

**YEAR PLAN 2018 – 2019**  
**Grade VIII MATHEMATICS**

The academic year is divided into **two** sessions.

**Session One:** June 2018 to October 2018

**Session Two:** November 2018 to March 2019

**Continuous assessments:** July, August, December, January, February

**Summative Assessment I:** October 2018

**Summative Assessment II:** March 2019

Please check the **index page** in the note books for Continuous Assessment Marks.

**Aim:** To acquire knowledge and skills pertaining to the subject, develop confidence to apply the same in daily life situations and appreciate the importance of Mathematics for the smooth functioning of life.

**Enduring Understanding:** To understand and appreciate the importance of the subject in daily life.

**Main Objectives:** This year plan is expected to help students,

1. to become successful learners who enjoy learning;
2. to understand texts of different subjects so as to communicate knowledge and ideas in ways specific to the subject;
3. to articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts;
4. to use technology to access and provide information and to communicate with others;
5. to understand cross-curricular linkages- connect learning across subject areas;
6. to become confident individuals who are able to live safe, healthy and fulfilling lives;
7. to become responsible citizens who make a positive contribution to society;
8. to understand and apply core concepts and knowledge from various subjects to real life experiences;
9. to respect diversity and plurality
10. to exhibit sensitivity towards environmental issues; learn to manage and utilize resources judiciously.

**Session One: June 2018 to October 2018**

<b>Duration</b>	<b>Topic</b>	<b>Specific objectives</b>	<b>Thinking Skills</b>	<b>Learning Process/Activities</b>
June	Ch 1 Rational numbers Ex 1 A,B,C,D,E.  Ch 2 Exponents Ex 2 A,B Ch 3 Squares and square roots Ex 3 A, B, C. Ch 4 Cubes and cube roots Ex 4 A,B. Ch5 Playing with numbers (Activity)	Recall the number system, Properties of rational numbers. Understanding that between any two rational numbers there lies another rational number. Apply Laws of exponent with integral powers. Compute the square root using factors and division method. Compute the cube root using factors.	Planning what to do Sequencing Comparing and contrasting Looking for alternative solutions Analysing relationships	Preparing a table to classify numbers, discussion(seminar) on types of numbers, mind mapping. Representing rational numbers on number line. Simplifying problems using laws of exponents Computing squares and square roots by factor and division method. Computing the cube root using factors Percentage as a fraction and decimal.
July	Ch 11 Algebraic expressions Ex A,B,C,D,E.  Ch 12 Identities Ex 12A, B, C, D(W.S).  Ch 16 Understanding shapes Ex 16 A,B,C Ch 17 Special types of quadrilaterals (only properties)	Mathematical operations using algebraic expressions.  Recalls the identities.  Angle sum property—interior and exterior angles of polygons. Angles of a quadrilateral. Properties of parallelograms.	Asking relevant questions Analysing relationships Extending ideas Posing and defining problems Reasoning Comparing units	Differentiating between addition and multiplication of algebraic expressions. Division of a polynomial by a monomial and binomial. Revising the identities, doing higher order problems .Expanding products, finding out the required expression using identities. Using identities for factorizing. Solving problems based on finding interior and exterior angles of a regular polygon and angle sum property of quadrilateral.
August	Ch 18 Constructions Ex 18 A,B,C,D  Ch 19 Representing 3 D in 2 D.(Project to be done based on the chapter)	Construction of angles, angle bisectors, perpendicular bisectors and quadrilaterals using scale and compass. Develop the ability to use mental arithmetic in doing basic problems of profit, loss and discount.	Comparing symbolic models Extending ideas Reasoning Processing the information Predicting outcomes Comparing and contrasting Classifying	Revising construction of angle bisectors and perpendicular bisectors Construction of different types of quadrilaterals Revising profit and loss through mental maths. Problems based on discount to be solved.

September	Ch 20 Area of trapezium and a polygon Ex 19 A,B, D Ch 23 Probability Ex 23  Ch 13 Factorisation Ex 13 A, B, C, D, E & F (WS)	Area of trapezium, parallelogram and circle. Recall the perimeter and area of plane figures. Generalizing the notions of chance in events like tossing coins, dice etc. Develop the skill to use the appropriate method to factorise a given expression	Comparing and contrasting Processing information Making deductions Drawing inferences	Finding Area and Perimeter of Triangle, Rectangle Squares and circle using formula. Problems on paths inside or outside of a rectangle. Problems based on probability of events to be solved Using identities for factorizing.
October	Ch 22 Data handling Ex 22 A,B  Revision SA1	Arranging ungrouped data into groups, graphical representations.	Planning what to do Sequencing Comparing and contrasting Processing information Applying imagination	Constructing a frequency table using tally marks. Representation of grouped data through bar graphs, pie charts and histograms.

**Session Two: November 2018 to March 2019**

November	Ch 14 Linear Equation in one variable Ex 14 A, B,C (WS) Ch 15 Linear Inequations Ex 15 A,B Ch 6 Sets Ex 6 A,B,C,D	Understand the operations involved in a linear equation. Understands the replacement set and solution set.  Union and intersection of sets. Disjoint and complement set.	Looking for alternative solutions Making deductions	Simple problems based on linear equations including word problems to be solved. Solving problems based on properties of linear inequations and representing on a number line. Representation of set in roster or set builder form. Types of sets. Operations of set
December	Ch 21 Volume and Capacity Ex 21 A,B,C,D	Recall the concept of Volume and Surface area of Cube & Cuboid .Volume and capacity of cylinders.	Looking for alternative solutions	Problems to find the area and Surface area of cube, cuboid and cylinder using formula. To construct an open box using chart paper and finding the surface area and volume.
January	<b>Grade IX</b> Ch 7 Indices  Ch 8 Logarithms  Ch 4 Expansions	Apply the laws of indices to simplify the given expressions.  Identify the specific identity to be used in a given problem	Sequencing Analysing relationships Extending ideas	Doing higher order simplifications using the laws of indices. Revising the identities, doing higher order problems .Expanding products, finding out the required expression using identities
February	Ch 5 Factorization  Ch 9 Triangles  Ch Isosceles Triangles.	Taking common and grouping method  Recall the properties of congruency Recall the properties of isosceles triangle	Sorting Analysing relationships Comparing and contrasting	Using identities for factorizing. Doing higher order simplifications. Revising the congruency properties of triangles and doing higher order problems based on the above properties. Problems based on properties of isosceles triangle.
March	Revision SA2			

*Approved by the Principal*

**RESOURCES**

<p><i>Facilitators' names: Mr.M. A. Raju, Mrs Nirmala , Mrs Srividhya, Mrs.Asha Sasidhar</i> <i>Text Books: Concise Mathematics Grade 8 ; Concise Mathematics Grade 9 (Selina Publications)</i> <b>Textbooks :</b> Concise Mathematics Grade 8 &amp; 9 (Selina Publications)</p> <ul style="list-style-type: none"> <li>• Together with Mathematics – Ravinder Kumar Vimal, Vinod Kumar Jain</li> <li>• Understanding ICSE Mathematics- M.L. Aggarwal</li> </ul>	<p><b>INTERACTIVE software/websites</b></p> <ul style="list-style-type: none"> <li>• <a href="http://www.math-aids.com">www.math-aids.com</a></li> <li>• <a href="http://www.bbc.co.uk/schools/qcsebitesize">www.bbc.co.uk/schools/qcsebitesize</a></li> <li>• <a href="http://www.in.ixl.com">www.in.ixl.com</a></li> <li>• <a href="http://www.alphamath.in">www.alphamath.in</a></li> </ul>
--	--