

Review

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the only weakness is the author's underestimation of the necessary background in mathematics required to read this material successfully.

This book belongs on your professional bookshelf (or in your backpack or travel bag, into which it will easily fit). You will find many of the problems interesting, challenging, and satisfying. It is also appropriate for use as a text or supplementary text with a wide range of high school and college students.

—Ken Wolff  
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**Encyclopedia of Measurement and Statistics, Volumes 1-3**, edited by Neil J. Salkind, 2006. 1416 pages, \$395.00 cloth. ISBN 1-4129-1611-9. Sage Publications; (805) 499-0721; www.sagepublications.com.

This three-volume encyclopedia contains several hundred entries, contributed by nearly 300 research experts from universities and other organizations, on topics in statistics and measurement that are useful in the social sciences and allied fields of public health and education. The topics range from *ability tests* to *z-scores*, and the entries are separated alphabetically into three parts, corresponding to the three volumes.

Included are an up-to-date bibliography of about 1700 items, appendixes of basic statistical concepts, tables of critical values, relevant Internet sites, a glossary, and an index. Some of the appendixes are taken from Salkind's introductory statistics text, *Statistics for People Who (Think They) Hate Statistics*, second edition (2004). An eight-page reader's guide, which appears in all three volumes, is useful for finding particular entries and gaining an overview of all entries contained in the three volumes.

The encyclopedia is targeted at beginning and intermediate-level college students as well as consumers and practitioners of measurement and statistics. It is intended to be broadly useful for many activities of data collection, management, interpretation, analysis, and sense making. As a resource, it is comprehensive and easy to use.

Many items conclude with a listing of

further readings, consisting of relevant print and Internet references. Having the references listed next to the specific item is very convenient. Other strengths are the ease of use due to the thoughtful organizational structure and the overall strong writing. I highly recommend this encyclopedia as a library resource for both secondary school students and college students.

—Roger H. Marty  
Cleveland State University  
Cleveland, OH 44115

**An Imaginary Tale: The Story of  $\sqrt{-1}$** , Paul J. Nahin, 2007 (with a new preface by the author). 288 pp., \$16.95 paper. ISBN 978-0-691-12798-9. Princeton University Press; (609) 958-5714; pup.princeton.edu.



I found this book, the corrected and updated paperback edition of *An Imaginary Tale*, first published in 1998, fascinating from its beginning to its end.

The author's enthusiasm is infectious. He presents complex ideas (pun intended) in an easy-to-read style. I especially enjoyed the historical tidbits about all the mathematicians and nonmathematicians who were involved in unraveling the mystery surrounding  $\sqrt{-1}$ .

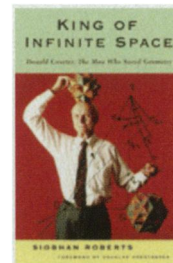
Anyone having the opportunity to read this book should have a pen or pencil in hand to try verifying the many interesting problems that the author includes throughout the text as he weaves the tale of  $\sqrt{-1}$ . Several examples are given of the applications of complex numbers to the solutions of problems in mathematics and applied sciences.

High school and college textbooks generally report that  $\sqrt{-1}$  was invented as a solution to the equation  $x^2 + 1 = 0$ . Nahin shatters this belief by reporting that the breakthrough for  $\sqrt{-1}$  came from solutions to cubic equations, not from solutions to quadratic equations.

This book is a must read for all high school mathematics teachers and should be part of any teacher education program preparing them. I would also recommend it to high school students taking advanced placement calculus courses

and undergraduates majoring in mathematics, applied physics, or engineering.  
—Brenda Strassfeld  
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**King of Infinite Space: Donald Coxeter, The Man Who Saved Geometry**, Siobhan Roberts, 2006. 320 pp., \$25.00 cloth. ISBN 0-8027-1499-4. Published by Walker and Company, distrib. by VHPS Distribution Center; (888) 330-8477; www.walkerbooks.com.



Siobhan Roberts presents a colorful look at a very colorful character, Donald Coxeter, the man who saved geometry. I did not expect to be so enthralled with this biography, a happy

convergence of a notable personality and a talented writer. The weaving of interpersonal relationships with mathematical content makes the book broadly appealing. Those who like to read biographies will enjoy this book. However, those who do not have some mathematical background, preferably in geometry, may find many passages over their heads. The interspersing of text with delightful drawings, quotes, and pictures also adds to the book's overall appearance.

Roberts's study would make an excellent supplement to any mathematics history course, even those not geometry based. She is able to relate Coxeter's mental calisthenics with his practical contributions to geometry in particular and mathematics in general. Advanced high school seniors should be able to handle most of the text, but I think the general appeal would be to college students and, certainly, graduate students.

—Barbara Hershey-Handler  
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Knoxville, TN 37919

**The Life of Numbers**, Antonio J. Duran, Georges Ifrah, and Alberto Manguel, 2006. 180 pp., \$38.00 cloth. ISBN 1-56881-325-2. A K Peters; (781) 416-2888; www.akpeters.com.

This book, a fairly sophisticated account of the evolution of numbers, is a real