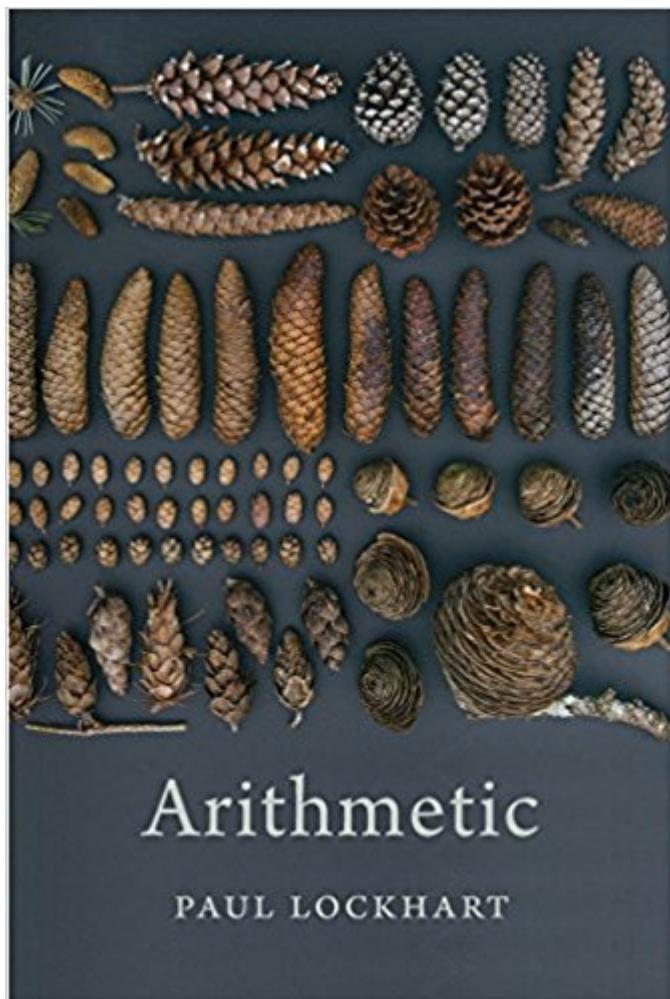


The book was found

Arithmetic



Synopsis

Because evolution endowed humans with a complement of ten fingers, a grouping size of ten seems natural to us, perhaps even ideal. But from the perspective of mathematics, groupings of ten are arbitrary, and can have serious shortcomings. Twelve would be better for divisibility, and eight is smaller and well suited to repeated halving. Grouping by two, as in binary code, has turned out to have its own remarkable advantages. Paul Lockhart reveals arithmetic not as the rote manipulation of numbers—“a practical if mundane branch of knowledge best suited for balancing a checkbook or filling out tax forms”—but as a set of ideas that exhibit the fascinating and sometimes surprising behaviors usually reserved for higher branches of mathematics. The essence of arithmetic is the skillful arrangement of numerical information for ease of communication and comparison, an elegant intellectual craft that arises from our desire to count, add to, take away from, divide up, and multiply quantities of important things. Over centuries, humans devised a variety of strategies for representing and using numerical information, from beads and tally marks to adding machines and computers. Lockhart explores the philosophical and aesthetic nature of counting and of different number systems, both Western and non-Western, weighing the pluses and minuses of each. A passionate, entertaining survey of foundational ideas and methods, *Arithmetic* invites readers to experience the profound and simple beauty of its subject through the eyes of a modern research mathematician.

Book Information

Hardcover: 240 pages

Publisher: Belknap Press: An Imprint of Harvard University Press (August 21, 2017)

Language: English

ISBN-10: 0674972236

ISBN-13: 978-0674972230

Product Dimensions: 5.7 x 0.8 x 8.4 inches

Shipping Weight: 14.4 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #55,667 in Books (See Top 100 in Books) #10 in Books > Science & Math > Mathematics > Popular & Elementary > Counting & Numeration #41 in Books > Science & Math > Mathematics > History #43 in Books > Science & Math > Mathematics > Popular & Elementary > Arithmetic

Customer Reviews

Today's world is more dependent on numbers than at any time in human history, yet with the ready availability of cheap, reliable devices that handle computation, we have never had less need to master arithmetic. Our newfound freedom from the chore of hand computation makes it both possible and, Paul Lockhart argues in this wonderful new book, desirable to step back and reflect on the entire development of arithmetic over several millennia. What are numbers, how did they arise, why did our ancestors invent them, and how did they represent them? They are, after all, one of humankind's most brilliant inventions, arguably having greater impact on our lives than the wheel. Lockhart recounts their fascinating story. (Keith Devlin, mathematician, author of *The Man of Numbers* and *Finding Fibonacci*) What an exuberant, exciting invitation to take joy in the wonderful human activity of counting, and to think deeply about its many origins. Marvelously personal, quite surprising at times, and fun to read. (Barry Mazur, Gerhard Gade University Professor at Harvard University and coauthor of *Prime Numbers and the Riemann Hypothesis*)

Paul Lockhart teaches mathematics at Saint Ann's School in Brooklyn, New York.

[Download to continue reading...](#)

How to Memorize Numbers, Equations, & Simple Arithmetic: Magnetic Memory Series
The Man of Numbers: Fibonacci's Arithmetic Revolution
The Devil's Arithmetic (Puffin Modern Classics)
Multiplication Facts Practice Worksheets
Arithmetic Workbook with Answers: Reproducible Timed Math Drills: Multiplying the Numbers 0-12
100 Math Brainteasers (Grade 7, 8, 9, 10). Arithmetic, Algebra and Geometry Brain Teasers, Puzzles, Games and Problems with Solutions: Math olympiad contest problems for elementary and middle schools
ASVAB Study Guide Book: Practice Test Questions & Review for Math, Mechanical, General Science, Word Knowledge, Arithmetic Reasoning & More
Hardware Implementation of Finite-Field Arithmetic (Electronic Engineering)
Secret Of Mental Math Arithmetic: 70 Secrets To Super Speed Calculation & Amazing Math Tricks:
How to Do Math without a Calculator
Secret of Mental Math Arithmetic: 70 Secrets to Super Speed Calculation
Amazing Math Tricks The Manual: A Guide to the Ultimate Study Method
(Concentration, Super Memory, Speed Reading, Note-Taking, USM, & Rapid Mental Arithmetic),
Second Edition
The Arithmetic of Elliptic Curves (Graduate Texts in Mathematics)
Calabi-Yau Varieties: Arithmetic, Geometry and Physics: Lecture Notes on Concentrated Graduate Courses (Fields Institute Monographs)
Multiplication Facts Math Worksheet Practice Arithmetic Workbook With Answers: Daily Practice guide for elementary students
Integrated Arithmetic and Basic Algebra (5th Edition)
Addition Facts Math Practice Worksheet Arithmetic Workbook With Answers: Daily Practice guide for elementary students (Elementary Addition Series) (Volume 1)
Subtraction Facts

Math Practice Worksheet Arithmetic Workbook With Answers: Daily Practice guide for elementary students and other kids (Elementary Subtraction Series) (Volume 1) Division Facts Math Practice Worksheet Arithmetic Workbook With Answers: Daily Practice guide for elementary students and other kids (Elementary Division Series) (Volume 1) The Foundations of Arithmetic: A Logico-Mathematical Enquiry into the Concept of Number E-Z Arithmetic (Barron's E-Z Series) Arithmetic

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)