# Mathematics Class - VIII



# State Council of Educational Research and Training Chhattisgarh, Raipur

(For Free Distribution)

Publication Year - 2024 S.C.E.R.T. CHHATTISGARH, RAIPUR

# **Co-operation**

Hridaykant Diwan (Vidya Bhawan, Udaypur)

### Convener

Dr. Vidyawati Chandrakar

# **Co-ordinator**

U. K. Chakraborthy

# **Editors**

U.K. Chakraborthy, C.P. Singh, G.P. Pandey,

Nagendra Bharti Goswami, Shankar Singh Rathore, R.K. Chari, R.K. Dewangan, B.L. Gupta, Hulesh Patel, Anil Gabhel,

Mina Shrimali, Sanjay Bolya,

Deepak Mantri, Ranjana Sharma

# **Translated By**

Shishirkana Bhattacharya

# **Editing By**

V. Shivram, Dr. Sheela Tiwari, Prachi khare, Nivedita Ganguly

**Cover Design** 

Rekhraj Chouragadey, Raipur

# Layout Design

Amil Prabhat Hirwani, Kumar Patel

# **Published by**

State Council of Educational Research & Training Chhattisgarh, Raipur

# **Printed by**

Chhattisgarh Textbook Corporation, Raipur

**Printing Press** 

# Preface

The aim of mathematical studies is not only to provide a knowledge of mathematics, but also to develop an understanding which will enable the students to enjoy maths. They will also be able to form relevant mathematical questions and solve them. They may also be able to transfer their aquired skill in their daily life conveniently.

By the time they reach class-VIII, children start experiencing the inherent power of maths. At this juncture, they are not only able to write the largest number separately, but also to calculate the compound interest with the help of power, and to recognize the special features of Geometrical figures or shapes. They begin to understand the multiplication of Algebraic numbers (variables) and to understand the concept of a substance occupying place. The most important objective of Mathematics is to develop the skill of understanding and reasoning and to elaborate them.

This book has been prepared keeping in view the achievement level of the students and the objectives of Mathematics. But no book can be completely self-sufficient in itself, hence your suggestions are invited to make it more interesting and perceptible. Your suggestions will be beneficial to all the students of the state.

We are grateful to all the learned scholars of government and non-government institutions whose valuable guidance and co-operation we have always received. We are particularly thankful to Vidya Bhawan, Udaypur, whose contribution in preparing this book is very valuable.

The National Council of Educational Research and Training (NCERT) sets some clear and measurable goals for class 1 to 8th. They are known as 'Learning outcomes'.

We have made some necessary changes in this textbook in reference with 'Learning out comes'. Some new contents have been added and some chapters have been transferred from one class to another. Do not let the teachers and the students get confused.

#### Director

State Council of Educational Research and Training Chhattisgarh, Raipur

CONTENTS			
Chapter 1	•	Square and Cube	1-19
Chapter 2	:	Exponent	20-26
Chapter 3	:	Parallel Lines	27-41
Chapter 4	:	Multiplication and Division of Algebraic Expressions	42-56
Chapter 5	:	CIRCLE AND ITS COMPONENTS	57-71
Chapter 6	:	Statistics	72-85
Chapter 7	:	DIRECT AND INVERSE VARIATION	86-101
Chapter 8	:	Factors and Factorization of Algebraic Expressions	102-110
Chapter 9	:	Identities	111-122
Chapter 10	:	Polygon	123-136
Chapter 11	:	Construction of Quadrilateral	137-158
Chapter 12	:	Equation	159-172
Chapter 13	:	Application of Percentage	173-190
Chapter 14	:	Mensuration-I	191-207
Chapter 15	:	Mensuration-II	208-218
Chapter 16	:	Figures (Two and Three Dimensional)	219-232
Chapter 17	:	PLAYING WITH NUMBERS	233-254
Chapter 18	:	Operation on Rational Number	255-286
Chapter 19	:	Mensuration-III	287-297
		Answers	298-311