Annual Syllabus
Class-VIII (2025-26)
Subject: Mathematics

Chapter Name	Content	Learning Outcomes	Suggested Activities
Chapter – 1 Rational Numbers	**Class VII*** Multiplication and Division of Integers. **(Use Worksheet No. 5, 6, 7, 8, 42, 43 dated 02.08.21 to 13.08.21 and 27.12.21 to 31.12.21)** **Class VIII** Introduction, Properties of Rational Numbers **(Use Worksheet No. 1, 2, 3, 4, 5, 6 dated 06.04.21 to 22.04.21)**	The learner will be able to: ▪ Generalize properties of addition, subtraction, multiplication, and division of rational numbers through patterns. ▪ Find out as many rational numbers as possible between two given rational numbers.	▪ Activity No. 9, 11, 35. NCERT Lab Manual https://ncert.nic.in/science-laboratory-manual.php?ln=en ▪ **Who Am I?** – Give clues (e.g., "I am a rational number greater than -0 but less than 1") and let students guess the number. ▪ **Number Line Walk** – Draw a large number line on the floor and let students place given rational numbers at the correct positions.
Chapter – 2 Linear Equations in One Variable	**Class VII*** Multiplication & Division of Integers, Multiplication & Division of Fraction, Multiplication & Division of Decimal. **(Use Worksheet No. 5, 6, 7, 8, 11, 12, 13 dated 02.08.21 to 13.08.21 and 27.08.21 to 06.09.21)** **Class VIII** Introduction, Solving equations having the variable on both sides, Reducing equations to simpler form **(Use Worksheets No. 5, 6, 7, 8, 9 dated 02.08.21 to 16.08.21)**	The learner will be able to: ▪ Solve problems based on linear equation in one variable. ▪ Solve puzzles and daily life problems using variables.	▪ **Balance the Equation** – Use a weighing scale model to demonstrate how keeping both sides equal helps solve an equation. ▪ **Match the Equation** – Provide real-life situations (e.g., "A pen costs ₹x, and 3 pens cost ₹30") and ask students to write and solve the equation. ▪ **Equation Bingo** – Create bingo cards with different equations, call out solutions, and let students mark the correct ones.
Chapter – 3 Understanding Quadrilaterals	**Class VII*** Pair of lines, Checking for parallel lines, Medians of a triangle, Altitudes of a triangle, Exterior angle of a triangle and its property, Angle sum property of a triangle, Equilateral and Isosceles triangle, Sum of the lengths of two sides of a triangle, Right angled triangle, and Pythagoras property.	The learner will be able to: ▪ Solve problems related to angles of quadrilateral using angle sum property. ▪ Verify properties of parallelogram and establishes	▪ **Diagonals of a polygon**- Making, identification of vertices & counting of Diagonals of a polygon with the help of students.

	(Use Worksheet No. 14, 15, 27, 28, 29, 30 dated 10.09.21 to 13.09.21 and 29.10.21 to 12.11.21) **Class VIII** Introduction, Sum of the measures of the exterior angles of a polygon, Kinds of quadrilaterals, Some special parallelograms **(Use Worksheets No. 20, 21, 22, 23, 24, 25, 26 dated 01.10.21 to 25.10.21)**	the relationship between them through reasoning. ▪ Generalize properties of different types of quadrilaterals.	▪ To make parallelogram, square, rectangle, rhombus, and trapezium using set squares ▪ **(Activity No. 22: NCERT Math Lab Manual).** https://ncert.nic.in/science-laboratory-manual.php?ln=en
Chapter – 4 Data Handling	**Class VII*** Range, Mean, Median, Mode, Bar Graph. **(Use Worksheet No. 23, 24, 25, 26 dated 11.10.21 to 25.10.21)** **Class VIII** Looking for Information, Circle Graph or Pie Chart, Chance and Probability	The learner will be able to: ▪ Draw and interprets bar charts and pie charts. ▪ Make hypothesis on chances of future events on the basis of its earlier occurrences or available data like, after repeated throws of dice and coins.	▪ **Survey & Graphs** – Conduct a class survey on favourite sports and represent the data using bar graphs and pie charts. ▪ **Dice Probability** – Roll a dice 50 times, record outcomes, and calculate the probability of each number. ▪ **Weather Data Analysis** – Collect temperature data for a week and analyze it using mean, median, and mode.
Chapter – 5 Squares and Square roots	**Class VII*** Exponents, Laws of Exponents **(Use Worksheet No. 16, 17, 18 dated 17.09.21 to 24.09.21)** **Class VIII** Introduction, Properties of square numbers, Some more interesting patterns, Finding the square of a number, Square Roots, Square roots of decimals. **(Use Worksheets No. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 dated 23.08.21 to 27.09.21)**	The learner will be able to: ▪ Find square and square roots of numbers using different methods. ▪ Use square roots in solving problems of daily life.	▪ **Play with straws**: To make square using straw and reshape the figure by shifting the straws ▪ **Perfect Square Hunt** – Give students a number chart and ask them to highlight all perfect squares. ▪ **Square Root Relay** – Form teams, give each a square number, and have them race to find its square root. ▪ **Magic Squares** – Let students create or solve 3x3 or 4x4 magic squares using perfect squares.
Chapter – 6 Cubes and Cube Roots	**Class VII*** Exponents, Laws of Exponents	The learner will be able to: ▪ Find cube and cube roots of a number.	▪ Finding Volume of different size RUBIK'S CUBE.

	(Use Worksheet No. 16, 17, 18 dated 17.09.21 to 24.09.21) **Class VIII** Introduction, Cubes and Cube roots **(Use Worksheets No. 29, 30, 31, 32, 33, 34 dated 08.11.21 to 29.11.21)**		• **Cube Number Hunt** – Give students a number chart and have them highlight all perfect cubes. • **Building Blocks Challenge** – Use small cubes (or draw them) to visualize numbers as perfect cubes. • **Cube Root Relay** – Form teams, give each a cube number, and have them race to find its cube root.
➢ The above content must be completed for Mid Term Examination by **6th September, 2025**. ➢ Mental Maths & Maths Lab Activities ➢ Revision of syllabus for Mid Term Examination.			

MID TERM EXAMINATION

Chapter – 7 Comparing Quantities	**CLASS VII*** Percentage-another way of comparing quantities, use of percentages, prices related to an item or buying and selling, charge given on borrowed money or simple interest. **(Use Worksheet No. 31, 32, 33, 34, 35 dated 15.11.21 to 03.12.21)** **Class VIII** Recalling ratios and percentages, Finding Discounts, Sales tax/VAT/GST, Compound Interest, Deducing a formula for Compound Interest, Applications of Compound Interest Formula. **(Use Worksheet No. 42, 43 dated 27.12.21 to 31.12.21)**	The learner will be able to: • Apply the concept of percent in profit and loss situation, in finding discount, GST and compound interest.	• Conversation between friends (Role play) to understand profit/loss % and interest. • Connect the concept and procedure to get result.
Chapter – 8 Algebraic Expressions and Identities	**Class VII*** How are expressions formed? Terms of an expression, Like and Unlike Terms, Types of Polynomials **(Use Revision Worksheet No. 3 dated 19.07.21)** **Class VIII** Addition and subtraction of algebraic expressions, Multiplication of algebraic expression: Introduction, Multiplying a monomial by a monomial, Multiplying	The learner will be able to: • Add, subtract, and multiply algebraic expression. • Use various algebraic identities in solving problem of daily life.	• Sorting and writing surrounding patterns. • Checking $(a + b)^2 = a^2 + 2ab + b^2$ through paper cutting. • Checking $(a – b)^2 = a^2 – 2ab + b^2$ through paper cutting. • Checking $(a + b)(a – b) = a^2 – b^2$ through paper cutting. • **(Activity No. 54 and 55: NCERT Math Lab Manual).**

	a monomial by a polynomial, Multiplying a polynomial by a polynomial. **(Use Worksheets No. 35, 36, 37, 38, 39, 40,41 dated 03.12.21 to 24.12.21)**		**https://ncert.nic.in/science-laboratory-manual.php?ln=en**
Chapter – 9 Mensuration	**Class VII*** Visualizing plane figures **(Use Worksheet No. 19, 20, 21, 22 dated 27.09.21 to 08.10.21)** **Class VIII** Introduction, Area of a polygon, Solid Shapes, Surface area of cube, cuboid and cylinder, Volume of cube, cuboid and cylinder, Volume and Capacity **(Use Worksheets No. 27, 28 dated 29.10.21 to 01.11.21)**	The learner will be able to: ▪ Find the area of polygon. ▪ Find the Surface area and volume of 3-D objects in their surroundings.	▪ Demonstrate to differentiate between Surface area and volume of football, lunch box, cylindrical water bottle etc. ▪ Connect the concept with procedure to get result ▪ Nets of 3D figures to understand surface area ▪ Real life applications
Chapter – 10 Exponents and Powers	**Class VII*** Chapter 13: Exponents, Laws of Exponents, Decimal Number System **(Use Worksheet No. 16, 17, 18 dated 17.09.21 to 24.09.21)** **Class VIII** Introduction, Power with negative exponents, Laws of exponents, Use of exponents to express small numbers in standard form.	The learner will be able to: ▪ Solve problems with integral exponents.	▪ **Matching Game** – Prepare flashcards with exponent expressions on one side and their simplified values on the other for students to match. ▪ **Exponential Growth Chart** – Show how numbers grow when repeatedly multiplied by themselves using a chart (e.g., 2^1, 2^2, 2^3 etc.). ▪ **Guess My Power** – Give clues like "I am a power of 3 between 10 and 100" and have students guess the exponent.
Chapter – 11 Direct and Inverse Proportion	**Class VIII** Introduction, Direct proportion, Inverse proportions.	The learner will be able to: ▪ Solve problem based on direct and inverse proportion.	▪ Details of Riyan's Birthday party ▪ Real life examples: Direct and Inverse Variation. ▪ Distinguish different situation of Direct and Inverse Variation by mean of colours.
Chapter – 12 Factorization	**Class VII*** How are expressions formed? Terms of an expression, Like and Unlike Terms, Types of Polynomials **(Use Revision Worksheet No. 3 dated 19.07.21)**	The learner will be able to: ▪ Find factors of algebraic expression. ▪ Divide algebraic expression.	▪ TLM (flash cards) for clarification of concept. ▪ **(Activity No. 76, 77 and 78: NCERT Math Lab Manual).**

	Class VIII Introduction, What is factorization? Division of algebraic expression, Division of algebraic expression continued (polynomial ÷ polynomial) **(Use Worksheet No. 41 dated 24.12.21)**		
Chapter – 13 Introduction to Graphs	**Class VII*** Range, Mean, Median, Mode, Bar Graph. **(Use Worksheet No. 23, 24, 25, 26 dated 11.10.21 to 25.10.21)** **Class VIII** Introduction, Some Applications	The learner will be able to: ▪ Draws and interpret linear graph.	▪ Finding exact location of flower painted on a table cloth. ▪ Identify the location of different seats in a theatre hall. ▪ Identification of a position on globe using latitude as x-axis & longitude as y-axis.

➢ The whole syllabus must be completed for Annual Examination by **31st January, 2026**.
➢ Mental Maths & Maths Lab Activities
➢ Revision of whole syllabus for Annual Examination.

ANNUAL EXAMINATION 2026

Note: The above said syllabus is for assessment purpose only and remaining topics/chapters may be taught as Subject Learning Enrichment.

- **Asterisk (*) marked topics are for concept clarity.**