AMERICAN MATHEMATICAL SOCIETY

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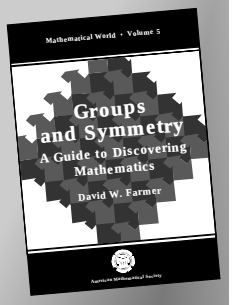
Recommended Undergraduate Texts

The AMS offers an extensive selection of titles that are suitable for many levels of course study. The titles below are among those in high demand for course adoption by undergraduate mathematics teachers. For more recommended texts at the undergraduate level, visit the AMS Bookstore at www.ams.org/bookstore/.



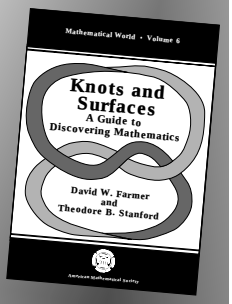
Basic Geometry
Third Edition

George David Birkhoff † and **Ralph Beatley**

Offers a sound mathematical development ... and at the same time enables the student to move rapidly into the heart of geometry.
—The Mathematics Teacher

Should be required reading for every teacher of geometry.
—Mathematical Gazette

AMS Chelsea Publishing; 1959; ISBN 0-8284-0120-9; 294 pages; Hardcover; **All AMS members $18**, List $20, Order Code CHEL/120CT96



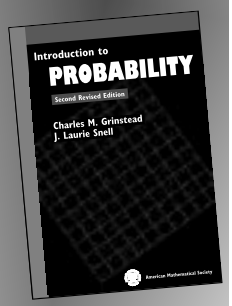
Groups and Symmetry: A Guide to Discovering Mathematics

David W. Farmer, *Bucknell University, Lewisburg, PA*

Nicely produced and concentrates on the informal analysis of geometrical patterns with the emphasis on informality ... could serve as a useful collection of activities to precede a formal course and would provide a range of intuitive experiences to which the more formal treatment could refer.
—The Mathematical Gazette

On the basis of this book it is possible to tailor a good course for high school students to really discover mathematics ... for anyone who is working with high school students in an advanced level the book is really recommended.
—Zentralblatt für Mathematik

Mathematical World, Volume 5; 1996; ISBN 0-8218-0450-2; 102 pages; Softcover; **All AMS members $15**, List $19, Order Code MAWRLD/5CT96



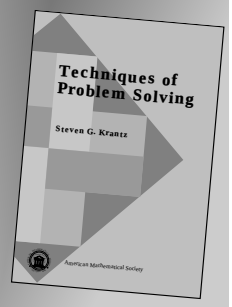
Knots and Surfaces: A Guide to Discovering Mathematics

David W. Farmer, *Bucknell University, Lewisburg, PA*, and **Theodore B. Stanford**, *University of Nevada, Reno*

The book is perfectly suited to a course for non-science majors in need of fulfilling a math requirement. All the sections have worked well at sparking student interest and convincing them that math is much more interesting than mere number-crunching and graphing.
—Professor William Bloch, Wheaton College

Would serve well as the basis of an independent study course in which the student would work through the tasks in a journal subject to periodic review by the instructor ...
—American Mathematical Monthly

Mathematical World, Volume 6; 1996; ISBN 0-8218-0451-0; 101 pages; Softcover; **All AMS members $15**, List $19, Order Code MAWRLD/6CT96



Introduction to Probability
Second Revised Edition

Charles M. Grinstead, *Swarthmore College, PA*, and **J. Laurie Snell**, *Dartmouth College, Hanover, NH*

1997; ISBN 0-8218-0749-8; 510 pages; Hardcover; **All AMS members $39**, List $49, Order Code IPROBCT96

Techniques of Problem Solving

Steven G. Krantz, *Washington University, St. Louis, MO*

Krantz has collected a thoroughly engaging arsenal of problems and problem-solving techniques. Most scientists will want to have a copy for personal reference and for the mental stimulation that it provides. It is well written in a style that encourages the reader to become actively involved ... a myriad of fascinating related problems are provided. After a delightful introductory chapter, the chapters are primarily organized around specific techniques and their applicability in areas such as geometry, logic, recreational math, and counting.
—CHOICE

Steven Krantz is a teacher, scholar, and artist. How else could he have written a book that not only introduces students to many of the great problems of mathematics, but also informs them about the process of solving these problems? Although many books include collections of intriguing problems, Techniques of Problem Solving *uses clear development and lucid explanations to guide students through the process of problem solving. The text gives compelling examples that capture students' interest and encourages them to work problems at the end of the chapter ... Although the book would be excellent for a senior-level capstone course in mathematics, it would also appeal to advanced lower-division or strong high school students as well. [T]his superb book connects the worlds of great mathematical problems with effective classroom instruction.*
—The Mathematics Teacher

1997; ISBN 0-8218-0619-X; 465 pages; Softcover; **All AMS members $23**, List $29, Order Code TPSCT96

Solutions Manual for Techniques of Problem Solving

Luis Fernández and **Haedeh Gooransarab**, *Washington University, St. Louis, MO,* with assistance from Steven G. Krantz

1997; ISBN 0-8218-0628-9; 188 pages; Softcover; **All AMS members $10**, List $12, Order Code SMTPSCT96

Algebra
Third Edition

Saunders Mac Lane, *University of Chicago, IL*, and **Garrett Birkhoff**

Nearly any ten years there seems to arrive a new edition of this now classical book the review of which (1st edition 1967, Zbl. 153,324; 2nd edition 1979, Zbl. 428.00002) the reviewer hardly can improve. The main advantage of the authors had been the introduction of thoroughly categorical concepts into algebra.
—Zentralblatt für Mathematik

The book is clearly written, beautifully organized, and has an excellent and wide-ranging supply of exercises ...
—Mathematical Reviews

AMS Chelsea Publishing; 1988; ISBN 0-8218-1646-2; 626 pages; Hardcover; **All AMS members $35**, List $39, Order Code CHEL/330.HCT96

All prices subject to change. Charges for delivery are $3.00 per order. For optional air delivery outside of the continental U. S., please include $6.50 per item. *Prepayment required.* Order from: **American Mathematical Society**, P. O. Box 5904, Boston, MA 02206-5904, USA. For credit card orders, fax 1-401-455-4046 or call toll free 1-800-321-4AMS (4267) in the U. S. and Canada,1-401-455-4000 worldwide. Or place your order through the AMS bookstore at www.ams.org/bookstore/. Residents of Canada, please include 7% GST.

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