Essential Algebra for Chemistry Students, 2nd Edition

Available for packaging with any CENGAGE textbook or available separately for a minimal cost at CENGAGEbrain.com, this short book is intended for students who lack confidence and/or competency in the essential mathematics skills necessary to survive in general chemistry. Each chapter focuses on a specific type of skill and has worked-out examples to show how these skills translate to chemical problem solving.
David W. Ball is Professor of Chemistry at Cleveland State University. His research interests include computational chemistry of new high energy materials, matrix isolation spectroscopy, and various topics in chemical education. He has over 160 publications, equally split between research articles and educational articles, including five books currently in print. He has won recognition for the quality of his teaching, receiving several departmental and college teaching awards as well as the university's Distinguished Faculty Teaching Award in 2002. He has been a contributing editor to "Spectroscopy" magazine since 1994, where he writes "The Baseline" column on fundamental topics in spectroscopy. He is also active in professional service, serving on the Board of Trustees for the Northeastern Ohio Science and Engineering Fair and the Board of Governors of the Cleveland Technical Societies Council. He is also very active in the American Chemical Society, serving the Cleveland Section as chair twice (in 1998 and 2009) and Councilor from 2001 to the present.Preface. 1. Numbers, Units, and Scientific Notation. 2. Arithmetic Evaluation. 3. Significant Figures. 4. Converting Units. 5. Using Chemical Reactions to Make Conversion Factors. 6. Using Mathematical Formulas. 7. Advanced Math Topics. 8. Making Graphs. Index.
Other Books
The Linear Algebra a Beginning Graduate Student Ought to Know, Linear algebra is a living, active branch of mathematics which is central to almost all other areas of mathematics, both pure and applied, as well as computer science, the physical and social sciences, and engineering. It entails an extensive corpus of theoretical results as well as a large body of computational techniques. The book is intended to be used in one of several possible ways: (1) as a self-study guide; (2) as a textbook for a course in advanced linear algebra, either at the upper-class undergraduate level or at the first-year graduate level; or (3) as a reference book. It is also designed to prepare a student for the linear algebra portion of prelim exams or PhD qualifying exams. The volume is self-contained to the extent that it does not assume any previous formal knowledge of linear algebra, though the reader is assumed to have been exposed, at least informally, to some basic ideas and techniques, such as the solution of a small system of linear equations over the real numbers. More importantly, it does assume a seriousness of purpose and a modicum of mathematical sophistication. The book also contains over 1000 exercises, many of which are very challenging.
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