

**HANSRAJ MODEL SCHOOL**  
**PUNJABI BAGH, NEW DELHI**  
**ACADEMIC PLAN**  
**SESSION 2024-2025**  
**SUBJECT - MATHEMATICS**

**CLASS VI**

**TERM 1/ Half Yearly**

<b><u>MONTH</u></b>	<b><u>TOPIC-SUBTOPIC</u></b>	<b><u>LEARNING INTENTIONS</u></b>	<b><u>ACTIVITY</u></b>	<b><u>ASSIGNMENTS</u></b>
<b><u>APRIL</u></b>	<b><u>L-1</u></b>  <b><u>NATURAL NUMBERS AND WHOLE NUMBERS</u></b> <ul style="list-style-type: none"> <li>• Roman numerals</li> <li>• Number line</li> <li>• Successor and predecessor</li> <li>• Operations on whole numbers</li> </ul>	To enable the students to a) understand and write Roman Numerals b) represent whole numbers on number line c) Perform mathematical operations and manipulations with confidence, speed and accuracy. d) Understand BODMAS rule and perform arithmetic operations within the brackets using it. e) Students will be able to develop life skill and critical thinking.	<b>Roman numeral tiles</b>	<b><u>Single line blue copy</u></b> <b><u>A1</u></b> : WS 1 Q1(h,j) Q2 (f,i) Q3 (d) WS-2 Q2(c) , Q3(d) , Q5, 10 WS-3 Q4 (e,f) Q10.  <b><u>A2</u></b> : Ws-4 Q5 WS-5 Q2(e,f) Q3 (c, d, f) Q4 (b, d, e)  <b><u>A3</u></b> : Ws-6 Q3, 6 WS-7 Q3 , 4, 8 WS-8 Q5,7 Ws-9 Q3, 7, 8  <b><u>A4</u></b> : BT Q1.B (a,e) Q3, Q8, Q9(b) Q12 (a,d)

<p><b>MAY</b></p>	<p><b>Ch -8 BASIC GEOMETRICAL CONCEPTS</b></p> <ul style="list-style-type: none"> <li>• Properties of a point and a line</li> <li>• Collinear points</li> <li>• Intersecting lines</li> <li>• Parallel lines</li> <li>• Concurrent lines</li> </ul> <p><b>Ch 2 FACTORS &amp; MULTIPLES</b></p> <ul style="list-style-type: none"> <li>• Divisibility tests</li> <li>• Prime factorisation</li> <li>• HCF</li> <li>• LCM</li> <li>• Properties of HCF and LCM</li> </ul>	<p>To enable the students to</p> <p>a)Recapitulate the concept of Point, line, ray &amp;Line segments.</p> <p>b) Identify the given figures as ray, line or line segments.</p> <p>c) Understand the properties of a Point and a line.</p> <p>d)Understand the concept of Collinear points, Parallel lines, intersecting lines, concurrent Lines and point of Concurrence.</p> <p>e) Students will be able to develop life skills Creative Thinking.</p> <p>To enable the students to</p> <p>a)Understand LCM and HCF and analyse the relationship between them.</p> <p>b)Relate the concept of LCM and HCF in their daily life situations.</p> <p>c)Understand the concept of factors and multiples.</p> <p>d)Understand and use the divisibility rules.</p> <p>e) Students will be able to develop life skills critical thinking</p>	<p><b>FRAYER’S MODEL Using wooden toothpick In example and non – Example.</b></p> <p><b>Mathletics :- finding Factors and multiples using square grid.</b></p>	<p><b><u>GEOMETRY COPY(</u> <u>Single line interleaf )</u></b>  <b><u>A1</u> : Definitions and Properties. WS-1 Q5, 8, Q9.</b></p> <p><b><u>A2</u> : BT Q2, Q3 , Q4.</b></p> <p><b><u>A5</u> : WS-1 Q9, 10 (b,d) WS-2 Q2(b,g,f) WS-3 Q2(a,d) Q3 b , Q4 (b,f)</b></p> <p><b><u>A6</u> : Ws-4 Q1 (c,e,h) Q3 , Q4 d , Q5 c.</b></p> <p><b><u>A7</u> : WS-5 Q1 h , Q2 c, Q3 (e,f,h), Q6 , Q8. WS-6 Q3 (a,c,f) Q6</b></p> <p><b><u>A8</u> : WS-7 Q3, 5 BT: Q1.B. (d), Q3, 5, 7 (b) Q8 b , Q9a , Q10 , Q14.</b></p>
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<p><b>JULY</b></p>	<p><b>Ch 2 (continued)</b></p> <p><b>Ch 3 INTEGERS</b></p> <ul style="list-style-type: none"> <li>• Number line</li> <li>• Absolute value</li> <li>• Operations on integers</li> <li>• Power of integers</li> </ul>	<p>To enable the students to</p> <p>a) Understand the need for Integers.</p> <p>b) Represent Integers on Number Line.</p> <p>c) Find the absolute value of Integers.</p> <p>d) Compare the integers.</p> <p>e) Perform four fundamental operations on Integers Using its properties.</p> <p>f) Solve powers of Integers.</p> <p>g) Students will be able to develop critical thinking.</p>	<p><b>Mandala art on integers</b></p>	<p><b>A9</b> : WS-2 Q3(b, c) , Q4(d,e,h,j) Q6b, Q7a</p> <p><b>A10</b> : WS-3 Q1 (c,d), Q2 (c,d,f) Q3 (e, g, h, j) WS-4 Q3 (b,c,f,g)</p> <p><b>A11</b> : Ws-5 Q3 (h, j) Q6 Q8 (e,f) WS-6 Q3 (e, f) Q4 (e, f)</p> <p><b>A12</b> : Ws-8 Q3(d) Q4(d) Q5 e Q6 c , Q7(d,f) , Q11 d. BT Q1.A.d(solve) Q1.B.(d,e) Q7b, Q9 c.</p>
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	<p><b>Ch 9</b></p> <p><b>LINE SEGMENTS</b></p> <ul style="list-style-type: none"> <li>• Comparison of line Segment</li> <li>• Measuring line Segments</li> <li>• Construction of a Line segment</li> </ul>	<p>To enable the students to</p> <p>a) Draw the line segments using ruler.</p> <p>b) Construct the line segments using ruler and Compass.</p> <p>c) Compare the pairs of line segments using divider</p> <p>d) Construct and analyses the sum and Difference between two line segments.</p> <p>e) Students will be able to develop life skills creative Thinking</p>	<p>(to be assessed by an activity)</p> <p><b>(NOT TO BE INCLUDED AS PEN PAPER TEST)</b></p>	<p><b>All Definitions</b></p>
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<p><b>AUGUST</b></p>	<p><b>CH 10</b></p> <p><b>ANGLES</b></p> <ul style="list-style-type: none"> <li>• Interior and exterior Of an angle</li> <li>• Pairs of angles</li> </ul>	<p>To enable the students to</p> <p>a) Understand about different types of angles.</p> <p>b) Understand the interior and exterior of an Angle</p> <p>c) Understand about the Pairs of angles (adjacent angles, complementary angles, supplementary angles, linear pair &amp; vertically opposite angles)</p> <p>d) Students will be able to develop life skills Creative Thinking</p>	<p><b>Forming different Angles using paper Folding.</b></p>	<p><b><u>A3</u> : Definitions Pg – 159 Q4(b,f) Ws-1 Q1, 4, 7</b></p> <p><b><u>A4</u> : WS-2 Q2, Q4 (a,d ,f, g, h) Q5(a,d,e) Q6 (d,e,f) Q7, Q13 Q15 (b,d)</b></p> <p><b><u>A5</u> : BT Q1.b.(a,c,d,e) Q2, Q4.</b></p>
	<p><b>CH 11</b></p> <p><b>TRANSVERSAL AND PAIR OF LINES</b></p> <ul style="list-style-type: none"> <li>• Angles made by the Transversal</li> </ul>	<p>To enable the students to</p> <p>a) Understand the concept of transversal and the angles made by a transversal.</p> <p>b) Analyse the classification of angle made by a transversal as Interior &amp; Exterior angles, Corresponding and Alternate angles.</p> <p>c) Students will be able to develop life skills Critical Thinking</p>	<p><b>Colour the same angles Formed by a transversal And parallel lines.</b></p>	<p><b><u>A6</u> : Definitons WS-2 Q1, 2 WS-3 Q1. BT Q1. B (a, b,e) Q2 (b) Q4, 5.</b></p>

	<p><b>CH 16 STATISTICS</b></p> <ul style="list-style-type: none"> <li>• Data</li> <li>• Pictograph</li> <li>• Tally marks</li> <li>• Interpretation of bar graph</li> <li>• Drawing of bar graph</li> </ul>	<p>To enable the students to</p> <p>a) Understand the concept of data, pictograph and tally marks.  b) Arrange numerical data in a tabular form.  c) Interpret the data in the form of pictograph.  d) Understand and read the data represented through bar graph.  e) Represent data in the form of bar graph.  f) Develop life skill creative thinking</p>	<p><b>Pictograph / bar graph of favourite sport.</b></p>	<p><b><u>A7</u> : WS- 1 in book , WS-2 in graph .</b></p>
<b>SEPTEMBER</b>	<b>Revision</b>	<b>Term 1/ half yearly examination</b>		

**TERM 2 / FINAL**

<b>OCTOBER</b>	<p><b>CH 4 RATIO, PROPORTION AND UNITARY METHOD</b></p> <ul style="list-style-type: none"> <li>• Ratio</li> </ul>	<p>To enable the students to</p> <p>a) Compare two quantities by division.  b) Understand the terms ratio and proportions.  c) Apply the concept of unitary method on word Problems related to daily life</p>	<p><b>Make a pattern on a graph sheet and find the ratio.</b></p>	<p><b><u>A1</u> : WS-1 Q3 (d,e,f) Q4 (a,d,e) , Q5 (c) , Q 8, Q 10</b></p>
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<p><b>NOVEMBER</b></p>	<ul style="list-style-type: none"> <li>• Proportion</li> <li>• Unitary Method</li> </ul> <p><b>CH 5 PERCENTAGE AND ITS APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>• Percentage</li> <li>• More about percentage</li> <li>• Profit loss</li> <li>• Simple Interest</li> </ul> <p><b>CH 6 INTRODUCTION TO ALGEBRA</b></p> <ul style="list-style-type: none"> <li>• LITERAL AND CONSTANTS</li> <li>• Algebraic Expressions</li> </ul>	<p>situations.</p> <p>To enable the students to</p> <ol style="list-style-type: none"> <li>Infer the concept of percentage through fractions.</li> <li>Convert fraction to percentage and percentage to fraction or decimal.</li> <li>Relate percentage with daily life situations.</li> <li>Consolidate their understanding of percentage, profit &amp; loss and Simple Interest.</li> <li>Apply the concept of profit &amp; loss.</li> <li>Find simple Interest when time is given in days.</li> </ol> <p>e) Students will be able to develop life skills Problem Solving</p> <p>To enable the students to</p> <ol style="list-style-type: none"> <li>Explain the new terms such as literal number, variables, and constants, like and unlike terms.</li> <li>Write the powers of literal numbers.</li> <li>Solve addition and subtraction of algebraic expressions.</li> </ol>	<p><b>Percent magic square</b></p> <p><b>Maze on algebraic expression.</b></p>	<p><b>A 2 : WS-2 Q1(c,f) , Q2(a,d) , Q3(b) , Q4(b,c)</b></p> <p><b>A 3 : WS-3 Q1,3,5,8 BT Q1 B(a,d), Q2(c) , Q3(b) Q7, 11</b></p> <p><b>A 4 : Pg 90 &amp; 91 Q1 (d) ,Q2(c) ,Q3(b) , Q4(d) , Q5(b), Q6(a,d) WS 1 Q1(e,f,) , Q4,8</b></p> <p><b>A5 : Ws-2 Q1b , Q3 Ws-3 Q1b, Q4 Ws-4 Q1c, Q3 , Q6 Ws-5 Q2,4</b></p> <p><b>A6 : BT Q1.A.e , Q1B(c,d), Q2 b , Q5 , 7, 9</b></p> <p><b>A7 WS-3 Q4(a,c, h, g) Q6 (b,g) Ws-5 Q2(d,e,f) Q3 (b,c,e)</b></p> <p><b>A8 Ws-6 Q2(a,c,f) Q3 (d, e,f) ,Q6</b></p>
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	<ul style="list-style-type: none"> <li>• Addition and subtraction of Algebraic expressions</li> <li>• Powers of variables</li> </ul> <p><b>Ch-7 linear equations</b></p> <ul style="list-style-type: none"> <li>• to form linear equation using variables and constant.</li> <li>• To solve linear equation by elimination method.</li> <li>• to solve linear equation and check the corresponding answer.</li> <li>• Substitute the variable and solve the equation</li> </ul>	<p>d) Write algebraic expressions using statements. e) To develop life skill critical Thinking.</p> <p>To enable the students to</p> <ol style="list-style-type: none"> <li>Explain What is a linear equation Using degree of the equation.</li> <li>Form an equation using the constant Variables and arithmetic operations</li> <li>To solve linear equations using different Methods( elimination, transposing)</li> <li>To prove that LHS = RHS using substitution Method.</li> </ol>		<p><b>A9 Ws-7 Q2(b), Q4 BT Q1.B.(b,e) Q14.</b></p> <p><b>A10 Ws-3 Q7, 9,10 Ws-4 Q7,9,10,12</b></p> <p><b>A11 Ws-5 Q2,3,4,6 BT-Q1.B.(a,c,e) Q4 (b,d) Q5 (a,c) Q6b</b></p>
	<p><b>Ch-7 linear equation (continued)</b></p>			

<p><b><u>DECEMBER</u></b></p>	<p><b>CH 14 CONSTRUCTIONS</b></p> <ul style="list-style-type: none"> <li>• Perpendicular Bisector</li> <li>• Bisect a given angle</li> <li>• Construction of special angles</li> <li>• Construction of a perpendicular from a point on the line and not on the line</li> <li>• Construction of a parallel line</li> </ul> <p><b>CH-13 CIRCLES CENTRE RADIUS DIAMETER QUARTER SEMICIRCLE CIRCUMFERENCE CHORDS ARCS</b></p>	<p>To enable students to</p> <p>a) Construct a perpendicular bisector of a given line segment.  b) Bisect a given angle.  c) Construct angles of different measures ( <math>30^\circ</math>, <math>45^\circ</math>, <math>60^\circ</math>, <math>90^\circ</math>, <math>120^\circ</math>, <math>180^\circ</math>) using ruler and compass.  d) Develop life skill problem solving</p> <p>To enable students to</p> <p>A) To differentiate between radius and diameter.  B) To locate centre  C) To find the radius and diameter using formula  D) To draw circle of given radius and diameter  E) To differentiate between chords and radius</p>	<p><b>Transparent tape activity (to introduce the bisector concept)</b></p> <p><b>To be assessed by an activity (not to be included in pen and paper test)</b></p>	<p><b>A1 Definitions Page 204 Q1(c,d,f) Ws-1 Q3, Ws-2 Q2</b></p> <p><b>A2 WS-3 Q1(b,d,e) Q3 ws-4 Q1, Q3 BT Q4,6</b></p> <p><b>All definitions And construction of circle using given radius and diameter.</b></p>
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	<p><b>CH 15 PERIMETER AND AREA</b></p> <ul style="list-style-type: none"> <li>Perimeter and area of a rectangle</li> <li>Perimeter and area of a square</li> </ul>	<p>To enable the students to</p> <p>a) <u>Understand</u> the concept of perimeter and area of a closed figure.</p> <p>b) <u>Relate</u> the concept of perimeter and area in daily life.</p> <p>c) Calculate the perimeter and area of rectangles and squares.</p> <p>d) Develop life skill critical thinking</p>	<p><b>To find the area of a shape of a body (eg: human or animal) on a square grid paper.</b></p>	<p><b>A3 Page 217 Q2(d) Q3(c) Q5</b>  <b>Page 218 Q2c Q3a , Q5</b></p> <p><b>A4 Ws-1 Q2,4,5,7</b>  <b>Ws-2 Q1,3,5</b>  <b>BT Q1.B.(a,c,d) Q3(ii) Q5,6</b></p>
<p><b>JANUARY</b></p>	<p><b>CH 12 TRIANGLES</b></p> <ul style="list-style-type: none"> <li>Types of triangles</li> <li>Angle sum property</li> <li>Ext angle Property</li> <li>More about</li> <li>Triangles</li> </ul>	<p>To enable the students to</p> <p>a) Recall the basic shape of triangle.</p> <p>b) Classify triangles on the basis of sides and angles.</p> <p>c) Know more about triangles such as vertex opposite to a side and exterior angles of triangles.</p> <p>d) Students will be able to develop life skill Creative Thinking</p>	<p><b>To build a tangram of aquatic species on an A-3 sheet.</b></p>	<p><b>A5 All definitions</b>  <b>Ws-1 Q4,5(b) , Q7</b>  <b>Ws-2 Q4,5</b></p> <p><b>A6 Ws-3 Q3 BT</b>  <b>Q1.B(d,e) , Q3.</b></p>
<p><b>FEBRUARY</b></p>	<p><b>Revision</b></p>			