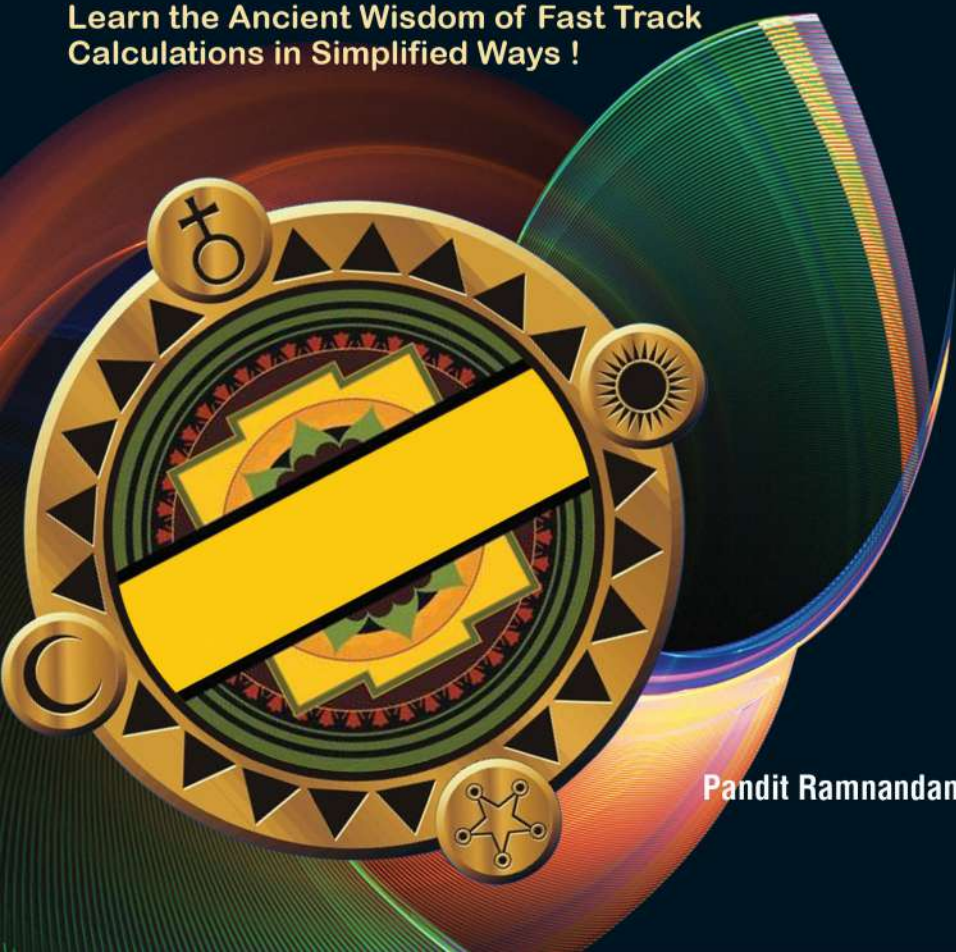


For Competitive Exams

Vedic Mathematics

MADE EASY

Learn the Ancient Wisdom of Fast Track
Calculations in Simplified Ways !



Pandit Ramnandan Shashtri

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preface

'Vedic Mathematics' is the ancient system of mathematics; a unique technique of calculations based on simple rules and principles, with which any mathematical problem - be it arithmetic, algebra, geometry or trigonometry—can be solved, ORALLY !! According to Clive Middleton, a vedic maths enthusiast, "These formulas describe the way the mind naturally works, and are therefore a great help in directing the student to the appropriate method of solution."

In today's system of competitive examinations where speed with accuracy is the calling shot, a mastery & practice of vedic maths can work wonder for the aspirants. Not only the students or the aspirants of various competitive exams, even the professionals, like, engineers, teachers, executives, or businessmen can benefit immensely from Vedic Mathematics.

Divided into 21 chapters, this book is the outcome of a thorough research on Vedic Maths, its 'Sutras' and their best possible applications, which has been scientifically synchronized with the learning pace & pattern of different categories of readers. Each of the chapters is followed by two exercises, one with questions on the topics taught in the chapter along with their hints & solutions; and the other exercise comprises questions from various competitive and management entrances, the solutions for which has been given at the end of the chapters, together. Approach and language of the book is simple & lucid, and the format of presenting texts is attractive enough to keep the mind of the readers engrossed.

The book bears all the hallmarks of brand Arihant & its years of experience as leading publisher in competitive examination segment.

We invite and welcome any feedback/suggestion for improvement of this book in subsequent editions.

Varanasi, 2011

Pt. Ramnandan Shastri

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॥ व॒द॑ि॒क॒ म॒थ॒य॒म॒ति॒क॒ इ॒ ॥

व॒ह॒त॒ इ॒ इ॒ त॒ ?

Born in the Vedic Age, but buried under centuries of debris, this remarkable system of calculation was deciphered towards the beginning of the 20th century, when there was a great interest in ancient Sanskrit texts, especially in Europe. However, certain texts called Ganita Sutras, which contained mathematical deductions, were ignored, because no one could find any mathematics in them. These texts, it's believed, bore the germs of what we now know as Vedic Mathematics.

What is Vedic Mathematics?

'Vedic Mathematics' is the name given to the ancient system of mathematics, or, to be precise, a unique technique of calculations based on simple rules and principles, with which any mathematical problem - be it arithmetic, algebra, geometry or trigonometry - can be solved, ORALLY!!



Some may wonder why it is called "vedic" . Just as the basic principles of Hinduism lie in the Vedas, so do the roots of mathematics. The Vedas, written around 1500-900 BCE, are ancient Indian texts containing a record of human experience and

knowledge. Thousands of years ago, Vedic mathematicians authored various theses and dissertations on mathematics. It is now commonly believed and widely accepted that these treatises laid down the foundations of algebra, algorithm, square roots, cube roots, various methods of calculation, and the concept of zero.

The system is based on 16 Vedic sutras or aphorisms, which are actually word-formulae describing natural ways of solving a whole range of mathematical problems. Some examples of Sutras are "By one more than the one before", "All from 9 & the last from 10", and "Vertically & Crosswise". These 16 one-line formulae originally written in Sanskrit, which can be easily memorized, enables one to solve long mathematical problems quickly.

Bharati Krishna Tirthaji & Vedic Math



Bharati Krishna Tirthaji

The revival of Vedic Mathematics is no less than a miracle. Extracting the theorems and corollaries from religious texts requires not only an understanding of the scriptures but also a genuinely intelligent mind.

Credit of rediscovering Vedic maths (between 1911 and 1918) from the ancient Indian scriptures goes to Sri Bharati Krishna Tirthaji (1884-1960), a scholar of Sanskrit, Mathematics, History and Philosophy. He studied these ancient texts for years, and after careful investigation was able to reconstruct a series of mathematical formulae called Sutras.

Bharati Krishna Tirthaji, who was also the former Shankaracharya (major religious leader) of Puri, India, delved into the ancient Vedic texts and established the techniques of this system in his pioneering work - Vedic Mathematics (1965), which is considered the starting point for all work on Vedic math. It is said that after Bharati Krishna's original 16 volumes of work expounding the Vedic system were lost, in his final years he wrote this single volume, which was published five years after his death.

Development of Vedic Math

Vedic math was immediately hailed as a new alternative system of mathematics, when a copy of the book reached London in the late 1960s. Some British mathematicians, including Kenneth Williams, Andrew Nicholas and Jeremy Pickles took interest in this new system. They extended the introductory material of Bharati Krishna's book, and delivered lectures on it in London. In 1981, this was collated into a book entitled *Introductory Lectures on Vedic Mathematics*. A few successive trips to India by Andrew Nicholas between 1981 and 1987, renewed the interest on Vedic math, and scholars and teachers in India started taking it seriously.

The Sutras (aphorisms) apply to and cover each and every part of each and every chapter of each and every branch of mathematics (including arithmetic, algebra, geometry – plane and solid, trigonometry – plane and spherical, conics- geometrical and analytical, astronomy, calculus – differential and integral etc., etc. In fact, there is no part of mathematics, pure or applied, which is beyond their jurisdiction;

The Sutras are easy to understand, easy to apply and easy to remember; and the whole work can be truthfully summarised in one word “mental”!

Dr L M Singhvi, the former High Commissioner of India in the UK, also an avid endorser of the system says: "A single sutra would generally encompass a varied and wide range of particular applications and may be likened to a programmed chip of our computer age".

Another Vedic maths enthusiast, Clive Middleton feels, "These formulae describe the way the mind naturally works, and are therefore a great help in directing the student to the appropriate method of solution."