Principles of Mathematics. A Primer

Description: Presents a uniquely balanced approach that bridges introductory and advanced topics in modern mathematics.

An accessible treatment of the fundamentals of modern mathematics, Principles of Mathematics: A Primer provides a unique approach to introductory and advanced mathematical topics. The book features six main subjects, which can be studied independently or in conjunction with each other: set theory; mathematical logic; proof theory; group theory; theory of functions; and linear algebra.

The author begins with comprehensive coverage of the necessary building blocks in mathematics and emphasizes the need to think abstractly and develop an appreciation for mathematical thinking. Maintaining a useful balance of introductory coverage and mathematical rigor, Principles of Mathematics: A Primer features:

- Detailed explanations of important theorems and their applications
- Hundreds of completely solved problems throughout each chapter
- Numerous exercises at the end of each chapter to encourage further exploration
- Discussions of interesting and provocative issues that spark readers' curiosity and facilitate a better understanding and appreciation of the field of mathematics

Principles of Mathematics: A Primer is an ideal textbook for upper-undergraduate courses in the foundations of mathematics and mathematical logic as well as graduate-level courses related to physics, engineering, and computer science. The book is also a useful reference for readers interested in pursuing careers in mathematics and the sciences.

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