The Influence of Computers and Informatics on Mathematics and Its Teaching, Bernard Cornu and Anthony Ralston. 1992, v + 133 pp., free, paper. UNESCO, 7 Place de Fontenoy, 75352 Paris 07-SP, France.

This collection of articles is a thorough, realistic exploration of the issues affecting curriculum, pedagogy, teacher education, and students that have developed because of the influence of computers and informatics on mathematics and its teaching. The overall tone indicates an awareness of the effects that budget constraints, teacher preparation, and a crowded curriculum have on integrating computers into the classroom.

Care is taken to discuss the changes taking place in software development. Elementary and secondary school educators will find the chapter "The Effect of Computers on the School Mathematics Curriculum" useful because it presents specific examples of the use of existing software in the classroom. The reference section of this chapter supplies addresses and descriptions of the programs appearing in the chapter.

Much of this collection is devoted to higher mathematics. Secondary teachers undoubtedly will find meaningful Hodgson and Muller's article on symbolic computer systems as well as the articles discussing the influence of discrete mathematics on higher mathematics.

Reading the articles from this collection is both intellectually and professionally worthwhile. The ideas and topics discussed are informative and may inspire technology-oriented lessons or discussions.—*Janet M. Smith, Horace Mann School, Bronx, NY 10471.*

Introducing Data Analysis in the Schools: Who Should Teach It and How?
Lionel Pereira-Mendoza. 1993, x + 242 pp., $25 paper. ISBN 90-73592-08-9. International Statistical Institute, 428 Prinses Beatrixlann, 2700 AZ Voorburg, The Netherlands.

The subtitle of this report is "Proceedings of the International Statistical Institute Round Table Conference." An international group of twenty-three statistics educators delivered eighteen presentations followed by congenial group discussions over four days. The presentations are divided into several categories: the current situation of data analysis in different countries; who can, or should, teach statistics; how to teach data analysis; and potential areas for future research in statistical education.

Most of the articles follow recent trends in statistics education in the United States and are consistent with the NCTM's curriculum standards. Many articles have an extensive bibliography for the interested reader. Some of the more practical articles include one by Gail Burrill showing how aspects of statistics can be incorporated into standard secondary mathematics classes. Andrejs Dunkels's article on data analysis at the primary level and Carolyn Maher and John Pancari's article on data analysis at the secondary level contain some interesting experiments for the classroom. David Green's article, titled "Data Analysis: What Research Do We Need?" is a particularly good summary of some statistical-education research and what should be done in the future.

The bottom line: the book is interesting in its international flavor, but the practical teaching techniques of data analysis can be found in recent back issues of the *Mathematics Teacher* and the *Arithmetic Teacher* (now *Teaching Children Mathematics*).— *Kevin S. Jones, Southwest Texas State University, San Marcos, TX 78666.*

Investigating Mathematics: The Touchstones Approach,
Howard Zeiderman. 1994, viii + 150 pp., $22 spiral. ISBN 1-878461-20-6. CZM Press, 48 West St., Ste. 104, Annapolis, MD 21401, (410) 263-2121.

This volume supplements regular classwork in mathematics for eleventh- and twelfth-grade students. Its unique approach stimulates discussion about mathematical ideas and thinking by focusing on dialogue other than that of being "correct" or "incorrect" with respect to classroom work in mathematics. Each of the fifteen units contains an orientation, a text, and a set of questions. Guidelines assist the teacher in using this material. The appendix offers a quick summary of each unit and a classification of units according to subject area.

Although topics are not pursued in depth, original textual material from outstanding contributors to mathematical thought, such as Euclid, Galileo, Pascal, Kant, Hilbert, and Russell, provides the "meat" for investigation and provocative discussion. One of the most meaningful texts for students is probably Galileo's notions of finite and infinite, presented in Unit 3. In fact, a teacher using this book might depart from the guidelines and have the students read the text first, even before the orientation, to allow them their own fresh response to the material before exchanging ideas and opinions. The orientation sections, although certainly valuable, require a fairly high level of reading ability and frequently contain rather definite opinions of the author. Teachers may want to modify this section, depending on the composition of their class. Although the author indicates that this material is appropriate for students of various ability levels, it would seem more appropriate for honors students who can afford more regular class time for such enrichment. The volume could also be used by mathematics clubs for discussion sessions.

The author has offered a challenging set of ideas to help students see mathematics as a human activity.—*Charleen M. DeRidder, Knox County Schools, Knoxville, TN 37920.*

The Mathematical Traveler: Exploring the Grand History of Numbers,
Calvin C. Clawson. 1994, x + 307 pp., $25.95 cloth. ISBN 0-306-44645-6. Plenum Publishing Corp., 223 Spring St., New York, NY 10013-1578, (212) 620-8000.

This superb book on the historical development of numbers will interest most readers of this journal, although it was written for the general reader whose mathematical experience ended years ago in high school.

Clawson discusses all aspects of the history of numbers, including primitive counting, fractions, Pythagorean number theory, incommensurables, complex numbers, Dedekind's construction of the irrationals, Cantor's transfinite cardinals, chaos, and fractals. The mathematical development is sound, and the history is well done. The content is not the typical "who did what and when" history often found in mathematics books. It is a survey that makes connections between different mathematical developments and between mathematical events and culture in general.

I recommend this book as background reading for every teacher of mathematics, whether in college or elementary school. I also suggest it as a textbook or as a supplementary book for courses ranging from liberal arts mathematics to mathematics for teachers to a senior seminar for mathematics majors. In each situation it would have to be supplemented with appropriate material because the explanations, although excellent, are often brief and student exercises are not included.

I also recommend *The Mathematical Traveler* to the general public as long as they are forewarned that Clawson has packed a lot of ideas into three hundred pages. The author's brevity is more than compensated for by the excellence of his writing, by his contagious enthusiasm for mathematics, and by his skill at relating mathematics to other aspects of our culture.—*Gerald E. Lenz, St. John's University, Collegeville, MN 56310.*

Mathematics Write Now!
Peggy A. House and Nancy S. Desmond. 1994, x + 129 pp., $13.95 paper. ISBN 0-939765-65-9. Janson Publicatons, Dept. B93M, P.O. Box 860, Dedham, MA 02027-0860, (800) 322-MATH.

Creativity in the mathematics classroom is exemplified by the collection of prose, poetry, and song lyrics in this book. Several topics of mathematics are covered, including algebra, geometry, and fractions, and several types of creative writing are presented: a "soap opera" ("As the Spheroid Turns"), historical fiction ("The Newton-Leibniz Affair"), a rewritten classic ("The Adventures of Huckleberry Function"), poetry ("Rhymes for a Reason"), and song ("The 12 Days of Math Class").

Most of the mathematical content in the book would be appropriate for middle and high school