

# Mathematics

## VII class

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## FOREWORD

Andhra Pradesh State Curriculum Frame Work (APSCF-2011) recommends that childrens' life at schools must be linked to their life outside the school. The Right To Education Act (RTE-2009) perceives that every child who enters the school should acquire the necessary skills prescribed at each level upto the age of 14 years. Academic standards were developed in each subject area accordingly to maintain the quality in education. The syllabi and text books developed on the basis of National Curriculum Frame work 2005 and APSCF-2011 signify an attempt to implement this basic idea.

Children after completion of Primary Education enter into the Upper Primary stage. This stage is a crucial link for the children to continue their secondary education. We recognise that, given space, time and freedom, children generate new knowledge by exploring the information passed on to them by the adults. Inculcating creativity and initiating enquiry is possible if we perceive and treat children as participants in learning and not as passive receivers. The children at this stage possess characteristics like curiosity, interest, questioning, reasoning, insisting proof, accepting the challenges etc., Therefore the need for conceptualizing mathematics teaching that allows children to explore concepts as well as develop their own ways of solving problems in a joyful way.

We have begun the process of developing a programme which helps children understand the abstract nature of mathematics while developing in them the ability to construct own concepts. The concepts from the major areas of Mathematics like Number System, Arithmetic, Algebra, Geometry, Mensuration and Statistics are provided at the upper primary stage. Teaching of the topics related to these areas will develop the skills prescribed in academic standards such as problem solving, logical thinking, expressing the facts in mathematical language, representing data in various forms, using mathematics in daily life situations.

The textbooks attempt to enhance this endeavor by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups and activities required for hands on experience in the form of 'Do This', 'Try This' and 'Projects'. Teachers support is needed in setting of the situations in the classroom. We also tried to include a variety of examples and opportunities for children to set problems. The book attempts to engage the mind of a child actively and provides opportunities to use concepts and develop their own structures rather than struggling with unnecessarily complicated terms and numbers. The chapters are arranged in such a way that they help the Teachers to evaluate every area of learning to comprehend the learning progress of children and in accordance with Continuous Comprehensive Evaluation (CCE).

The team associated in developing the textbooks consists of many teachers who are experienced and brought with them view points of the child and the school. We also had people who have done research in learning mathematics and those who have been writing textbooks for many years. The team tried to make an effort to remove fear of mathematics from the minds of children through their presentation of topics.

I wish to thank the national experts, university teachers, research scholars, NGOs, academicians, writers, graphic designers and printers who are instrumental to bring out this textbook in present form. I hope the teachers will make earnest effort to implement the syllabus in its true spirit and to achieve academic standards at the stage.

The process of developing materials is a continuous one and we hope to make this book better. As an organization committed to systematic reform and continuous improvement in quality of its products, SCERT, A.P., welcomes comments and suggestions which will enable us to undertake further revision and refinement.

Place: Hyderabad

Date: 28 January 2012

*B. Sheshu Kumari*

DIRECTOR

SCERT, A.P., Hyderabad

## Mathematics

### VII class

S. No.	Contents	Syllabus to be covered during	Page No
1.	Integers	June, July	1 - 25
2.	Fractions, Decimals and Rational Numbers	July, August	26 - 58
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4.	Lines and Angles	August	69 - 87
5.	Triangle and Its Properties	August, September	88 - 109
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11.	Exponents	January, February	211 - 226
12.	Quadrilaterals	February, March	227 - 244
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14.	Understanding 3D and 2D Shapes	March	265 - 276
15.	Symmetry	March, April	277 - 289

## OUR NATIONAL ANTHEM

- Rabindranath Tagore

Jana-gana-mana-adhinayaka, jaya he

Bharata-bhagya-vidhata.

Punjab-Sindh-Gujarat-Maratha

Dravida-Utkala-Banga

Vindhya-Himachala-Yamuna-Ganga

Uchchala-Jaladhi-taranga.

Tava shubha name jage,

Tava shubha asisa mage,

Gahe tava jaya gatha,

Jana-gana-mangala-dayaka jaya he

Bharata-bhagya-vidhata.

Jaya he, jaya he, jaya he,

Jaya jaya jaya, jaya he!

## PLEDGE

“India is my country. All Indians are my brothers and sisters.

I love my country, and I am proud of its rich and varied heritage.

I shall always strive to be worthy of it.

I shall give my parents, teachers and all elders respect,  
and treat everyone with courtesy. I shall be kind to animals

To my country and my people, I pledge my devotion.

In their well-being and prosperity alone lies my happiness.”