Ministry of Education, Science and Technology
Curriculum Development Centre
Curriculum of Class 9 (2078)

S.N.	Area	Content Explanation	Teaching Hours
1.	Set	1.1 Set operations: union, intersection, difference of sets, complement of set (up to three sets) 1.2 Cardinality of sets	12
2.	Arithmetic	2.1 Taxation (Income tax, Value added tax) 2.2 Commission, Bonus, Dividend 2.3 Household arithmetic (Electricity bill, Water bill, Telephone bill, Taximeter)	28
3.	Mensuration	3.1 Area of scalene triangle 3.2 Application of relation between the local units of measuring the area of land (Bigha, Kattha, Dhur, Ropani, Aana, Paisa, Daam) and sq. cm, sq. m to find the area of triangular and quadrilateral shaped land. 3.3 Area of four walls, floor and ceiling of squared or rectangular room 3.4 Surface area and volume of prisms 3.5 Problems related to surface area and volume of cylindrical and spherical solid objects 3.6 Real life problems related to cost estimation (carpeting, painting, colouring, plastering etc.)	28
4.	Algebra	4.1 Sequence and Series - Introduction of sequence and general term - introduction of series and sigma ($\sum$) notation - arithmetic and geometric sequence and series (introduction and terms) - Problems based on arithmetic and geometric sequences 4.2 Factorization of algebraic expressions of the form $(a \pm b)^3$, $a^3 \pm b^3$ and $a^4 + a^2b^2 + b^4$ 4.3 H.C.F. and L.C.M. of algebraic expressions 4.4 Problems based of simultaneous linear equations of two variables (elimination and substitution method) 4.5 Simplification of problems related to indices having same bases	32

5.	**Geometry**	5.1	Verification of theorems based on relation between the sides and angles of triangles experimentally and theoretically	28

5.1 Verification of theorems based on relation between the sides and angles of triangles experimentally and theoretically

- Relation between the exterior angle formed by producing a side of a triangle and two opposite interior angles (experimental verification only)
- Relation between the angular bisector of vertical angle of an isosceles triangle and its base (experimental verification only)
- Relation between the sum of any two sides of a triangle and its third side (experimental verification)
- Relation between the side opposite to the greater angle and the side opposite to the smaller angle and its converse theorem (Experimental verification)
- Relation among the corresponding angles and corresponding sides of similar triangles.
- Problems based of similar triangles

5.2 Quadrilateral

- The opposite sides of a parallelogram are equal (Theoretical proof only)
- The opposite angles of a parallelogram are equal (Theoretical proof only)
- The diagonals of a parallelogram bisect each other (Theoretical proof only)
- Discussion of the interrelationship of quadrilaterals (parallelogram, rectangle, square, rhombus)

5.3 Construction

- Construction of rhombus
- Construction of scalene quadrilateral
- Construction of scalene trapezium

5.4 Circle

- The perpendicular drawn from the centre of a circle to a chord, bisects the chord (Experimental verification and theoretical proof)
- The line joining the mid-point of a chord and the centre of a circle is perpendicular to the chord (Experimental verification and theoretical proof)
- Equal chords of a circle are equidistant from the centre and its converse theorem ((Experimental verification)

6.	**Statistics and Probability**	6.1 Statistics
		   - Collection and classification of data
		   - Frequency distribution table (discrete and continuous data), histogram, frequency polygon and frequency ogive
		   - Mean, median, mode (only one modal value) and quartiles of ungrouped data
		
		6.2 Probability
		   - Introduction to probability
		   - Definition of probability and basic concepts
		   - Use of simple probability and introduction of probability scale (0 - 1)
		   - Introduction and use of formula to estimate probability a) Empirical probability b) Probability of an event
			24

7.	**Trigonometry**	7.1 Introduction of trigonometric ratios on the basis of right-angled triangle 7.2 Measurement and problem solving related to the ratios sine, cosine and tangent 7.3 Problems related to sine, cosine and tangent of the angles 0°, 30°, 45°, 60° and 90° in right-angled triangles.	8
Total			**160**