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# Japanese Abacus Soroban Techniques

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The Japanese Soroban Abacus, Part 1: The Basics Japan's ancient secret to better cognitive memory - BBC REEL Learn to use the abacus(soroban), the Japanese way - Part 1 Amazing abacus addition by Japanese girl, age 7 Soroban Japanese Abacus Basics (Multiplication) Abacus Mental Math Demonstration - Strengthen Math Facts, Improve Focus, Concentration \u0026amp; Memory How to Add using a Soroban (Japanese Abacus) How to count to 20 using a Soroban (Japanese Abacus) Sudoku solution - New York Times 15 October 2024 Hard level Incredible Japanese Woodworking Tools Have Used for Soroban Processing - Crazy Ancient Hand Tools CMA Singapore - Meet our little champs! 8 simple Japanese habits that will make your life so much better!! 35 Most Viral TikToks of Japanese Stationery 2024 50 Most Viral TikToks of Japanese Stationery 2024 How to use an Abacus The Abacus - Part 1 Japanese Abacus Math School, Beaverton OR. These Japanese writing instruments are SO SATISFYING to use! BOOK: How To Use A Japanese Abacus. Seeing Numbers with Soroban - The Japanese Abacus Soroban - The Japanese Abacus - Overview Soroban (Japanese abacus) | Math as a popular culture How to Subtract using Soroban (Japanese abacus) How to Use a Japanese Abacus (Soroban) Abacus Rules - Part - 1.1 BOOK: Japanese Abacus For Kids. World champion in mental calculation \u25a1 Doing abacus in Hands. Advanced calculations in seconds!!!! From the Birth of Numbers Abacus Mind Math Level 2 IB Quickly Learn to Use the Abacus Addition and Subtraction on a Japanese Abacus (Soroban) Airman (Of 2) Excel at Mind Math with Soroban, a Japanese Abacus The Japanese Abacus Explained How to Use a Chinese Abacus How the Mind Creates Mathematics, Revised and Updated Edition Imaginary Abacus Mastering the Skills for Success in Life, Business, and School, Or How to Become an Expert in Just about Anything The Fundamental Operations in Bead Arithmetic - How to Use the Chinese Abacus A Commemoration on His Tercentenary Seki, Founder of Modern Mathematics in Japan Abacus 101: Beginner's Abacus & Mental Math: Learn the Story, Concepts & Basics of Traditional Abacus A Step-By-Step Guide to Addition, Subtraction, Multiplication, Division, Roots and More Learn How to Add, Subtract, Multiply, Divide and Find Square Roots With This Easy to

Use Instruction Guide.  
The Big Book of Small Python Projects  
(Of 2) Excel at Mind Math with Soroban, a Japanese Abacus  
Mathematics  
Japanese Abacus Use & Theory  
A Companion to School Experience

*Japanese Abacus* **OMB No.**  
*Soroban Techniques* **6582940873520** *edited*  
**by**

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## ROMAN FOLEY

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### FROM THE BIRTH OF NUMBERS

BookRix

Entertaining, easy-to-follow suggestions for developing greater speed and accuracy in doing mathematical calculations. Surefire methods for multiplying without carrying, mastering fractions, working quickly with decimals, handling percentages, and much more.

#### **Abacus Mind Math Level 2 IB**

Princeton University Press

Japanese Abacus Soroban

Techniques Advanced Abacus Theory and Practice Tuttle Publishing

Quickly Learn to Use the Abacus

Springer Nature

Level-2 instructional book to teach children mind math skills using Soroban, the Japanese abacus.

#### **Addition and Subtraction on a Japanese Abacus (Soroban)**

OUP

First published in 1202, Fibonacci's *Liber Abaci* was one of the most important books on mathematics in the Middle Ages, introducing Arabic numerals and methods throughout Europe. This is the first translation into a modern European language, of interest not only to historians of science but also to all mathematicians and mathematics teachers interested in the origins of their methods.

**Airman** Createspace Independent Publishing Platform

This is a simple guidebook for people who are interested in learning the introduction of how an Abacus works. The book includes simple explanation of the theory of abacus, how to read an abacus, and how to use an abacus to do simple calculation. The book includes a rule sheet for those who is interested in depth learning. At its simplest, abacus is a language that will translate numbers into beads. It will train your brain muscles to better focus, enhance your memory and become more observational. Learning to read numbers on an abacus really does open up a whole new world to explore.

### (OF 2) EXCEL AT MIND MATH WITH SOROBAN, A JAPANESE ABACUS

Pragmatic Bookshelf

This handy guide will take abacus users from beginner to master level in a very short time. Though the Japanese abacus may appear mysterious or even primitive, this intriguing tool is capable of amazing speed and accuracy. It is still widely used throughout the shop and markets of Asia and its popularity shows no sign of decline. This volume is designed for the student desiring a greater understanding of the abacus and its calculative functions. The text provides thorough explanations of the advanced operations involving negative numbers, decimals, different units of measurement, and square roots. Diagrams illustrate bead manipulation,

and numerous exercises provide ample practice. Concise and easy-to-follow, this book will improve your abacus skills and help you perform calculations with greater efficiency and precision.

### THE JAPANESE ABACUS EXPLAINED

CreateSpace

The Chinese counting system has undergone a western surge in popularity recently because of its ability to calculate large sums very quickly mentally.

#### How to Use a Chinese Abacus

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Learn how to add, subtract, multiply, divide and find square roots with this easy to use instruction guide. There are many sample problems with step-by-step instructions. The illustrations make it easy to follow along with the descriptions. Practice and perfect skills as you learn with the numerous practice problems given at the end of each chapter.

#### **How the Mind Creates Mathematics, Revised and Updated Edition** Tuttle Publishing

Seki was a Japanese mathematician in the seventeenth century known for his outstanding achievements, including the elimination theory of systems of algebraic equations, which preceded the works of Étienne Bézout and Leonhard Euler by 80 years. Seki was a contemporary of Isaac Newton and Gottfried Wilhelm Leibniz, although there was apparently no direct interaction between them. The Mathematical Society of Japan and the History of Mathematics Society of Japan hosted the International Conference on History of Mathematics in Commemoration of the 300th Posthumous Anniversary of Seki in 2008. This book is the official record of

the conference and includes supplements of collated texts of Seki's original writings with notes in English on these texts. Hikosaburo Komatsu (Professor emeritus, The University of Tokyo), one of the editors, is known for partial differential equations and hyperfunction theory, and for his study on the history of Japanese mathematics. He served as the President of the International Congress of Mathematicians Kyoto 1990.

#### *Imaginary Abacus* Japanese Abacus Soroban Techniques Advanced Abacus Theory and Practice

The Japanese Abacus & Theory book is easy to follow, and gives the reader step-by-step directions on how to use it correctly while applying it to practical use. The imperfect numerical notation and scarcity of suitable writing materials in ancient times are presumed to have given rise to need for devices of mechanical calculation. While the definite origin of the abacus is obscure, there is some reason for believing that its earliest form reckoning table covered with sand or fine dust, in which figures were drawn with a stylus, to be erased with the figure when necessary. Though the Abacus is an older tool for calculation it still is used today in Japan taking on a different name called Soroban. Though the Japanese Abacus or Soroban may appear mysterious or even primitive to those raised in the age of pocket calculators and desktop computers, this intriguing tool is capable of amazing speed and accuracy. It is still widely used throughout the shops and markets of Asia, and its popularity shows no sign of decline. Here for the first time in English is a complete explanation of how to use the abacus.

**MASTERING THE SKILLS FOR  
SUCCESS IN LIFE, BUSINESS,  
SCHOOL, OR HOW TO BECOME AN  
EXPERT IN JUST ABOUT ANYTHING**

Routledge

For centuries, experts have argued that learning was about memorizing information: You're supposed to study facts, dates, and details; burn them into your memory; and then apply that knowledge at opportune times. But this approach to learning isn't nearly enough for the world that we live in today, and in *Learn Better* journalist and education researcher Ulrich Boser demonstrates that how we learn can matter just as much as what we learn. In this brilliantly researched book, Boser maps out the new science of learning, showing how simple techniques like comprehension check-ins and making material personally relatable can help people gain expertise in dramatically better ways. He covers six key steps to help you "learn how to learn," all illuminated with fascinating stories like how Jackson Pollock developed his unique painting style and why an ancient Japanese counting device allows kids to do math at superhuman speeds. Boser's witty, engaging writing makes this book feel like a guilty pleasure, not homework. *Learn Better* will revolutionize the way students and society alike approach learning and makes the case that being smart is not an innate ability--learning is a skill everyone can master. With Boser as your guide, you will be able to fully capitalize on your brain's remarkable ability to gain new skills and open up a whole new world of possibilities.

**THE FUNDAMENTAL OPERATIONS IN**

**BEAD ARITHMETIC - HOW TO USE  
THE CHINESE ABACUS**

Springer

Mathematics is beautiful--and it can be fun and exciting as well as practical. *Good Math* is your guide to some of the most intriguing topics from two thousand years of mathematics: from Egyptian fractions to Turing machines; from the real meaning of numbers to proof trees, group symmetry, and mechanical computation. If you've ever wondered what lay beyond the proofs you struggled to complete in high school geometry, or what limits the capabilities of computer on your desk, this is the book for you. Why do Roman numerals persist? How do we know that some infinities are larger than others? And how can we know for certain a program will ever finish? In this fast-paced tour of modern and not-so-modern math, computer scientist Mark Chu-Carroll explores some of the greatest breakthroughs and disappointments of more than two thousand years of mathematical thought. There is joy and beauty in mathematics, and in more than two dozen essays drawn from his popular "Good Math" blog, you'll find concepts, proofs, and examples that are often surprising, counterintuitive, or just plain weird. Mark begins his journey with the basics of numbers, with an entertaining trip through the integers and the natural, rational, irrational, and transcendental numbers. The voyage continues with a look at some of the oddest numbers in mathematics, including zero, the golden ratio, imaginary numbers, Roman numerals, and Egyptian and continuing fractions. After a deep dive into modern logic, including an introduction to linear logic and the logic-savvy Prolog language, the

trip concludes with a tour of modern set theory and the advances and paradoxes of modern mechanical computing. If your high school or college math courses left you grasping for the inner meaning behind the numbers, Mark's book will both entertain and enlighten you.

**A Commemoration on His Tercentenary** Read Books Ltd

The book presents thirty great Chinese inventions, both ancient and modern, which are original, distinct, have made outstanding contributions and had extensive influence in China and around the globe. It also clarifies the misunderstandings and provides a clear definition and classification of the evaluation criteria for great inventions. Each invention is presented with color pictures and comprehensive discussions. The book not only offers readers the fascinating stories behind the greatest inventions of all time from China, such as the compass, paper, and tea making & planting, but also allows them to be inspired by the great Chinese inventors' inherent spirit of innovation and creativity.

Seki, Founder of Modern Mathematics in Japan Courier Corporation

These simple math secrets and tricks will forever change how you look at the world of numbers. Secrets of Mental Math will have you thinking like a math genius in no time. Get ready to amaze your friends—and yourself—with incredible calculations you never thought you could master, as renowned “mathemagician” Arthur Benjamin shares his techniques for lightning-quick calculations and amazing number tricks. This book will teach you to do math in your head faster than you ever thought possible, dramatically improve your memory for numbers, and—maybe for the first time—make mathematics fun.

Yes, even you can learn to do seemingly complex equations in your head; all you need to learn are a few tricks. You'll be able to quickly multiply and divide triple digits, compute with fractions, and determine squares, cubes, and roots without blinking an eye. No matter what your age or current math ability, Secrets of Mental Math will allow you to perform fantastic feats of the mind effortlessly. This is the math they never taught you in school.

**Abacus 101: Beginner's Abacus & Mental Math: Learn the Story, Concepts & Basics of Traditional Abacus** Independently Published

The book explains how to quickly learn how to use the Japanese Abacus. Instructions on how to effectively master the essential elements needed for addition and subtraction. Examples are shown for each section with clear graphics on how to proceed. Learning the Abacus: 1. Strengthens mental visualization 2. Sharpens concentration 3. Improves academic results 4. Enforces problem solving techniques Great for both children and adults. This useful and impressive skill would be an asset for anyone.

*A Step-By-Step Guide to Addition, Subtraction, Multiplication, Division, Roots and More* No Starch Press

Learn to add and subtract in your head by imagining an abacus to calculate the result. This workbook has 1882 problems with answers. Example: Learn to calculate  $415-350+233-155+44$  quickly, just by imagining an abacus. To follow this course you will also need: 1) A Japanese abacus (with at least 13 columns). 2) The accompanying Instruction book 'Imaginary Abacus - Instruction book' (sold separately). Clearly written with graphics. Answers to all work is included. Learning to use an

abacus is both enjoyable and helps to improve concentration and memory power. Clearly written with graphics. Answers to all work is included. Learning to use an abacus is both enjoyable and helps to improve concentration and memory power. see book review here: [https://www.youtube.com/watch?v=wxGfE8i\\_Res&feature=youtu.be](https://www.youtube.com/watch?v=wxGfE8i_Res&feature=youtu.be)

### **LEARN HOW TO ADD, SUBTRACT, MULTIPLY, DIVIDE AND FIND SQUARE ROOTS WITH THIS EASY TO USE INSTRUCTION GUIDE.**

CreateSpace

What is the role of mathematics in the secondary classroom? What is expected of a would-be maths teacher? How is mathematics best taught and learnt? Learning to Teach Mathematics in the Secondary School combines theory and practice to present a broad introduction to the opportunities and challenges of teaching mathematics in the modern secondary school classroom. Written specifically with the new and student teacher in mind, the book covers a wide range of issues related to the teaching of mathematics, including: The role of ICT Assessment for Learning NEW Using mathematics in context NEW Communicating mathematically Planning mathematics lessons Including special-needs pupils Teaching mathematics post-16 Professional Development Already a major text for many university teaching courses, this fully revised third edition takes into account new developments in the National Curriculum as well as recent changes to the standards for Qualified Teacher Status. Featuring two brand new chapters, a glossary of useful terms, addresses for resources and organisations, and tasks

designed to prompt critical reflection and support thinking and writing at Masters level, this book will help you make the most of school experience, during your training and beyond. Designed for use as a core textbook, this new edition of Learning to Teach Mathematics in the Secondary School provides essential guidance and advice for all trainee and practising teachers of secondary mathematics.

[The Big Book of Small Python Projects](#)

Gordon & Breach Science Publishers

"Our understanding of how the human brain performs mathematical calculations is far from complete. In The Number Sense, Stanislas Dehaene offers readers an enlightening exploration of the mathematical mind. Using research showing that human infants have a rudimentary number sense, Dehaene suggests that this sense is as basic as our perception of color, and that it is wired into the brain. But how then did we leap from this basic number ability to trigonometry, calculus, and beyond? Dehaene shows that it was the invention of symbolic systems of numerals that started us on the climb to higher mathematics. Tracing the history of numbers, we learn that in early times, people indicated numbers by pointing to part of their bodies, and how Roman numerals were replaced by modern numbers. On the way, we also discover many fascinating facts: for example, because Chinese names for numbers are short, Chinese people can remember up to nine or ten digits at a time, while English-speaking people can only remember seven. A fascinating look at the crossroads where numbers and neurons intersect, The Number Sense offers an intriguing tour of how the structure of the brain shapes our mathematical abilities, and how math

can open up a window on the human mind"--Provided by publisher.

(Of 2) *Excel at Mind Math with Soroban, a Japanese Abacus* Springer Science & Business Media

For all the discussion in the media about creationism and 'Intelligent Design', virtually nothing has been said about the evidence in question - the evidence for evolution by natural selection. Yet, as this succinct and important book shows, that evidence is vast, varied, and magnificent, and drawn from many disparate fields of science. The very latest research is uncovering a stream of evidence revealing evolution in action - from the actual observation of a species splitting into two, to new fossil discoveries, to the deciphering of the evidence stored in our genome. Why Evolution is True weaves together the many threads of modern work in genetics, palaeontology, geology, molecular biology, anatomy, and development to demonstrate the 'indelible stamp' of the processes first proposed by Darwin. It is a crisp, lucid, and accessible statement that will leave no one with an open mind in any doubt about the truth of evolution.

## MATHEMATICS

CreateSpace

*Ancient Computers* is an excellent introduction to the calculating methods of diverse cultures across time. A mixture of history and practical techniques for understanding and using these ancient devices brings the tools of these long-forgotten civilizations to a wide audience. Stephenson writes in an easy-to-understand and accessible manner and the use of diagrams is extensive. Want know how to use an abacus or where it came from? This is the book for you! The book is

appropriate for high school audiences and above. Dag Spicer Senior Curator Computer History Museum Mountain View, CA ===== The author ... makes two points that deserve wider dissemination. The first is that he sees the central dividing line of the Salamis Tablet as allowing an additive side and a subtractive side ... and notes that this approach, 'reduces the number of pebbles needed tremendously'. It also makes many calculations easier. One cannot argue with his claims of increased efficiency and this point deserves further investigation. The author's second substantive point is that in attempting to understand ancient mathematics, historians need to pay more attention to the available tools, technology, notation, and terminology to see how particular algorithms may have been performed. The author has a video of himself computing the square root of 2 using a set of Salamis Tablets following Heron's method. It takes him 25 minutes [to achieve the four sexagesimal digit precision of Yale tablet YBC 7289]. His argument is that [making and] using only [mathematical reference] tables and writing intermediate [cuneiform] results on clay would take a lot longer. From review by Prof. Duncan Melville, <http://www.stlawu.edu/user/348>, in *Aestimatio*, <http://www.ircps.org/aestimatio/9/294-297>. ===== People, especially historians, have long struggled to appreciate and understand how Ancient Romans, Greeks, Egyptians, and Babylonians, et al, were able to do their arithmetic calculations. Many say the Ancients "probably" used line abacuses or abaci, a.k.a. counting boards. But most then trivialize the possible impact that use would have on the Ancient cultures because they really don't think those

abaci would be very powerful and that they would be extremely hard to use. The (re-)discovery this book documents and explores materialized from the author's experiences in engineering, with a knowledge that design compromises often have to be made; computer programming, especially the different number bases used; the hobby use of a Japanese abacus called the Soroban; and study of the Ancients' numbers and culture. The bottom line is that the Ancients had a powerful and lightning fast computer; powerful and fast compared to any other calculation method available to them in their time. Features included: - multi-base number modes: e.g., sexagesimal, decimal, duodecimal, or nonary; - operating on those numbers in two parts: a signed fraction of the base and a signed exponent of the base, equivalent to scientific notation; - easy and low-cost

expandability; and - built-in error checking! On the "standard" Ancient line abacus doing base-10 calculations, the fraction could have 10 significant digits and the exponent 4. Certainly enough for most modern engineering or scientific problems. If you need more, though, just scribe a few more lines on the abacus and add a few more pebbles to your pouch! By the way, 170 small pebbles will suffice for any problem on the "standard" line abacus. They fit in a pouch that can be easily and comfortably carried in a man's trouser pocket. I hope you find Ancient Computers interesting and useful, -Steve Stephenson, July 15, 2010 ===== Edition 2 adds two appendices: N: Nonary Abacus as Candidate for Modern Electronic Implementation; and V: Visualizing the Basis of Abacus Arithmetic (Using Colored Chip Models). - Steve Stephenson, July 2013

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