MATHEMATICS
CLASS: V

R. No.	CHAPTER/ TOPIC	SUB - TOPIC		
1	Number & Numeration	Revision of Big Numbers, System of Numeration, Expanded and Short Form, Introducing 7, 8, 9digit numbers(Indian Place Value System), Reading and Writing 7, 8, 9 digit numbers (Indian & International systems), Place values, Read and Write 6 digit numbers in both systems, Comparing numbers by place values in two systems, Order of numbers(AO & DO), Formation of Greatest and Smallest numbers, Successor and Predecessor, Skip and Counting in Ten Thousands and Lakhs, Rounding Off a number to nearest thousands		
2	Roman Numerals	Rules for Converting Roman Numerals (Hindu - Arabic Numerals to Roman Numerals)	Rules to write Roman Numerals: 1. Repetition of a Roman numeral means addition.(I&X repeated maximum three times) 2. When a smaller numeral iks written on the right of a greater numeral, we add them. The sum represents the numeral. 3. When a smaller numeral is written on the left of a greater numeral, we subtract the smaller one from the greater, The difference represents the numeral. 4. If a smaller numeral comes between two larger numerals it is first subtracted from the bigger numeral on the right and the result is added to the numeral on the left.	
3	Addition & Subtraction	Addition without regrouping. Addition with regrouping. Finding missing digits. Adding 7, 8digit numbers (Without carry over & with carryover) Subtraction without borrowing. Subtraction with borrowing. Finding missing digits. Combining Addition and Subtraction.	Properties of Addition: 1. When we add 0 to any number, the sum is the number itself. 2. When we add 1 to any number, we get the next number, ie its successor. 3. Commutative property: If the order of two numbers to be added is changed the sum remains the same. 4. Associative property: The sum of three or more numbers does not change even when their grouping is changed. Properties of Subtraction: 1. When we subtract 0 from any number, the difference is the number itself. 2. When we subtract 1 from any number, we get the previous number or its predecessor. 3. When we subtract a number from itself, the difference is 0.	
4	Multiplication	Revising Multiplication of large numbers. Multiplication by 10, 100, 1000..... Finding missing digits by multiplication. Distributive method Lattice multiplication.	Properties of Multiplication: 1. The product of a number and 0 is always 0. 2. The product of a number and 1 is always the number itself. 3. Commutative property: If the order of two numbers which are to be multiplied is changed, the product remains the same. 4. Associative property: If the grouping of numbers in a multiplication is changed, the product remains same.	
5	Division	Parts of Division. Division with 10, 100, 1000 Division of Big Numbers by 2 or 3 digit divisors. Division through estimation method. Unitary method.	Properties of division: 1. When a number is divided by itself, the answer is 1. 2. When a number is divided by one, answer is the number itself. 3. When zero is divided by any number, the answer is zero. 4. Dividing a number by 0 is not possible.	Remember: In division The remainder is always less than the divisor. The quotient, divisor and remainder are always less than the dividend. Dividend = Quotient X Divisor + Remainder.

6	**Multiples & Factors**	Multiples, Common multiples, Even and Odd numbers, LCM, Factors, Common factors, HCF, Tests of divisibility, Prime and Composite Numbers, Prime Factorization, Factor tree method, Division method. HCF by prime factorization and LCM by prime factorization, LCM of prime factorization by single division method. Sieve of Eratosthenes. Finding HCF or LCM by common division method. Relation between HCF and LCM.	Properties of Multiples: 1. A number ca have infinite multiples. It means that there is no limit of the multiples we can get because we can keep on multiplying. 2. Every number is a multiple of 1. 3. The first and the smallest multiple of a number is the number itself. 4. A multiple of a number is exactly divisible by it. 5. Every multiple of a number is greater than or equal to the number itself. Properties of Factorization: 1. 1 is the factor of every number. 2. The greatest factor of every number is the number itself. 3. The factors of a number are equal to or less than the number. 4. When a number is divided by its factor, the remainder is 0.
7	**Fractions**	Fraction, Parts of fraction, Types of fractions, Equivalent fractions, Comparison of fractions, like and unlike fractions, converting mixed into improper vice versa, Fraction in lowest term or simplest form, fundamental operation on fractions, Degree of closeness of fractions, reciprocal.	**Properties of Equivalent Fractions:** **1. We can get an equivalent fraction by multiplying the numerator and denominator with the same number.** **2. We can also get on equivalent fraction by dividing with the same number.**
8	**Decimals & Percentages**	**Place values of decimal system, fractions to decimals vice versa, parts of decimal fraction, Representing decimals diagrammatically, Converting decimals to fractions and vice versa, like and unlike decimals, comparing decimals. Application of decimals. Percentages, relationship between fractions, decimals and percentages. Application of percentages.**	
9	**Simplifications & Average**	**DMAS, AVERAGE,**	
10	**Geometry**	**Basic definitions, plane, lines, perpendiculars, angles, measuring angles, classification of angles, constructing 60 degree angle, triangle and types, angle sum property of a triangle, quadrilateral, types of quadrilaterals, circle(interior and exterior), construction of circle, properties of circle.**	
11	**Perimeter, Area & Volume**	**Perimeter, perimeter of regular and irregular shapes, area, finding area, area of regular and irregular shapes. Volume, finding volume by counting the number of cubes, finding volume by using formula.**	
12	**Metric Measures**	**Measuring length, conversion of units of length, using decimals to express units of length, decimal operations on length/weight. Measuring capacity, conversion of units of capacity, using decimals to express units of capacity, decimal operations on capacity. Maping skills, mapping.**	
13	**Time & Temperature**	**Time, fundamental operations on time, Reading clock, am and pm, types of clocks, railway and flight time tables, temperature, thermo meter, conversion of temperature from centigrade to Fahrenheit degrees,**	
14	**Money**	**Unitary method, bills, profit and loss, cp and sp, all formulae.**	
15	**Symmetry**	**Reflection symmetry and uses, Tiles and tessellations, making patterns, symmetry of 3D shapes, nets, nets of 3Ds,Floor maps, and deep drawing, drawing the top, front, side views of an object, isometric sketches, tangrams, number patterns, square pattern, pattern with consecutive odd numbers, triangular numbers, palindromes, calendar magic.**	
16	**Data handling**	**Collection of data, tabulation of data, revising pictographs and bar graphs, pie chart or circle graph,**	