

Himachal Pradesh Board of School Education, Dharamshala

MATHEMATICS

9th Class

The Syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of the society. The present revised syllabus has been designed in accordance with National Curriculum Framework 2005 and as per guidelines given in Focus Group on Teaching of Mathematics which is to meet the emerging needs of all categories of students for motivating the teacher to relate the topics from real life problems and other subject areas, greater emphasis has been laid on applications of various concepts.

The curriculum at Secondary stage primarily aims at enhancing the capacity of students to employ Mathematics in solving day-to-day life problems and studying the subject as a separate discipline. It is expected that students should acquire the ability to solve problems using algebraic methods and apply the knowledge of simple trigonometry to solve problems of heights and distances. Carrying out experiments with numbers and forms of geometry, framing hypothesis and verifying these with further observations form inherent part of Mathematics learning at this stage. The proposed curriculum includes the study of Arithmetical concepts, number system, algebra, geometry, trigonometry, mensurations, statistics, graphs and coordinate geometry etc.

The teaching of Mathematics should be imparted through activities which may involve the use of concrete materials, models, patterns, charts, pictures posters games, puzzles and experiments.

OBJECTIVES

The board's objectives of teaching of Mathematics at secondary stage are to help the learners to :

1. Consolidate the Mathematical Knowledge and Skills acquired at the upper primary stage.
2. Acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills.
3. Develop mastery of basic algebraic skills;
4. Develop drawing skills;
5. Feel the flow of reasons while proving a result or solving a problem.
6. Apply the Knowledge and skills acquired to solve problems and wherever possible, by more than one method
7. To develop positive ability to think analyze and articulate logically.
8. To develop awareness of the need for national integration, protection of the environment, observance of small family norms. Removal of social barriers, elimination of gender biases.
9. To develop necessary skills to work with modern technological devices fields for its beautiful structures and patterns etc.
10. To develop interest in Mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.
11. To develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics.
12. To develop interest in the subject by participating in related competitions
13. To acquaint students with different aspects of mathematics used in daily life.
14. To develop an interest in students to study mathematics as discipline

Class 9th

Maths Syllabus

Unit wise Distribution of Marks

One Paper

Time:3 Hours

Marks:80

UNIT	MARKS
I. Number System	08
II. Algebra	17
III. Co-Ordinate Geometry	04
IV. Geometry	28
V. Mensuration	13
VI. Statistics	10
TOTAL	80

1. Number System
2. Algebra
 - (i) Polynomial
 - (ii) Linear Equation in two variables
3. Co-ordinate Geometry
4. Geometry
 - (i) Euclidean Geometry
 - (ii) Line and angles
 - (iii) Triangles
 - (iv) Quadrilateral
 - (v) Circle
 - (vi) Area of parallelograms and triangles
 - (vii) Constructions
5. Mensurations
 - (i) Heron's Formula
 - (ii) Surface Area and Volume
6. Statistics
 - (i) Statistics
 - (ii) Probability

Design of Question Paper

(Blue Print)

Mathematics-Class IX

Sr No.	Forms of Questions → Content Units ↓	MCQ 1Mark	Short answer with reasoning 2 Marks	Short answer 3Marks	Long answer case based 4 Marks	Long answer 5 Marks	Total marks Questions
1.	Number System	1	2	1	---	---	8(4)
2.	Algebra: Polynomial, Linear Equations in two Variables	4	1	2	---	1	17(8)
3.	Co-ordinate Geometry	2	1	----	---	---	04(3)
4.	Geometry: Introduction to Euclid Geometry, Lines and Angles, Triangles, Quadrilaterals, Area, Circles, Constructions	5	---	3	1	2	28(11)
5.	Mensuration: Areas, Surface Area and Volumes	2	1	---	1	1	13(5)
6.	Statistics and Probability	2	---	1	---	1	10(4)
	Total	16	5	7	2	5	80(35)

Design of Question Paper

Time:3 Hours

Marks:80

Form of Questions	Marks of Each Question	Number of Questions	Total Marks
M.C.Q.	1	16	16
Short Answer type with reasoning	2	5	10
Short Answer	3	7	21
Long Answer	4	2	8
Long Answer	5	5	25
Total	-----	35	80

Prescribed Book

Mathematics

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