

NEW ERA SENIOR SECONDARY SCHOOL

MATHS SYLLABUS 2026 - 27

CLASS – X

MONTH & Days	CHAPTER
APRIL 23 + MAY 2	<p><u>Ch 1 Real Numbers</u></p> <ul style="list-style-type: none">• Fundamental Theorem of Arithmetic• LCM and HCF of numbers using above properties.• Proofs of results - irrationality of $\sqrt{2}, \sqrt{3}, \sqrt{5}$ <p><u>Ch 2 POLYNOMIALS</u></p> <ul style="list-style-type: none">• Zeros of a polynomial.• Geometrical meaning of the zeroes of a polynomial.• Relationship between zeroes and coefficients of a polynomial (quadratic polynomials). <p><u>Ch 6 TRIANGLES</u></p> <ul style="list-style-type: none">• Understanding Similar figures• Definitions, examples, counter examples of similar triangles• (Prove Thales theorem) 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.• (Motivate- converse of Thales theorem) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side. • Similarity of triangles, criteria of similarity and applications• (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional then the triangles are similar.• (Motivate) If the corresponding sides of two triangles are proportional, then their corresponding angles are equal and the two triangles are similar.• (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.
JUNE 19	<p><u>Ch 3 PAIR OF LINEAR EQUATIONS IN TWO VARIABLES</u></p> <ul style="list-style-type: none">• Pair of linear equations in two variables. Geometric representation of different possibilities of solutions: unique sol., no sol. & infinite sol.• Algebraic conditions for number of solutions.• Solution of pair of linear equations in two variables algebraically and graphically.• Substitution and elimination methods.• Simple situational problems. <p><u>Ch 8 TRIGONOMETRIC RATIOS</u></p> <ul style="list-style-type: none">• Trigonometric ratios : definitions and application.• Trigonometric ratios of some specific angles : $0^\circ, 30^\circ, 45^\circ, 60^\circ$ & 90°.• Values (with proofs) of the trigonometric ratios of $30^\circ, 45^\circ$ & 60°.• Relationships between ratios.• TRIGONOMETRIC IDENTITIES :Proof and applications .• $\sin^2 A + \cos^2 A = 1$, $\sec^2 A = \tan^2 A + 1$, $\operatorname{cosec}^2 A = \cot^2 A + 1$
JULY 26	<p><u>Ch 9 APPLICATIONS OF TRIGONOMETRY</u></p> <ul style="list-style-type: none">• Solving simple and believable problems on heights and distances , using trigonometric ratios.• Problems should not involve more than two right triangles.• Angles of elevation / depression should be only $30^\circ, 45^\circ, 60^\circ$.

	<p><u>Ch 13 STATISTICS</u></p> <ul style="list-style-type: none"> • Mean, median and mode of grouped data (bimodal situation to be avoided). • Calculating mean by Direct method , Assumed mean method and step deviation method. • Empirical formula : $3 \text{ median} = \text{mode} + 2 \text{ mean}$ and its application. <p><u>Ch 4 QUADRATIC EQUATIONS</u></p> <ul style="list-style-type: none"> • Standard form of a quadratic equation $ax^2 + bx + c = 0$, ($a \neq 0$). • Solution of the quadratic equations (only real roots) by factorization and by using quadratic formula. • Relationship between discriminant and nature of roots. • Situational Problems related to day to day life based on Quadratic equations.
AUGUST 23	<p><u>Ch 5 ARITHMETIC PROGRESSIONS</u></p> <ul style="list-style-type: none"> • Motivation for studying Arithmetic Progression (Examples of number patterns from our day to day life). • Derivation of standard results of finding the nth term and sum of first n terms of an AP. • Problems based on applications of above formulae. <p><u>Ch 10 CIRCLES</u></p> <ul style="list-style-type: none"> • Concept of tangents and secants. • Proof and applications of the given two theorems. • (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact. • (Prove) The lengths of tangents drawn from an external point to circle are equal
SEPTEMBER 23	<p><u>Ch 11 AREAS OF PLANE FIGURES</u></p> <ul style="list-style-type: none"> • Areas of a circle, areas 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° & 120° only.)
OCTOBER 23	<p><u>Ch 7 COORDINATE GEOMETRY</u></p> <ul style="list-style-type: none"> • Review the concepts of coordinate geometry done earlier including graphs of linear equations. • Derivation and application of Distance formula and section formula (internal). <p><u>Ch 12 SURFACE AREAS AND VOLUMES</u></p> <ul style="list-style-type: none"> • Problems on finding surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones.
NOVEMBER 11	<p><u>Ch14 PROBABILITY</u></p> <ul style="list-style-type: none"> • Theoretical Approach of probability. • Understanding terms like experiment, outcomes, elementary events , sure event , impossible event , complementary event, sample space etc. • Simple problems based on finding probability.
DECEMBER 23	Revision PREBOARD-1
JANUARY 22	PREBOARD-2

**FEB. 23 +
MARCH-0**

Revision