

This is the way to score more in Mathematics

Mathematics is one of the Major Subjects for getting full marks in 10th class. This is an open Secret, but Students' strength varies from one to other; one might be sharp minded and one might be weak. They want to reach their Destinations, but How to Choose the Correct way is the Question for most of the Students. A systematic approach while preparing is important to succeed in the Exam. Various tips for the students are added in this article along with Preparation Plan. The following tips would help students getting Full marks as well as Pass marks

The Whole syllabus containing 12 Chapters is divided into 2 papers i .e. chapter no.1-6 are of Paper-I and chapter no 7-12 are of Paper-II.

The following table gives the idea of approximate weightage given to each chapter in Public Exams

Sl.No	Name of the chapter	5 marks	4 marks	2 marks	1 mark	½ mark(Bits)	TOTAL MARKS
1	Statements and Sets	---	1	2	2	5-6	12-13
2	Functions	---	2	1	1-2	5-6	12-14
3	Polynomials over integers	1	1-2	1	1	5-6	13-18
4	Linear programming	1	1	1	1	4-5	14-15
5	Real numbers	---	1-2	1-2	1-2	5-6	12-14
6	Progressions	---	1-2	1-2	1-2	5-6	12-14
7	Geometry	1	1	1	1	5-6	13-15
8	Analytical Geometry	---	2	1-2	1-2	5-6	14-16

9	Trigonometry	1	1	1	1	5-6	13-15
10	Statistics	---	1	1-2	1	5-6	10-12
11	Matrices	---	1-2	1-2	1-2	5-6	14-16
12	Computing	---	1	1-2	1-2	4-5	12-14

How to score cent percent marks:

PAPER-I

Ch-01: STATEMENTS AND SETS

In this topic, students must prepare mainly the definitions of **Conjunction, Disjunction Conditional, Bi-conditional and their truth tables**. Along with this, the concept of **converse, inverse and contrapositive of a conditional** and information related to Quantifiers.

Element wise **proofs of Demorgan's laws and Distributive laws** under four marks questions, the table that contains all the **laws of algebraic identities of statements and sets** are to be referred for objective purpose.

Ch-02: FUNCTONS (OR) MAPPINGS

This chapter has lot of weightage, especially in four marks type questions. Mainly Exercise-2 problems based on substitution and simplification, Exercise-5 problems based on **composite function's Associative property** are to be prepared, also the definitions of various functions like **on to function, constant function, equal functions, zeros of function, real variable and real functions** etc.. to get maximum marks from this chapter.

Ch-03: POLYNOMIALS OVER INTEZERS

In this chapter, students have to focus mainly on the problems related to Remainder theorem, constructing quadratic polynomial when the required conditions are given. Graphs of Exercise No-5, related to solving a quadratic equation by

(i) using $y=mx^2$,

(ii) drawing the graph of $ax^2+bx+c=0$

are to be prepared thoroughly to attempt Sec-IV. Solving of quadratic inequations, finding **the constant term, middle term(s) in the expansion of a binomial** are to be prepared to score well in this chapter.

Ch-04: LINEAR PROGRAMMING

This is a very small topic with more weightage. From this topic, one 2 marks problem to draw the graph, one definition for 1 mark -around 8 to 10 definitions, one 4 marks problem in section-III related to word problem for **constructing LPP** and one problem of 5 marks based on **maximizing or minimizing an objective function**. Definition of **iso-profit line and its characteristics** are to be referred must to answer the objective part perfectly.

NOTE: Students have an option to leave the graphs of this topic under choice, if they have prepared the graphs of "Polynomials" perfectly.

Ch-05: REAL NUMBERS

This is the easiest topic in Paper-I, with a very good weightage, where students can score better by easy preparation. The focus should be on Ex-2 and Ex-7, **modulus value equations and inequations, limit of a function**. One should be thorough in all the laws of exponents to avoid simplification mistakes.

Ch-06: PROGRESSIONS

This chapter is a bit lengthy, but usually there are few problems around 10-15 which only come in every exam. Students should compare the formulae related to A.P and G.P for better clarity and understanding purpose. The focus is to be given for **$9S^2=S(1+8S)$, sum to "n" terms in 7,77,777,..... , $A \geq G \geq H$** for 4 marks purpose.

For 2 marks purpose inserting **A.M's, G.M's between any two given numbers** also some more standard problems of Ex-1&2. The textual objective part, which is given after all the exercises, must be prepared carefully to do well in Part-B.

* The students who prepare according to the instructions given above may get **50** out of **50** marks in **Paper-I**

PAPER-II

Ch-07: GEOMETRY

This is a very crucial chapter in Mathematics to decide 100/100 marks to students. Even though this is a vast chapter, there are some areas from where only the questions will be selected which reduce the burden of students to prepare well. Students must learn perfectly 5 theorems, 6 constructions and around 8-10 short answer type questions to answer the Geometry part well. Textual objective bits, definitions and note points are to be focused in this topic. Anyhow, this topic is the deciding factor for getting 100/100 marks.

Ch-08: ANALYTICAL GEOMETRY

This topic consists of so many model problems, but there are around 15 problems that only repeat mostly in the exams. Students should focus on **trisecting points, other end of diameter, internal and external division of a line segment, centroid, area of a triangle, area of a triangle enclosed with the co-ordinate axes when the two points through which the line is passing is given**. Students should have clear idea on various forms of **straight-line equations** to apply them in solving the problems. More focus is to be given in objective part also to score full marks in this chapter.

Ch-09: TRIGONOMETRY

This topic is important not only for the SSC exams but also for higher studies like intermediate and engineering etc. In this topic, one 5 marks problem, two -4 marks problems, one or two -2 marks problems and one -1 mark problem, 5-6 objective bits will be given in SSC public exams. If one is thorough in constructions of Geometry, there is no need to prepare Heights and Distances.

Ch-10: STATISTICS

This is very small topic and where we can score more marks with less efforts. Students should be perfect in **calculating mean, median and mode grouped data problems** to answer one 4 marks problem. **Problems related to errors, empirical relation among mean, median and mode** is also to be referred.

Ch-11: MATRICES

This topic plays very important role in getting very good score and plays vital role in making even below average students to pass the public exams. Students must be perfect in two methods i.e. **Cramer's rule and matrix inversion method** where they can definitely answer one problem, also be perfect in Ex: 2 & 3 problems to attempt one more question even from the same topic. Mostly short answer problems will be given from the models of Ex:2 . One should be perfect in all the textual objective bits and definitions to score well in objective part.

Ch-12: COMPUTING

This is basically, fully theoretical topic and very small, where we can score more marks with less hard work. Students must refer the **generations of computers, characteristics, computer languages some important definitions, block diagram, major components, some problems related to flow charts** along with objective part.

The students who prepare according to the instructions given above may get compulsory **50** out of **50** marks in **Paper-I**

* Students who prepare with proper plan by keeping above points in mind may get 100 out of 100 marks without any doubt.

How to Get Pass marks:

Students who wants to get at least pass marks, they should focus more on the following topics

Paper -1

- Statements and Sets,
- Functions , graphs of Polynomials,
- Real numbers

Paper -2

- Matrices,
- Statistics,
- Computing
- Constructions of Geometry

