * Construct a triangle similar to a given triangle		PORTFOLIO 2
	Areas related to Circles	*Perimeter & Area of Circle	Students will be able to * Find areas and perimeters of shaded regions.		
November (24)	Areas related to Circles (contd..)	* Areas of sectors and segments of a circle.	*Find areas of sectors and segments of a circle.		Worksheets-9 & 10 MA 2
	Surface Areas & Volumes	*Surface Areas and volumes of combination of solids. *Frustum of a cone * Conversion of one solid to another.	Students will be able to *Find areas and volumes of combination solids. *Solve problems on Frustum of a Cone. * Solve problems on conversion of one solid to another.	Proofs of areas of Cylinders, cones, spheres and hemispheres by activity method	Slip test-6 PT-3 Chapter:1,3,5,7
December (11)	Revision				Revision Worksheet 3 Sample Papers
January (19)	Revision and Pre Board Examination 1				
February	Revision and Pre Board Examination 2				