NEW ERA SENIOR SECONDARY SCHOOL, NIZAMPURA
MATHS SYLLABUS 2026-2027
CLASS –VIII

MONTH (No. of days)	TOPICS
APRIL + MAY 23 + 2 (25)	**U-1 (BOOK 1) A SQUARE AND A CUBE** • Introduction to squares • Perfect Squares • Patterns with Squares • Square Roots • Introduction to cubes • Perfect cubes • Patterns with cubes • Cube Roots • Real life applications **U-2 (BOOK 1) POWER PLAY** • Exponential Notation and Operations • Laws of Exponents • Numbers with Negative Exponents • Scientific Notation (Standard Form) • Applications of Powers
JUNE (19)	**U-3 (BOOK 1) A STORY OF NUMBERS (PROJECT)** • The Mechanism of Counting • Development of Tally Marks • Historical Numeral Systems (Egyptian System, Roman Numerals, Mayan Number System, Other Numeral Systems) • Number Bases • Indian System of Numeration • Evolution of Numerical Representation • Place Value System **U-4 (BOOK 1) QUADRILATERALS** • Rectangles and Squares • Angles in a Quadrilateral • More Quadrilaterals with Parallel Opposite Sides • Kinds of Quadrilaterals (kite, Trapezium, Parallelogram, Rhombus, Rectangle, Square) • Properties of different types of quadrilaterals • Quadrilaterals with Equal Side lengths • Perpendicular Bisectors and Diagonals • Application based questions on properties of special quadrilaterals
JULY (26)	**U-5 (BOOK 1) NUMBER PLAY** • Sums of Consecutive Numbers • Consecutive Integer Patterns • Parity Rules (Breaking Even) • Digital Roots • Checking Divisibility • Digits in Disguise

	U-6 (BOOK 1) WE DISTRIBUTE, YET THINGS MULTIPLY • **Properties of Multiplication** • **Distributive Property** • **Algebraic Expressions & Expansion** • **Increase/Decrease in Products (Patterns)** • **Fast Multiplication Methods** • **Algebraic Identities** • **Patterns and Multiple Methods** • **Applications (Area & Real-life Problems)**
AUGUST (23)	**U-7 (BOOK 1) PROPORTIONAL REASONING-1** • **Understanding Ratios & Proportions** • **Simplest Form of a Ratio** • **Similar Figures & Scaling** • **Factors of Change** • **Cross multiplication** • **Sharing in a Ratio (Proportional Division)** • **Unitary Method** • **Applications in Real Life**
SEPTEMBER (23)	**U-3 (BOOK 2) PROPORTIONAL REASONING-2** • **Revision of Proportional Reasoning–1** • **Ratio of maps** • **Ratio with more than two terms** • **Pie chart (Graphical Representation)** • **Direct and Inverse Proportion** **Applications of Proportional Reasoning**
OCT (23)	**U-1 (BOOK 2) FRACTIONS IN DISGUISE** • **Fractions as Percentage** • **Percentage of a quantity** • **Inter conversion of percent, decimal and fraction** • **Percentage increase and decrease** • **Profit and Loss** • **Taxes and Interest**
NOV (11)	**U-2 (BOOK 2)THE BAUDHĀYANAPYTHAGORAS THEOREM** • **Introduction to Baudhāyana (*Sulba-Sutra*)** • **Doubling a Square** • **Halving a Square** • **Isosceles Right Triangle** • **Combining Two Squares** • **Baudhāyana Theorem (Pythagoras Theorem)** • **Baudhāyana (Pythagorean) Triples** • **Primitive & Non-Primitive Triples (Based on common factors)** • **Applications (Finding unknown sides, diagonals, solving geometry problems)**

DEC (23)	**U-4 (BOOK 2) EXPLORING SOME GEOMETRIC THEMES** • **Fractals: Meaning of fractals (self-similar shapes)** • **Visualising / Imagining Solids** • **Nets of Solids** • **Shortest Path on Surfaces** • **Projections, Shadows and Projections** • **Isometric Drawings / Grids** • **Visual Puzzles & Illusions (Activities)**
JAN (22)	**U-5 (BOOK 2) TALES BY DOTS AND LINES** • **The Balancing Act (Mean Concept)** • **Median and Data Description (Mean, Median, Range)** • **Visualising Data and Interpreting Data (Line Graphs)** • **Infographics and Data Representation** **U-6 (BOOK 2) ALGEBRA PLAY** • **Number Tricks** • **Number Pyramids** • **Fun with Grids (Calendar Magic and Algebra Grids)** • **Decoding Divisibility Tricks**
FEB (23)	**U-7 (BOOK 2) AREA** • **Area of Rectangle and Square** • **Area of Triangle** • **Area of any polygon** • **Area of Parallelogram** • **Area of Rhombus** • **Area of Trapezium** • **Areas in Real Life**