BLOOM PUBLIC SCHOOL

C-8 Vasant Kunj, New Delhi

Syllabus for the Session 2025-26

Class: X

Subject: Mathematics

SYLLABUS			
MONTH	**CHAPTER (NCERT Text book)**	**CONTENT (Topics)**	**Practical/Activities**
April	Ch 1: Real Numbers	Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples, Proofs of irrationality of √2, √3 and √5.	**Activity 1: (Activity File)** To draw the graph of a quadratic polynomial and observe: (i) The shape of the curve when the coefficient of x2 is positive. (ii) The shape of the curve when the coefficient of x2 is negative. (iii) Its number of zeroes. **Activity 2: (Activity File)** To obtain the solution of a quadratic equation (x2 + 4x = 60) by completing the square geometrically. **Activity 3: (Activity File)** To sketch the graphs of and , a > 0, a ≠ 1 and to examine that they are mirror images of each other.
	Ch 2: Polynomials	Zeros of a polynomial. Relationship between zeros and coefficients of quadratic polynomials.	
	Ch 4: Quadratic Equations	Standard form of a quadratic equation $ax^2 + bx + c = 0$, $(a \neq 0)$. Solutions of quadratic equations (only real roots) by factorization, and by using quadratic formula. Relationship between discriminant and nature of roots. Situational problems based on quadratic equations related to day to day activities to be incorporated	
May	Ch 3: Pair of Linear Equations with Two Variables	Pair of linear equations in two variables and graphical method of their solution, consistency/inconsistency.	**Activity 4: (Activity File)** To verify the conditions of consistency/ inconsistency for a pair of linear equations

		Algebraic conditions for number of solutions. Solution of a pair of linear equations in two variables algebraically - by substitution, by elimination. Simple situational problems.	in two variables by graphical method. **Activity 5: (Activity File)** To identify Arithmetic Progressions in some given lists of numbers (patterns). **Activity 6: (Activity File)** To find the sum of first n natural numbers.
	Ch 5: Arithmetic Progression	Motivation for studying Arithmetic Progression Derivation of the nth term and sum of the first n terms of A.P. and their application in solving daily life problems.	
July	Ch 6: Triangles	Definitions, examples, counter examples of similar triangles. 1. (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio. 2. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side. 3. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar. 4. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar. 5. (Motivate) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.	**Activity 7: (Activity File)** To verify Basic Proportionality Theorem (Thales theorem).
	Ch 7: Coordinate	Concepts of coordinate geometry, graphs of linear	

	Geometry	equations. Distance formula. Section formula (internal division).	
August	Ch 7: Coordinate Geometry(cont)	Concepts of coordinate geometry, graphs of linear equations. Distance formula. Section formula (internal division).	**Activity:** To find distance between two places on the globe using coordinates of the given place.
	Ch 8: Introduction to Trigonometry	Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined); motivate the ratios whichever are defined at 0˚ and 90 ˚. Values of the trigonometric ratios of 30 ˚, 45 ˚ and 60 ˚ . Relationships between the ratios. Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$. Only simple identities to be given.	**Activity:** Creatively representing the trigonometric ratios.
	Ch 9: Some Applications of Trigonometry	Simple problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation / depression should be only 30°, 45°, and 60°.	**Activity: (Field Activity)** To find the height of a building using a clinometer.
September	Ch 10: Circles	Tangent to a circle at, point of contact 1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact. 2. (Prove) The lengths of tangents drawn from an external point to a circle are equal. 3. (Motivate) Alternative Segment theorem: If a	**Activity 8: (Activity File)** To find the number of tangents from a point to a circle. **Activity 9: (Activity File)** To verify that the lengths of tangents to a circle from some external point are equal.

		chord is drawn through the point of contact of a tangent to a circle, then the angles made by the chord with the tangent are respectively equal to the angles subtended by the chord in the alternate segments.	
October	Ch 11: Areas related to Circles	Motivate the area of a circle; area of sectors and segments of a circle. Problems based on areas and perimeter / circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of 60°, 90° and 120° only. Plane figures involving triangles, simple quadrilaterals and circle should be taken.)	**Activity:** Form frustum of a cone. **Activity:** To determine experimental probability of 1, 2, 3, 4, 5 or 6 by throwing a die 500 times and compare them with their theoretical probabilities. **Activity 10: (Activity File)** To determine experimental probability of a head (or a tail) by tossing a coin 1000 times and compare it with its theoretical probability.
	Ch 12: Surface Area and Volume	Surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones.	
	Ch 13: Statistics	Mean, median and mode of grouped data (bimodal situation to be avoided).	
	Ch 14: Probability	Classical definition of probability. Simple problems on finding the probability of an event.	
November	Revision Pre-Board Exam	Chapter wise revision Sample papers & Previous years Board Exam papers	

December	Revision Pre-Board Exam	Remedial classes	
January	Revision Pre-Board Exam Board Practical Exams	Remedial classes	
February	Revision Board Exam	Remedial classes	
March	Revision Board Exam		
ASSESSMENT SYLLABUS			
PERIODIC ASSESSMENT -1		Ch 1: Real Numbers Ch 2: Polynomials Ch 4: Quadratic equations	
PERIODIC ASSESSMENT -2		Ch 3: Pair of Linear Equations in Two Variables Ch 5: Arithmetic Progression Ch 7: Coordinate Geometry	
MID TERM EXAM		Ch 1: Real Numbers Ch 2: Polynomials Ch 3: Pair of Linear Equations in Two Variables Ch 4: Quadratic Equations Ch 5: Arithmetic Progression Ch 6: Triangles Ch 7: Coordinate Geometry Ch 8: Introduction to Trigonometry	
FINAL EXAMINATION		Ch 1: Real Numbers Ch 2: Polynomials Ch 3: Pair of Linear Equations in Two Variables Ch 4: Quadratic Equations Ch 5: Arithmetic Progression Ch 6: Triangles	

	Ch 7: Coordinate Geometry Ch 8: Introduction to Trigonometry Ch 9: Some Applications of Trigonometry Ch 10: Circles Ch 11: Areas related to Circles Ch 12: Surface Area and Volume Ch 13: Statistics Ch 14: Probability	