# Annual Syllabus
# Class-VII (2024-25)
# Subject: Mathematics

| Chapter Name | Content | Learning Outcomes | Suggested Activities |
|---|---|---|---|
| **Chapter-1 Integers** | **CLASS V:** Comparing numbers, big number in practice and outcome in number situation.<br>**(Use Worksheet No. 9)**<br><br>**CLASS VI:** Representation of integers on number line, Addition and subtraction of integers<br>**(Use Worksheet No. 3,4,5,9,10)**<br><br>**CLASS VII:** Multiplication of integers, Properties of multiplication of integers, division of integers, properties of division of integers.<br>**(Use Worksheet No. 1,5,6,7,8)** | The learner will be able to:<br>• multiply and divide two integers.<br>• solve problems involving the multiplication and division of integers in daily life. | • To locate the integers on number line<br>• To multiply the integers on number line<br>• To fill the right integers in the given figure<br>• To find the right key of the doors<br>• To write the appropriate integers in the figure of square<br>• Arrows matching |
| **Chapter-3 Data Handling** | **CLASS V:** Tally Marks, Reading of Bar Graph and line graph<br><br>**CLASS VII:** Representative values, use of bar graphs with a different purpose.<br>**(Use Worksheet No. 23,24,25,26)** | The learner will be able to:<br>• Interpret data using bar graph such as consumption of electricity is more in winter or summer. | • Activity based on the conveyance used by the students.<br>• Role play<br>• run scored by team in first 10 overs etc. |
| **Chapter–5 Lines and Angles** | **CLASS V:** Meaning of line and angle, Angles less than 90°, More than 90°, Straight angles, Types of Polygons<br>**(Use Worksheet No. 96,97,100,103,106)**<br><br>**CLASS VI:** Type of lines parallel and perpendicular, Types of angles- Acute angle, Obtuse angle, Straight angle | The learner will be able to:<br>• classify pairs of angles based on their properties as linear, supplementary, complementary, adjacent and vertically opposite | • Searching examples of angles around us.<br><br>• Role play on recognition of angles and names of angles. |

| | | | |
|---|---|---|---|
| | and Reflex angle **(Use Worksheet No. 24,27,28,29)**<br><br>**CLASS VII:** Introduction, related angles, pair of lines, checking for parallel lines. **(Use Worksheet No. 14,15)** | • find the value of the one angle when the other angle is given. | • Activities described in Pragati Book |
| **Chapter-9 Perimeter and Area** | **CLASS V:** How many squares?, Area and its boundary<br>    **(Use Worksheet No. 110,115,118,124,127,132)**<br><br>**CLASS VII:** Area of parallelograms, Area of triangles, Area of circle<br>    **(Use Worksheet No. 3)** | The learner will be able to:<br>• find out approximate area of closed shapes by using unit square grid and graph sheet.<br><br>• calculate area of the region enclosed in a rectangle, square, triangle. | • In the given grid make rectangles of different sizes but same in area.<br>• Using method of cutting and pasting of paper find the area of parallelogram.<br>• Finding Circumference with the help of thread. |
| **Chapter -12 Symmetry** | **CLASS V:** Do you see the pattern? Does it look the same?<br>    **(Use Worksheet No. 84)**<br><br>**CLASS VI:** Halves and quarters, Play with patterns<br><br>**CLASS VII:** Introduction, Lines of symmetry for regular polygons, Rotational Symmetry, Line Symmetry and Rotational Symmetry | The learner will be able to:<br>• identify symmetrical figures from their environment<br>• differentiate between Line Symmetry and Rotational Symmetry<br>• visualize and draw the mirror image<br>• visualize the symmetry through paper folding activity | Conversation on the idea of symmetry: Artists, professionals, designers of clothing or jewellery…..<br>• Punching game<br>• Copy the diagram about the mirror lines.<br>• Collect and write examples of rotational symmetry from real life. |
| | ➢ **The above syllabus is to be completed for Mid-Term Examination by 13th September, 2024.**<br>➢ **Mental Math & Math Lab Activities**<br>➢ **Revision of syllabus for term examination** | | |
| | **MID TERM EXAMINATION** | | |
| **Chapter-2 Fraction and Decimals** | **CLASS V:** Equivalent fractions, mixed fractions without using terms, Tenths, Hundredths.<br>**(Use Worksheet No. 130,135,141,143)**<br><br>**CLASS VI:** Proper and improper fractions, representation of fractions on number line, Addition and Subtraction of fractions, Addition and Subtraction of decimals, comparing decimals **(Use Worksheet No.18,19,20,21)** | The learner will be able to:<br>• interpret the division and multiplication of fractions.<br>• apply algorithms to multiply and divide fractions and decimals.<br>• solve problems related to fractions and decimals in daily life. | • Introduction using daily life examples.<br>• Colouring/shading equal parts<br>• Work on decimals with the help of Dienes blocks and graph paper. |

| | | | |
|---|---|---|---|
| | **CLASS VII:** Multiplication of fractions, Division of fractions, Multiplication of decimal numbers, division of decimal numbers.**(Use Worksheet No. 10,11,12,13)** | | |
| **Chapter-6 The triangle and its properties** | **CLASS V:** Triangle shape<br><br>**CLASS VI:** Triangle in basic geometrical concepts<br>**(Use Worksheet No. 110)**<br><br>**CLASS VII:** Introduction, 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 triangles and Pythagoras property.<br>**(Use Worksheet No. 27,28,29,30)** | The learner will be able to:<br>• differentiate between median and altitude<br>• relate exterior angle of a triangle with its interior angle .<br>• find unknown angles of a triangle when its two angles are known.<br>• apply the Pythagoras theorem | • Colouring activity to visualization of interior and exterior parts of a triangle.<br>• Role play to understand triangle and its parts<br>• Drawing different types of triangles on dot paper.<br>• Paper folding activity<br>• Making triangles from sticks. |
| **Chapter-7 Comparing Quantities** | **CLASS V:** How big How heavy,comparing lengths and weights<br><br>**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)** | The learner will be able to:<br>• solve problems related to conversion of percentage to fraction and decimal and vice versa.<br>• calculate profit/loss percent and rate percent. | • Conversation between friends (Role play) to understand profit loss, % and interest. |
| **Chapter-10 Algebraic Expressions** | **CLASS VII:** Introduction, How are expressions formed?, Terms of an expression, like and unlike terms, monomial, binomial, trinomial, polynomial, finding the value of an expression. | The learner will be able to:<br>• identify terms of expressions<br>• classify different expressions<br>• add and subtract algebraic expressions. | (Pragati)<br>• Shyana and Bob conversation- role play in the introduction.<br>• Factor tree. |
| **Chapter-11 Exponents and Powers** | **CLASS V:** Multiples and Factors<br><br>**Class VII:** Introduction, exponents, laws of exponents, miscellaneous examples using the laws of exponents, decimal number system, expressing large numbers in the standard form.<br>**(Use Worksheet No. 16,17,18)** | The learner will be able to:<br>• simplify problems involving multiplication and division of large numbers by using exponential form of numbers. | Pragati<br>• Conversation between Yogesh and Kavita<br>• Is your secret intact? |

| | | | |
|---|---|---|---|
| **Chapter-13 Visualizing Solid Shapes** | **CLASS V:** Basic geometrical shapes<br><br>**CLASS VI:** 2D and 3D shapes<br><br>**CLASS VII:** Introduction,: plane figures and solids figures, faces, edges and vertices, nets for building 3D shapes, drawing solids on a flat surface, viewing different sections of a solid<br>**(Use Worksheet No. 21,22)** | The learner will be able to:<br>• visualize solid shapes and can draw their nets<br>• recognize and draw the top, front and side views of 3D objects. | (NCERT)<br>• Nets for 3-D figures.<br>• To draw solid shapes on graph paper.<br>• Oblique and isometric sketches. |

> **The whole syllabus is to be completed for Annual Examination by 31ˢᵗ January, 2025.**
> **Mental Math & Math Lab Activities**
> **Revision of whole syllabus for Annual Examination**

## ANNUAL EXAMINATION

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