

DELHI PUBLIC SCHOOL, JAMMU
SESSION (2024-25)
SYLLABUS BREAK UP

CLASS-X

SUBJECT- Mathematics

OBJECTIVES:

1. To acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills;
2. To develop mastery of basic algebraic skills;
3. To develop an interest in students to study Mathematics as a discipline
4. feel the flow of reason while proving a result or solving a problem;
5. To develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases;
6. To develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics;
7. To develop interest in the subject by participating in related competitions;
8. To develop ability to think, analyze and articulate logically.

Sr.No	Month	Learning outcomes	Name of Chapter	Activities
1	April	<p>A learner will be able to</p> <ul style="list-style-type: none"> • Understand the prime factors using factor tree • Find HCF and LCM using prime factors. • Prove irrationality of a number • Find zeroes and find relations between zeroes and coefficients. • Find polynomial when zeroes are given. • Find polynomial when sum and product of zeroes are given. • Solve quadratic equation by splitting middle term. • Solving quadratic equation by using quadratic formula. • Finding constant when roots are real, equal, distinct. 	<ol style="list-style-type: none"> 1. Real Numbers 2. Polynomials 3. Quadratic equations. 	<ol style="list-style-type: none"> 1. Factor tree using small rings and woolen thread 2. Finding zeroes by using factors with the help of papercutting 3. methods. Videos from mycbseguide Quiz from mycbseguide 4. Kahoot quiz

2	May/June	<p>The learner will be able to</p> <ul style="list-style-type: none"> • Pairs of linear equations their framing and representation on graph. • Conditions of equations for intersecting lines, coincident lines and parallel lines • Elimination method and substitution method for solving pairs of linear equations. • Find nth term for given Arithmetic 	<p>4. Pairs of Linear Equations.</p> <p>5. Arithmetic Progression.</p>	<p>1. Representation of conditions in the form of equations and drawing graphs.</p> <p>2. Ask students to collect data from different source and arrange as an AP. Find 50th, 100th, 150th,</p>
		<ul style="list-style-type: none"> • progression. Sum of nth term of an AP. 		<p>1000th term. Also find sum of 1000 term, 10000 terms.</p> <p>3. Quiz from mycbseguide</p> <p>4.</p>
3	July/August	<p>Learner will be able to</p> <p>Use concept of Thales theorem in solving various problems.</p> <ul style="list-style-type: none"> • Use Similarity of triangle to solve problems. • Find distance between two points Find ratio in which a point divides two lines. • Find mid- point of a line joining two given points • Finding ratios when one ratio is given. • Application of T- Ratios and their proof. <p>Trigonometric identities and applications</p>	<p>6. Triangles</p> <p>7. Coordinate Geometry.</p> <p>8. Introduction To Trigonometry.</p>	<p>1. Prove similarity of given figure using card board. Finding trigonometric ratios using matchsticks and ice cream sticks With the help of students of your class find mid- point between two buildings</p> <p>4. Quiz from mycbseguide/ Kahoot.</p>
4	September	<p>Learner will be able to</p> <p>Finding height and distance using trigonometric ratios of 30^o, 60^o, 90^o Understand concept of tangent and secant to the circle.</p> <ul style="list-style-type: none"> • Tangent from a point to the circle. 	<p>9. Some application To Trigonometry</p> <p>10. Circles.</p>	<p>1. Find height of tree/ building in your area using clinometer Quiz from mycbseguide/ Kahoot</p> <p>2.</p>

5	October	<ul style="list-style-type: none"> Learner will be able to Area and perimeter of circle, semicircles, quadrants. Area and length of arc of sector of circle. Area of major and minor segment. Find surface area of combinations of two or more figures Find volumes of combinations of two or more figures. 	11. Area related to circles 12. Surface area and volume.	1. Prepare cube, cuboid, cone, cylinder sphere and hemisphere using hard sheet and find surface area and volumes of the figure. 2. Quiz from mycbseguide/ Kahoot
6	November	<ul style="list-style-type: none"> Learner will be able to do Calculation of mean by direct, assumed mean, and step-deviation methods. Finding mode and median. Application of empirical formula. Basic concept of probability and its applications Theoretical approach of an event such as that of coin, playing cards, dice, colored balls etc. To understand geometric probability 	13. Statistics 14. Probability	1. Collect data of ages of all students of class 10 th and find mean, mode and median 2. Probability using coloured balls. of school. 3. Quiz from mycbseguide/ Kahoot.
7	December		Pre- board -1	
8	January		Pre-Board- 2	

CT-1

1. REAL NUMBERS
2. POLYNOMIALS
3. QUADRATIC EQUATIONS

HALF YEARLY

1. REAL NUMBERS.
2. POLYNOMIALS.
3. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES.
4. QUADRATIC EQUATIONS.
5. ARITHMETIC PROGRESSION.
6. TRIANGLES.
7. COORDINATE GEOMETRY.
8. INTRODUCTION TO TRIGONOMETRY.
9. APPLICATION TO TRIGONOMETRY.

PRE-BOARD-1

1. REAL NUMBERS
2. POLYNOMIALS
3. PAIR OF LINEAR



- VARIABLES.
4. QUADRATIC EQUATIONS.
 5. ARITHMETIC PROGRESSION.
 6. TRIANGLES.
 7. COORDINATE GEOMETRY.
 8. INTRODUCTION TO TRIGONOMETRY.
 9. APPLICATION TO TRIGONOMETRY.
 10. CIRCLES
 11. AREA RELATED TO CIRCLES.
 12. SURFACE AREAS AND VOLUMES.
 13. STATISTICS.
 14. PROBABILITY.

PRE-BOARD-2

1. REAL NUMBERS
2. POLYNOMIALS
3. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES.
4. QUADRATIC EQUATIONS.
5. ARITHMETIC PROGRESSION.
6. TRIANGLES.
7. COORDINATE GEOMETRY.
8. INTRODUCTION TO TRIGONOMETRY.
9. APPLICATION TO TRIGONOMETRY.
10. CIRCLES
11. AREA RELATED TO CIRCLES.
12. SURFACE AREAS AND VOLUMES.
13. STATISTICS.
14. PROBABILITY

PRE-BOARD-3

1. REAL NUMBERS
2. POLYNOMIALS
3. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES.
4. QUADRATIC EQUATIONS.
5. ARITHMETIC PROGRESSION.
6. TRIANGLES.
7. COORDINATE GEOMETRY.
8. INTRODUCTION TO TRIGONOMETRY.
9. APPLICATION TO TRIGONOMETRY.
10. CIRCLES
11. AREA RELATED TO CIRCLES.
12. SURFACE AREAS AND VOLUMES.
13. STATISTICS.
14. PROBABILITY



HALF YEARLY

1. To verify the conditions for consistency of a system of linear equations in two variables by graphical representation.
2. To verify the basic proportionality theorem by using parallel lines board, triangle cut outs.

ANNUAL

1. To compare the curved surface areas and total surface areas of two right circular cylinders which are formed from rectangular sheets of paper with same dimensions.

To set the idea of probability of an event through a double colour cards experiment.

