Why This book of Fast Track Objective **Arithmetic**

All the recruitment tests and competitive exams conducted in India, like *UPSC, CSAT, SSC (10+2, CGL, CPO) SBI and IBPS Bank (PO and Clerk), LIC AAO, CDS, Management and Hospitality Entrances, Railways and Police recruitments* etc. essentially contain a significant number of objective questions based on Arithmetic to check the candidates capabilities to answer them. If a candidate desire to achieve 'success' in these tests, he must be highly skilled in performing accurate and fast arithmetic calculations. Accordingly, this book aims to develop two specific skills in a candidate : *How to solve an arithmetic problem with accuracy and How to perform this calculation speedily?*

This book has been divided into *45 chapters*. In every chapter, firstly the general concepts are introduced, showing the way to apply the different mathematical formulae and making aware of the trends of questions asked in different competitive exams.

This book is specially incorporated with *'Fast Track Techniques'* to achieve fast and accurate solutions. At the end of chapters, there have provided with 'Practice Exercise' with complete solution. At the end of book, there are 5 Practice Sets to make ready to face this section in competitive exams.

"An Authentic and Indispensible Publication to master the approach towards Arithmetic."

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Fast Track Objective ARITHMETIC

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All Other Entrances, Recruitments and Aptitude Tests

Rajesh Verma

For Complete *Practice* and *Mastery* over **Arithmetic**

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All disputes subject to Meerut (UP) jurisdiction only.

卐 Sales & Support Offices
Agra, Ahmedabad, Bengaluru, Bhubaneswar,
Chennai, Delhi(I&II),Guwahati, Haldwani,
Hyderabad, Jaipur, Kolkata, Kota, Lucknow,
Nagpur, Meerut & Pune

卐 **ISBN :** 978-93-5176-014-6

卐 **Price:** ₹ 395

Typeset by Arihant DTP Unit at Meerut

PRINTED & BOUND IN INDIA
BY ARIHANT PUBLICATIONS (INDIA) LTD.

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Fast Track OBJECTIVE Arithmetic

Today, there is a plethora of books available in the market on Objective Arithmetic which seems to be complete in their way, but are still unable to fully satisfy the aspirants.

LET US KNOW SOME OF THE REASONS

Lack of Understanding the Basic Concepts

Mostly, students face a competitive examination on the base of their knowledge about mathematical rules, formulae and concepts. Inspite of having the knowledge, he lacks behind when he faces questions in the examination. Does he realise this inability? Yes, he does but feels confused and blocked when he is unable to solve them and is left with a sense of grudge that he could solve it. The only reason behind this problem is the understanding of basic concepts. If he would have been clear with them, he could solve any of the questions because as a matter of fact, every question is based on a particular concept which is just twisted in the examinations to judge the overall ability of a student.

Inappropriate Use of Short Tricks

This is the second biggest problem in front of the aspirants. The number of questions asked in the competitive examination is much more than the time assigned for them. This leads the aspirants to use shortcut methods. Although, these methods prove to be beneficial in some cases, but due to time management problems, he gets bound to use these methods irrationally and inappropriately. As a result, he jumbles between all the shortcuts which lead to wrong answers which could have been solved if he knew when and where to apply the shortcut methods.

Inability to Distinguish Between the Applications of Formulae

We all are aware of the amount of stress and pressure a competitive examination creates on the mindset of an aspirant. Succumbed to such pressure, an aspirant is unable to decide the appropriate formula to be applied in a particular step. During the crisis of time, such confusion adds to the problems and squeezes in more time and results to an unsatisfactory score.

Keeping in mind all kinds of problems faced by an aspirant in a competitive examination, we have developed this book with profound interest in a step-wise method to encounter all your queries and worries. This book named 'FAST TRACK ARITHMETIC' is worthy to fulfill your expectations and will help you as loyal guide throughout.

OUTSTANDING QUALITIES OF FAST-TRACK OBJECTIVE ARITHMETIC

Use of Fundamental Formulae and Method

In this book, all the fundamental formulae and methods have been presented in such a striking yet friendly and systematic manner that just going through them once will give you an effective grasp. They have been present in such a manner that they, will never let you get confused between fast track technique and basic method.

Appropriate Short Cut Methods

An important feature of this book is its short cut methods or tricks given in the name of "fast track formulae or techniques". Each technique is given with its basic or fundamental method. So, that a student can use these tricks according to their desire and save there precious time in exams.

Division of Exercises According to the Difficulty Level

Based on the standard and level of difficulty of various questions, the exercises are divided into two parts *i.e.*, 'Base level exercise' for relatively easier questions and 'Higher skill level exercise' for difficult questions. 'Multiconcept questions' which requires a use of different concepts in a single question have also been incorporated with important chapters.

Special Emphasise on Geometry, Trigonometry and Mensuration

Now-a-days, Questions from geometry, trigonometry and mensuration are asked in large numbers in different exams. So, a large variety and number of questions are provided for these chapters.

Completely Updated with Questions from Recent Exams

This book is incorporated with the questions from all the recent competitive exams, held in year 2013-14.

This book is a brain child of Mr Deepesh Jain, Director, Arihant Publications (India) Limited. Richa Agarwal, Diwakar Sharma and Shivam Mittal have given their best and sincere efforts for the completion and final presentations of the book.

The entire project has been managed and supervised by Mr Mahendra Singh Rawat and Mr Amit Verma. Aas Mohammed and Pradeep are to be complemented for very apt designing to the book cover. Amit Bansal and Mayank Saini have given their expertise in the layout of the book. Everyone's contribution for this book is very special and is worthy of great applause.

Reader's recommendations will be highly treasured.

With best compliments
Rajesh Verma

Contents

Chapter
01

Number System

A system in which we study different types of numbers, their relationship and rules govern in them is called as **number system.**

In the Hindu-Arabic system, we use the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. These symbols are called **digits.** Out of these ten digits, 0 is called an **insignificant digit** whereas the others are called **significant digits.**

Numerals

A mathematical symbol representing a number in a systematic manner is called a numeral represented by a set of digits.

How to Write a Number

To write a number, we put digits from right to left at the places designated as units, tens, hundreds, thousands, ten thousands, lakhs, ten lakhs, crores, ten crores.

Let us see how the number 308761436 is denoted

It is read as

Ten crores	Crores	Ten lakhs	Lakhs	Ten thousands	Thousands	Hundreds	Tens	Units
10^8	10^7	10^6	10^5	10^4	10^3	10^2	10^1	10^0
3	0	8	7	6	1	4	3	6

Thirty crore eighty seven lakh sixty one thousand four hundred and thirty six.

Face Value and Place Value of the Digits in a Number

Face Value

In a numeral, the face value of a digit is the value of the digit itself irrespective of its place in the numeral.

For example In the numeral 486729, the face value of 8 is 8, the face value of 7 is 7, the face value of 6 is 6, the face value of 4 is 4, and so on.