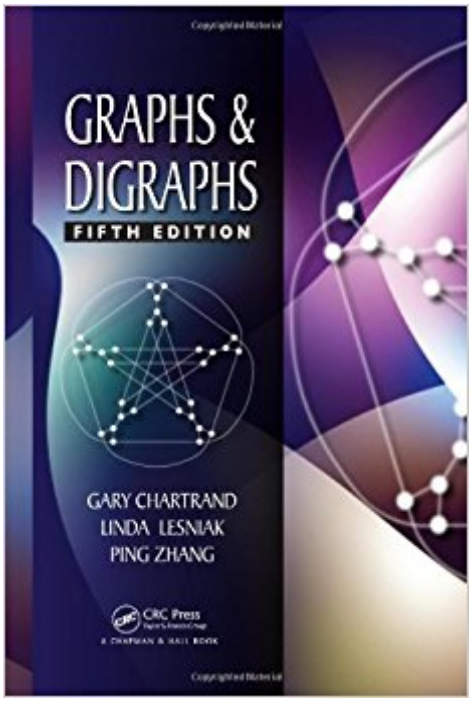
Graphs & Digraphs, Fifth Edition (Textbooks In Mathematics)



Synopsis

Continuing to provide a carefully written, thorough introduction, Graphs & Digraphs, Fifth Edition expertly describes the concepts, theorems, history, and applications of graph theory. Nearly 50 percent longer than its bestselling predecessor, this edition reorganizes the material and presents many new topics. New to the Fifth Edition New or expanded coverage of graph minors, perfect graphs, chromatic polynomials, nowhere-zero flows, flows in networks, degree sequences, toughness, list colorings, and list edge colorings New examples, figures, and applications to illustrate concepts and theorems Expanded historical discussions of well-known mathematicians and problems More than 300 new exercises, along with hints and solutions to odd-numbered exercises at the back of the book Reorganization of sections into subsections to make the material easier to read Bolded definitions of terms, making them easier to locate Despite a field that has evolved over the years, this student-friendly, classroom-tested text remains the consummate introduction to graph theory. It explores the subjectÃ¢â ¬â„¢s fascinating history and presents a host of interesting problems and diverse applications.

Book Information

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Customer Reviews

Gary Chartrand has influenced the world of Graph Theory for almost half a century. He has supervised more than a score of Ph.D. dissertations and written several books on the subject. The most widely known of these texts, Graphs and Digraphs, Ã¢â ¬Â| has much to recommend it, with

clear exposition, and numerous challenging examples [that] make it an ideal textbook for the advanced undergraduate or beginning graduate course. The authors have updated their notation to reflect the current practice in this still-growing area of study. By the authorsÃ¢â ¬â„¢ estimation, the 5th edition is approximately 50% longer than the 4th edition. Ã¢â ¬Â¦ the legendary Frank Harary, author of the second graph theory text ever produced, is one of the figures profiled. His book was the standard in the discipline for several decades. Chartrand, Lesniak and Zhang have produced a worthy successor.Ã¢â ¬â ¢John T. Saccoman, MAA Reviews, June 2012 (This book is in the MAA's basic library list.) As with the earlier editions, the current text emphasizes clear exposition, well-written proofs, and many original and innovative exercises of varying difficulty and challenge. Ã¢â ¬Â¦ The fifth edition continues and extends these fine traditions.Ã¢â ¬â ¢Arthur T. White, Zentralblatt MATH 1211 Now in its fifth edition, its success as a textbook is indicative of its quality and its clarity of presentation Ã¢â ¬Â¦ The authors also describe the fascinating history behind some of the key problems in graph theory, and, to a lesser extent, their applications. This book describes the key concepts you need to get started in graph theory Ã¢â ¬Â¦ . It provides all you might need to know about graph embeddings and graph colorings. Moreover, it analyzes many other topics that more general discrete mathematics monographs do not always cover, such as network flows, minimum cuts, matchings, factorization, decomposition, and even extremal graph theory Ã¢â ¬Â¦ this thorough textbook includes hundreds of exercises at the end of each section. Hints and solutions for odd-numbered exercises are included in the appendix, making it especially suitable for self-learning.Ã¢â ¬â ¢Fernando Berzal, Computing Reviews, September 2011 Praise for the Fourth Edition:Ã¢â ¬Â¦ a popular point of entry to the field Ã¢â ¬Â¦ has evolved with the field from a purely mathematical treatment to one that also addresses the needs of computer scientists.Ã¢â ¬â ¢LÃ¢â ¬â„¢Enseignement MathÃƒÂ©matique Ã¢â ¬Â¦ emphasizes clear exposition, well-written proofs, and many original and innovative exercises of varying difficulty and challenge Ã¢â ¬Â¦ For 25 years, Graphs & Digraphs, in its various editions, has served as an exemplary introduction to the emerging mathematical disciplines of graph theories, for advanced undergraduate and graduate students. It has also served established graph theorists, combinatorialists, and other discrete mathematicians, as well as computer scientists and chemists, as a useful reference work. The fourth edition continues these fine traditions.Ã¢â ¬â ¢Zentralblatt MATH

Gary Chartrand is a professor emeritus of mathematics at Western Michigan University. Linda Lesniak is a professor emeritus of mathematics at Drew University. Ping Zhang is a professor of

mathematics at Western Michigan University. All three have authored or co-authored many textbooks in mathematics and numerous research articles in graph theory.

The book has helped me understand a lot about graph theory in both of my college graph theory classes. Although the definitions or explanations might be a little vague at times and there are one or two errors in the book, it is a perfect book for those who need an intro into graph theory. The problems in the book can be challenging but if you think about the problems in the correct way, the problems aren't very difficult.

The printing was unacceptable. Many pages had significant faded areas. This made much of the copy difficult to read. As much as could be seen, the content was good.

it is new book and good looking. it help me work on the class and not too much expansive. hope other people like it

This book contains a lot of material and covers it very well. The discipline of graph theory is a broad one, and no textbook could possibly cover all of it, but Graphs and Digraphs gets as close to it as you are likely to find in a single book.The proofs and theorems are stated and proved quickly, giving brief examples only when it feels they are needed. I can see how this would be irritating to a great many students, but this choice allows it to cover far more material without spending pages getting bogged down in extraneous fluff.The end-of-section questions are extremely well thought out. Where many textbooks only ask students to repeat back to the instructor what they read this one expects the students to think before coming up with an answer. The authors assume that the reader wants to master the subject and therefore needs to learn how to think like a graph theorist and so they ask questions that make the reader work for an answer. I personally prefer this philosophy of textbook writing.I feel the need to offer a caveat. This book is for those that want to learn graph theory as opposed to those that want to use graph theory. If you are a computer scientist or someone else that wants a reference that will help with writing and analyzing algorithms I would skip over this book unless you are willing to spend the time and effort to learn the subject inside and out, including those parts of graph theory that have no relevance to whatever it is you are working on. The book is very unforgiving toward those that skip past the part where new vocabulary and concepts are introduced.Chapter Titles:1. Introduction to Graphs2. Trees and Connectivity3. Eulerian and Hamiltonian Graphs4. Digraphs5. Graphs: History and Symmetry6. Planer Graphs7.

Graph Embeddings8. Vertex Colorings9. Map Colorings10. Matchings, Factorization and Domination11. Edge Colorings12. Extremal Graph Theory

This is quite possible one of the worst textbooks I have ever used. Most of the chapters revolve around theorems and proofs (which is fine for this area of study) but the book doesn't give enough examples to support those theorems and proofs. The beginning chapters are overwhelming and do not give an adequate explanation of the basics you will need for the rest of the book. One example, the majority of the book relies on abbreviations and terms that are only mentioned once (if not at all), and if you do not comprehend these, it is easy to get lost. Most of the exercises at the end of the chapters were not explained clearly throughout the text, requiring that you study another resource to find the answer. Unless you are forced to, please do not spend your money on this monotonous, confusing textbook.

Book was in good shape.