

Subject : MATHEMATICS  
 Grade : VIII  
 Year : 2018-19

YEAR PLANNER

Text book used: Britannica Learning Math Spark

MONTH& NO. OF WORKING DAYS	UNIT	SUB- UNITS	OBJECTIVES	ACTIVITIES PLANNED	ASSESSMENT / RECAP
March/ April [19]	<b>TERM- I</b> <b>Ch 1</b> :Rational Numbers  <b>Ch9</b> : Quadrilaterals.	<ul style="list-style-type: none"> <li>• Properties of Rational numbers.</li> <li>• Representation of rational numbers on the number line.</li> <li>• Find rational numbers between any two rational Numbers.</li> <li>• Classification of Polygons.</li> <li>• Sum of the interior angles of a polygon</li> <li>• Sum of exterior angles of polygon</li> </ul>	<ul style="list-style-type: none"> <li>✓ To verify all the properties: closure, commutative, associative and distributive property for rational numbers.</li> <li>✓ To find rational numbers between two rational numbers.</li> <li>✓ To identify regular and irregular polygons, Concave and Convex polygon and discuss their properties.</li> <li>✓ To understand sum of interior angles is <math>180^{\circ}(n-2)</math></li> <li>✓ To verify the sum of exterior angles of any polygon is <math>360^{\circ}</math>.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Math Lab Activity: [Individual]</li> <li>➤ Graph the number line and locate rational number between two rational numbers.</li> </ul>	Worksheet-1
June [20]	<b>Ch9</b> : Quadrilaterals (cont)  <b>Ch 10</b> : Constructions of Quadrilaterals	<ul style="list-style-type: none"> <li>• Kinds of Quadrilaterals and their properties.</li> <li>• Construction of quadrilaterals:</li> <li>• (i)When four sides &amp; diagonal is given.</li> <li>• (ii) When two diagonals &amp; three sides are given.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To understand the different kinds of quadrilaterals and their properties.</li> <li>✓ To construct different quadrilaterals when their properties are given.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Math Lab Activity: [Individual]</li> <li>➤ Verify the sum of interior angle property of a quadrilateral</li> </ul>	Worksheet-2  Slip Test -1 Slip Test -2

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		<ul style="list-style-type: none"> <li>• (iii) When two sides &amp; three angles are given.</li> <li>• (iv) When three sides &amp; two angles is given.</li> </ul>			
July [24]	<p><b>Ch 4</b> : Playing with Numbers</p> <p><b>Ch6</b> : Linear Equations in One variable.</p> <p><b>Ch15</b>: Representing 3D in 2D.</p>	<ul style="list-style-type: none"> <li>• Numbers in General Form.</li> <li>• Games with numbers.</li> <li>• Letters for digits.</li> <li>• Test of Divisibility of 3, 5, 9 and 11.</li> <li>• Solving equations with numbers on both sides.</li> <li>• Solve real life situation problems.</li> <li>• Solve equations with variables on both sides of equal to.</li> <li>• View of 3D shapes: Plan {top view}, Side view {side elevation}, and front view {front elevation}. Edges, Faces, and Vertices.</li> <li>• Euler's formula.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To identify the sum, difference or product and by trial method identify the missing digits.</li> <li>✓ Use divisibility rules to choose the missing digit so that the number is divisible by 3,5,9 or 11</li> <li>✓ Explain the concept of balancing and relate it to solving equations.</li> <li>✓ Solve real life application questions using linear equations.</li> <li>✓ To recall all 2D and 3D shapes.</li> <li>✓ To discuss their properties.</li> <li>✓ Emphasize on the difference between prism and pyramid.</li> <li>✓ To discuss the number of vertices, faces and edges.</li> <li>✓ To verify the Euler's formula and identify the 3D shape.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Math Lab Activity: [Individual]</li> <li>✓ To form a Linear Equation using numbers and variables and solve it.</li> </ul>	<p>Worksheet-3</p> <p>Revision Worksheet</p> <p><b>P.T. 1 Portion:</b>  <b>Ch 1: Rational numbers</b>  <b>Ch 9 :</b>  <b>Quadrilaterals</b>  <b>Ch 10 :</b>  <b>Construction of quadrilaterals</b></p>

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Aug [21]	<p><b>Ch3:</b> Squares and Square Roots: Cubes and Cube Roots</p> <p><b>Ch2 :</b> Exponents and Powers</p>	<ul style="list-style-type: none"> <li>● Interesting facts on square numbers. Pythagorean Triplet. To find square roots by repeated subtraction, prime factorisation and long division. Estimation of square root of decimals.</li> <li>● Interesting facts on cube numbers. Finding cube root by prime factorisation and estimation.</li> <li>● Laws of Exponents.</li> <li>● Powers with Negative Exponents</li> <li>● Use of exponents in writing scientific form.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To recall prime factorisation and perfect squares and interesting patterns.</li> <li>✓ To explain long division to find square root of a number.</li> <li>✓ To use prime factorisation to identify perfect cubes.</li> <li>✓ To discuss the properties of cube numbers.</li> <li>✓ To estimate the cube root of a number.</li> <li>✓ To understand laws of Exponents.</li> <li>✓ To identify zero power and negative powers.</li> <li>✓ To write very large and very small numbers in Scientific Form.</li> </ul>	<p>Lab Activity :-</p> <p>➤ To understand and develop some patterns of square numbers.</p>	<p>Worksheet- 4</p> <p>Slip Test -3 Slip Test -4</p>
Sep [6]	Half yearly revision	<p><b>Half yearly portion:</b>  <b>Ch 1 :</b>Rational Numbers  <b>Ch2 :</b> Exponents or Powers  <b>Ch3:.</b> Square and Square Root ,Cube and Cube Root  <b>Ch 4 :</b> Playing with Numbers  <b>Ch6:</b> Linear Equations in One variable  <b>Ch9 :</b> Quadrilaterals  <b>Ch10:</b> Constructions of quadrilaterals  <b>Ch 15:</b> Representing 3D in 2D.</p>	Revision Worksheet		



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		<ul style="list-style-type: none"> <li>● Pie chart ,</li> <li>● Histogram and Linear Graph.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To use Standard identities to factorize algebraic expressions.</li> <li>✓ To simplify and identify errors in given expression &amp; correct them.</li> <li>✓ To explain Cartesian plane and four quadrants.</li> <li>✓ To plot points in order to form a line or linear graph.</li> <li>✓ Apply graphs in real life situation</li> </ul>		
Dec [22]	<b>Ch 8:</b> Simple and compound interest	<ul style="list-style-type: none"> <li>● Simple interest</li> <li>● Compound interest and their formulae</li> <li>● Problems on compound interest</li> <li>● Growth and depreciation</li> </ul>	<ul style="list-style-type: none"> <li>✓ To recall simple interest and explain compound interest both half yearly and yearly.</li> <li>✓ To apply the concept of compound interest on the concept of Growth and depreciation</li> </ul>	Lab Activity:To find the formula for future value by using compound interest.	Worksheet- 7  Slip Test - 6
Jan [19]	<b>Ch 11 : Area of Polygons</b>  <b>Ch 12: Volume and surface area</b>	<ul style="list-style-type: none"> <li>● Area of circle and Trapezium ,</li> <li>● Area of irregular polygon.</li> <li>● Surface Area of cube, cuboid and cylinder.</li> <li>● Volume and Capacity</li> </ul>	<ul style="list-style-type: none"> <li>✓ To discuss area of all 2D shapes and area of any irregular quadrilateral.</li> <li>✓ To derive and explain surface area and volume of cube, cuboid and Cylinder.</li> </ul>	➤ Lab Activity:- Paper folding activity to find the total surface area and volume of cuboid.	Worksheet 8  Revision Worksheet  <b>P.T.3 portion</b>

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			<ul style="list-style-type: none"> <li>✓ To discuss conversion of units of volume and capacity</li> </ul>		<b>Ch 7:</b> Commercial Mathematics <b>Ch 5:</b> Algebraic Expressions and Factorization
Feb [6]	<b>Ch14 :</b> Data Handling  Ch 13: Probability	<ul style="list-style-type: none"> <li>● Frequency distribution table.</li> <li>● Bar Graph, Histogram and Pie chart.</li> <li>● Probability</li> </ul>	<ul style="list-style-type: none"> <li>✓ Recall bar graph and double bar graph.</li> <li>✓ To organize data in the form of frequency table.</li> <li>✓ To represent data as a histogram and pie chart.</li> <li>✓ Discuss chance and probability related to real life.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Activity</li> <li>➤ To develop the concept of Probability by using a self-created spinner</li> </ul>	Worksheet- 9
Feb -March	Annual Exam	Annual Exam portion:- <b>Ch 1:</b> Rational Numbers <b>Ch2 :</b> Exponents and Powers <b>Ch 5:</b> Algebraic Expressions and Factorization <b>Ch6 :</b> Linear Equations in One variable <b>Ch 7:</b> Commercial Mathematics Ch 8: Simple Interest and Compound Interest <b>Ch9:</b> Quadrilaterals. <b>Ch 11 :</b> Area of Polygons <b>Ch 12:</b> Volume and surface area <b>Ch14 :</b> Data Handling <b>Ch 16:</b> Introduction to Graphs			Revision Worksheet