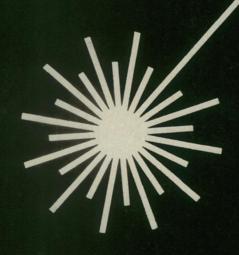
JULY 3, 1976 VOL. 110, NO. 1, 1-16



Science Books: from the Fundamentals to the Frontiers

Examine your choice free for 15 days.

COMPUTER POWER AND HUMAN REASON

From Judgment to Calculation

Joseph Weizenbaum,

Massachusetts Institute of Technology

"Are there decisions in human affairs which a computer ought not to be allowed to make? For example, should a computer—even a highly sophisticated computer—be permitted to sit as a judge in court cases? Or make psychiatric judgments? If such questions interest you, this book . . . will supply you with information and argument, and do it with such a controlled fervor that it may very well get you seriously concerned. . . . "

-The Christian Science Monitor, March 3, 1976

"A brilliantly documented and persuasive book for scientists, politicians, and laypeople, who may be giving up to computers the responsibility for making human choices demanding ethical values and wisdom."—American Libraries, March 1976

"An eloquent and excellent book, a deeply reflective, and felt, account of a scientist's awakening, in Weizenbaum's word, to the pernicious grandiosity that infects scientists everywhere."

-The New Republic, March 20, 1976

"A landmark in the integration of scientific and humanistic thinking."

-Lewis Mumford

1976, 300 pp., 13 illus., \$9.95 (A)

BIOCHEMISTRY

Lubert Stryer, Yale University

"A thoroughly admirable book by an author who combines a prodigious command of the subject with the ability to present it as lucidly as it seems possible for a book to do...."—Clinical Chemistry, 21 (9), 1975

"The author displays a genius for integrating words and pictures."

-Biochemical Education, July 1975

"A masterpiece both scientifically and artistically...."—Henry M. Sobell, The University of Rochester

"An excellent textbook for students and, for mature scientists, a useful synthesis of recent achievements and concepts."

—Andre Lwoff, Institut Pasteur, Paris
1975, 877 pp., 626 illus., 55 tables,
\$19.95 (B)

HOW TO SOLVE PROBLEMS Elements of a Theory of Problems and Problem Solving

Wayne A. Wickelgren, University of Oregon

This fascinating book analyzes and systematizes basic methods for solving mathematical problems. Examples illustrating these methods include chess problems, logical puzzles, railroad switching problems, and problems frequently encountered in science and engineering. The book provides hints to the solutions, allowing the reader to arrive at them independently (complete solutions are provided after the hints). With the exception of the final chapter, the book can be understood by readers with no more mathematical background than high school algebra and plane geometry. Whether your problem solving is professional or recreational, you will find this a helpful book.

1974, 262 pp., 73 illus., softcover, \$6.00 (C)

GRAVITATION

Charles W. Misner,
University of Maryland
Kip S. Thorne,
California Institute of Technology
John Archibald Wheeler,
Princeton University

"One of the great science texts of our day...."—Journal of the British Astronomical Association, October 1974

"A pedagogic masterpiece.... In this era of intense interest in gravitation we may be grateful to Misner, Thorne, and Wheeler for guiding us through its intricacies with such insight."—Science, March 22, 1974

"To understand this book, the reader will need to be a mature student of mathematics, physics, and cosmology. But such a student will find the work indispensable in view of the completeness of its coverage."—Endeavour, January 1975

1973, 1279 pp., 137 illus., 163 boxes, 49.50 (D) Softcover \$25.00 (E)

MATHEMATICS

A Human Endeavor

A Textbook for Those Who Think They Don't Like the Subject

Harold R. Jacobs

Foreword by Martin Gardner

"If I were going to teach mathematics, or learn it, I'd want this book. It's unusually enjoyable as well as big and thorough."
—Stewart Brand, in *The Last Whole Earth Catalog*

"Try this material on people who say there is nothing in mathematics and watch them change."—Mathematics Teacher, February 1972

"Absolutely outstanding! This book will set the standard for comparison for books in its genre for years to come." The Arithmetic Teacher, January 1972 1970, 529 pp., 634 illus., \$8.50 (F)

CROWDING AND BEHAVIOR

Jonathan L. Freedman, Columbia University

Crowding and Behavior presents startling new research, which suggests that crowded urban living is not the cause of high crime rates and other problems of big cities. Instead, crowding merely intensifies the effects of preexisting social situations, themselves either good or bad. This provocative new book points toward new and uniquely human solutions to our urban problems.

"The importance of this book is vastly out of proportion to its 177-page length. I cannot do more than hint at its richness and urge the reader to dig in."—Joseph Church, The New York Times Book Review

1975, 177 pp., 10 tables, softcover, \$4.50 (G)

Third Edition

MATHEMATICS

The Man-made Universe

An Introduction to the Spirit of Mathematics Sherman K. Stein.

University of California, Davis

The first edition of this book was widely hailed as one of the best for introducing the nonmathematician to the "beauty, extent, and vitality of mathematics." The third edition maintains this standard: it has been rewritten and reorganized with a lively new format; there are new results, new exercises, simpler proofs, new illustrations, and a completely new chapter on probability and chance phenomena; and answers to most of the excercises are now supplied in the text. Mathematics: The Man-made Universe is an outstanding introduction to mathematics as an essential part of human knowledge.

1976, 573 pp., 440 illus., \$12.50 (H)

MARTIN GARDNER'S SIXTH BOOK OF MATHEMATICAL GAMES FROM SCIENTIFIC AMERICAN

Martin Gardner

"To fans of recreational mathematics, a new collection of Martin Gardner's Scientific American work will need no recommendation. For variety, depth, and attractive presentation (by author and publisher alike), his books have no parallel in their field. Like its predecessors, it ranges from collections of short items, through new games and practical geometry and topology (some with simple but appealing constructions with paper), to by-ways and amplifications of standard but attractive real mathematics. Many will find suggestions for more forms of diversion than they can spare leisure time for, even over some period of years."-Bulletin of the Institute of Mathematics and its Applications, January 1973

1971, 262 pp., 184 illus., \$9.95 (I)

ENERGY

An Introduction to Physics

Robert H. Romer, Amherst College

This new book takes energy and the world's energy problems as unifying themes while presenting a solid coverage of the principles of physics. Topics covered include alternatives to the automobile, resource depletion, home heating efficiencies, nuclear power (and nuclear safety), the future of fusion and solar power, and many more. A series of appendices on conversion factors, physical constants, and other energy data constitutes a valuable "Energy Handbook" for ready reference. The book uses no mathematics beyond high-school algebra. 1976, 628 pp., 390 illus., \$14.95 (J)



ASTRONOMY AND COSMOLOGY A Modern Course

Fred Hoyle

In this important new book, Fred Hoyle abandons the traditional encyclopedic approach in favor of a fuller treatment of such topics as the large-scale structure of the universe, the history of matter, the origin of the planets, and the origin of life. Astronomy and Cosmology contains more than 600 illustrations, including many never before published photos and a special section in full color.

"In my opinion it is the best book that he has (so far) written and I strongly recommend it to everyone who cares about the universe and our ability to understand it."—Dennis Sciama,

New Scientist, 22 January 1976 1975, 711 pp., 617 illus., 45 tables, \$15.95 (K)

THE SOLAR SYSTEM

A Scientific American Book

In less than twenty years of space exploration we have learned more about the sun, the planets, and the diverse phenomena of interplanetary space than in all the previous centuries of earthbound observation. *The Solar System* is an engrossing, beautifully illustrated survey of these discoveries, written by some of the foremost astronomers of our day.

"An excellent summary of up-to-date knowledge of the solar system."

-W. F. van Altena, Professor of Astronomy, Yale University

1975, 145 pp., 96 illus., (44 with color), \$8.50 (L), Softcover \$4.50 (M)

TO ORDER ANY OF THESE BOOKS

Circle the appropriate letter on the Reader Service Card

FIELD PHOTOGRAPHY Beginning and Advanced Techniques

Alfred A. Blaker

The former Director of the University of California Scientific Photographic Laboratory shares the many tricks of the trade he acquired during fourteen years of experience. Field Photography is illustrated with more than 70 original photographs (18 in full color) and 85 drawings, and the entire book is printed on high-quality paper. Each book comes with a separate field supplement.

Because it is so comprehensive, and because it is equally valuable to professional and amateur photographers, Field Photography will be the standard reference on nature photography for many years to come.

1976, 451 pp., 156 illus., \$19.95 (N)

DNA SYNTHESIS

Arthur Kornberg, Stanford University Written by a Nobel Laureate in medicine, this is the first comprehensive treatment of DNA synthesis emphasizing its biochemical aspects and recent developments. "To present an overview of DNA synthesis in such detail in only 400 pages is in itself a remarkable achievement and the result is commendable."

-Nature, February 20, 1975

"An excellent book about a complex area of investigation, written with great clarity by a master of the subject.... Will long remain as a stimulating and useful work...."—Times Higher Education Supplement, December 20, 1974

1974, 399 pp., 194 illus., 69 tables, \$19.00 (O)

MAN, ENERGY, SOCIETY

Earl Cook, Texas A & M University, College Station

Here is a broad introduction to the technical, social, economic, and political aspects of man's use of energy. Written with a geographic point of view, the book traces the history of energy use, describes the dimensions of contemporary energy problems, and discusses possible alternative energy futures. Readers need no special scientific training to understand and appreciate this book.

1976, 478 pp., 113 illus., \$14.95 (P), Softcover \$7.95 (Q)



W. H. FREEMAN AND COMPANY 660 Market Street, San Francisco, CA 94104