

HANSRAJ MODEL SCHOOL
PUNJABI BAGH, NEW DELHI
CURRICULUM
SESSION: 2024-2025
SUBJECT: MATHEMATICS
CLASS: X

MONTH	TOPIC / SUB-TOPICS	LEARNING INTENTIONS	ACTIVITIES	ASSIGNMENTS
APRIL	<u>REAL NUMBERS</u> * Introduction * The Fundamental Theorem of Arithmetic * Revisiting Rational Numbers and their Decimal Expansions	* Students will be able to understand the concept of Fundamental Theorem of Arithmetic and how to find the HCF and LCM of any two positive integers by using it. * Students will be able to understand how to convert rational numbers to decimal form	* Framing of case study questions .	* <u>Text book assignment</u> Ex-1.1 Q 4,7 Ex-1.2 Q 3
	<u>POLYNOMIALS</u> * Introduction * Geometrical meaning of the zeroes of a polynomial * Relationship between zeroes and coefficients of a quadratic polynomial	* Students will be able to understand the concept of linear, quadratic and cubic polynomial. * Students will be able to understand the Relationship between zeroes and coefficients of a quadratic polynomial.	*Geometrical interpretation of the zeroes of the polynomial. *Book Marks and Foldables	* <u>Text book assignment</u> Ex-2.2 Q1 (v)(vi), Q2 (v)(vi)

<p>MAY</p>	<p><u>PAIR OF LINEAR EQUATIONS IN TWO VARIABLES</u></p> <ul style="list-style-type: none"> * Introduction * Pair of Linear Equations in Two Variables * Graphical Method of Solution of a Pair of Linear Equations. Consistency /Inconsistency * Algebraic Methods of Solution of a Pair of Linear Equations * Equations Reducible to a Pair of Linear Equation in Two Variables 	<p>Students will be able to understand how to solve the pair of linear equations by :</p> <ul style="list-style-type: none"> * Graphical Method * Substitution Method * Elimination Method <p>Students will be able to understand simple situational problems of pair of linear eq. in two variables.</p>	<p>* Stained Glass window activity.</p>	<p><u>Text book assignment</u></p> <p>Ex-3.1 Q6,7 Ex-3.2 Q 3(ii) (iii)</p>
	<p><u>INTRODUCTION TO TRIGONOMETRY</u></p> <ul style="list-style-type: none"> * Introduction * Trigonometric Ratios * Trigonometric Ratios of some specific angles * Trigonometric Identities 	<p>Students will be able to understand how to find the height or length of an object or the distance between two distant objects with the help of trigonometric ratios</p>	<p>* Activity: to find the trigonometric ratios of some specific angles geometrically.</p>	<p><u>Text book assignment</u></p> <p>Ex-8.1 Q5,11 Ex-8.2 Q 2 Ex-8.3 Q2,3</p>
<p>JULY</p>	<p><u>INTRODUCTION TO TRIGONOMETRY (CTD)</u></p>		<p>* Framing of Assertion -Reason questions</p>	

<p style="text-align: center;"><u>TRIANGLES</u></p> <ul style="list-style-type: none"> * Introduction * Similar Figures * Similarity of triangles * Criteria for similarity of triangles 	<p>Student will be able to understand :</p> <p>the concept of similar triangles, Basic Proportionality Theorem, Criteria for similarity of triangles and Pythagoras Theorem</p>	<p>*Activity: Basic Proportionality Theorem by paper cutting and pasting.</p> <p style="text-align: center;">* WORLI ART PAINTING</p>	<p><u>Text book assignment</u></p> <p>Ex-6.2 Q 8,10 Ex- 6.3 Q1,7,15</p>
<p style="text-align: center;"><u>QUADRATIC EQUATIONS</u></p> <ul style="list-style-type: none"> *Introduction *Solution of quadratic equation by factorization *solution of quadratic equation by quadratic formula *Nature of roots 	<ul style="list-style-type: none"> * Students will be able to understand the concept of quadratic polynomial *Difference between quadratic polynomial and quadratic equation <ul style="list-style-type: none"> * Use of quadratic equations in real life situations. 	<p>*Framing Assertion reason questions</p>	<p><u>Text book assignment</u></p> <p>Ex-4.1 Q 1 Ex- 4.2 Q3 Ex- 4.3 Q 4,5</p>

<p>AUGUST</p>	<p><u>PROBABILITY</u></p> <p>*Introduction *Probability: a theoretical approach</p>	<p>Students will be able to understand</p> <p>*That probability of an event lies between 0 & 1 *Probability of a sure event is always 1 *Probability of an impossible event is 0</p>	<p>* Framing of MCQ</p>	<p><u>Text book assignment</u> Exercise-14.1 Q-6,9,12,15,18</p>
	<p><u>COORDINATE GEOMETRY</u></p> <p>* Introduction * Distance formula * Section formula</p>	<p>Students will be able to find distance between 2 objects ;the length of median ; finding centroid of triangle * To find the coordinates of the point (x,y) which dividethe line A(x1,y1) ,B(x2,y2)in the ratio m1:m2</p>	<p>*Rangometry * Flag Posting Race will be organized to teach the concept of“Distance Formula” in Coordinate Geometry</p>	<p><u>Text book assignment</u> Ex-4.1 Q2 Ex-4.2 Q-2,4 Ex-4.3 Q-4,5</p>
<p>SEPTEMBER</p>	<p>Revision of half yearly examination.Half yearly examination.</p>			

<p>OCTOBER</p>	<p><u>SOME APPLICATIONS OF TRIGONOMETRY</u> *</p> <p>Introduction Heights and distances</p> <p><u>CIRCLES</u> *Introduction *Tangents to the circle *No. of tangents from a point on a circle</p> <p><u>AREA RELATED TO CIRCLES</u> *Introduction *Perimeter and area of a circle *Area of sector and segment of a circle</p>	<p>Student will be able to understand the concept of angle of elevation and depression and how to find the height of an object or the distance between two objects</p> <p>Students will be able to understand: *Length of tangents from an external point to a circle are equal. * The difference between tangent, secant, and chord</p> <p>* Students will be able to find the area swept by minute hand of a clock. * Area cleaned by each sweep of the blade of wipers of any car</p>	<p>*Project: Making of Clinometer</p> <p>* Activity: To verify that the length of tangent drawn from an external point to a circle are equal. * Activity: Dot Mandela Mug paintings</p> <p>Activity: To find the area of a circle by cutting it into a number of sectors and arranging them in the form of a rectangle. * 2-d paper model depicting a particular situation and framing case study questions</p>	<p><u>Text book assignment</u> Ex-9.1 Q-3,5,10,11</p> <p><u>Text book assignment</u> Ex-10.1 Q4 Ex-10.2 Q 2,3,6,7,13</p> <p><u>Text book assignment</u> Ex-11.1 Q5,8,9,12</p>
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