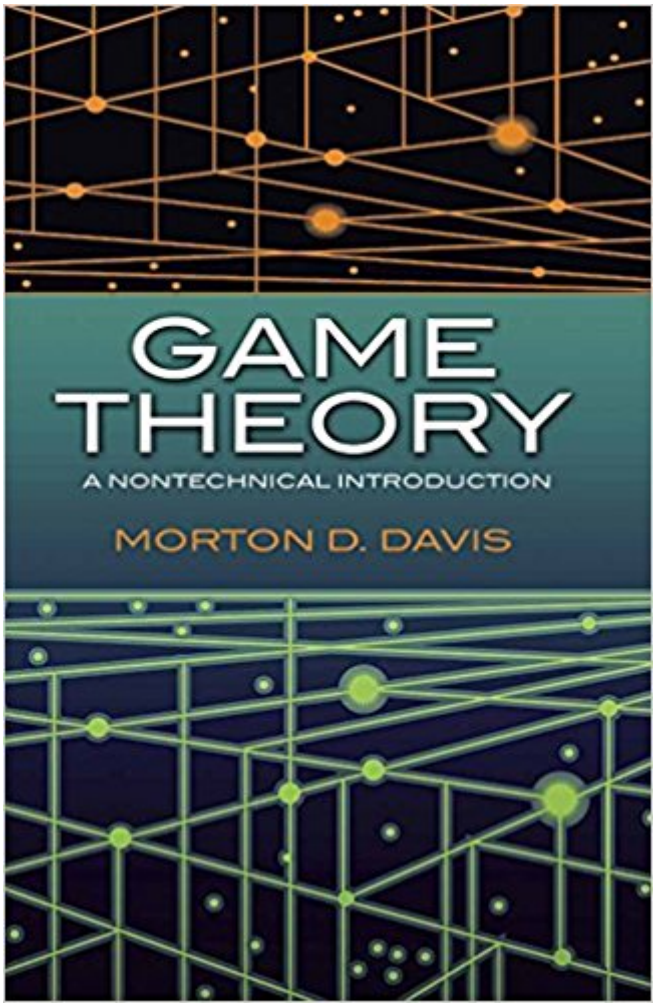
Game Theory: A Nontechnical Introduction (Dover Books On Mathematics)



Synopsis

"A lucid and penetrating development of game theory that will appeal to the intuition . . . a most valuable contribution." â ” Douglas R. Hofstadter, author of GÃ¶del, Escher, BachThe foundations of game theory were laid by John von Neumann, who in 1928 proved the basic minimax theorem, and with the 1944 publication of the Theory of Games and Economic Behavior, the field was established. Since then, game theory has become an enormously important discipline because of its novel mathematical properties and its many applications to social, economic, and political problems.Game theory has been used to make investment decisions, pick jurors, commit tanks to battle, allocate business expenses equitably â ” even to measure a senator’s power, among many other uses. In this revised edition of his highly regarded work, Morton Davis begins with an overview of game theory, then discusses the two-person zero-sum game with equilibrium points; the general, two-person zero-sum game; utility theory; the two-person, non-zero-sum game; and the n-person game.A number of problems are posed at the start of each chapter and readers are given a chance to solve them before moving on. (Unlike most mathematical problems, many problems in game theory are easily understood by the lay reader.) At the end of the chapter, where solutions are discussed, readers can compare their "common sense" solutions with those of the author. Brimming with applications to an enormous variety of everyday situations, this book offers readers a fascinating, accessible introduction to one of the most fruitful and interesting intellectual systems of our time.

Book Information

Series: Dover Books on Mathematics
Paperback: 288 pages
Publisher: Dover Publications; Subsequent edition (July 1, 1997)
Language: English
ISBN-10: 0486296725
ISBN-13: 978-0486296722
Product Dimensions: 5.4 x 0.5 x 8.5 inches
Shipping Weight: 12.6 ounces (View shipping rates and policies)
Average Customer Review: 3.7 out of 5 stars 34 customer reviews
Best Sellers Rank: #147,466 in Books (See Top 100 in Books) #35 inÂ Books > Science & Math > Evolution > Game Theory #1493 inÂ Books > Science & Math > Mathematics > Applied #2251 inÂ Books > Textbooks > Science & Mathematics > Mathematics

Customer Reviews

"A lucid and penetrating development of game theory that will appeal to the intuition . . . a most valuable contribution."â ”Douglas R. Hofstadter, author of GÃ¶del, Escher, BachThe foundations of game theory were laid by John von Neumann, who in 1928 proved the basic minimax theorem, and with the 1944 publication of the Theory of Games and Economic Behavior, the field was established. Since then, game theory has become an enormously important discipline because of its novel mathematical properties and its many applications to social, economic, and political problems.Game theory has been used to make investment decisions, pick jurors, commit tanks to battle, allocate business expenses equitablyâ ”even to measure a senator’s power, among many other uses. In this revised edition of his highly regarded work, Morton Davis begins with an overview of game theory, then discusses the two-person zero-sum game with equilibrium points; the general, two-person zero-sum game; utility theory; the two-person, non-zero-sum game; and the n-person game.A number of problems are posed at the start of each chapter and readers are given a chance to solve them before moving on. (Unlike most mathematical problems, many problems in game theory are easily understood by the lay reader.) At the end of the chapter, where solutions are discussed, readers can compare their "common sense" solutions with those of the author. Brimming with applications to an enormous variety of everyday situations, this book offers readers a fascinating, accessible introduction to one of the most fruitful and interesting intellectual systems of our time.

Well, as this book’s title suggests, it is a fairly "nontechnical" introduction to game theory, which normally includes lots of math. I’m not a mathematical person and I didn’t know how much of it usually is in game theory when I signed up for my (elective) Thomas Edison State College course "Games People Play." It included recorded lectures as the primary teaching, so this book was supplemental. Thankfully the course wasn’t too mathematical either, and neither was this book. It does have good explanations of interesting situations in game theory. It has problems at the beginning of each chapter, and then explains the concepts that help solve them; solutions are included. If this is your first introduction to game theory, or if you’re not enthusiastic about math, you might need to go to the Internet for extra help in understanding concepts (I did), but it is a good book.

This is my "Goldilocks/Babybear" game theory book. Not too hard, not to soft, just right.Without calculus, Davis provides a complete introduction to an arcane but useful mathematical

discipline.Â The Compleat Strategyst: Being a Primer on the Theory of Games of StrategyÂ by Williams was too soft. It used the simplest possible methods to address the concepts being discussed, and barely acknowledged some of the most interesting topics in game theory.Â Games and Decisions: Introduction and Critical SurveyÂ by Luce and Raiffa was good, up until you hit the calculus (pretty quickly in each chapter), after which I have no basis to form an opinion.Davis hits all the important concepts of game theory without resorting to sigma notation or even more occult symbols (unlike Luce and Raiffa). He does, however, require a fairly solid understanding of algebra, (unlike Williams). With this fairly humble prerequisite knowledge, Davis takes the non-mathematician where he or she needs to go, and provides a fairly complete level of understanding.I would recommend this one as a perfect sequel to Williams, should the reader not be challenged, or as a stand-alone for the marginally mathematically literate (such as myself) who need a practical understanding of mathematically grounded decision making.E. M. Van Court

Part of the deficiency of macroeconomics is that most of the models assume that "Man" is a rational actor. These models break down when man decides to act in ways that are observably irrational but have some sort of inner coherence.Part of the project to explain the gulf between the rational and the real has been the development of Game Theory in the last half century. The book here, a Dover edition of the nontechnical aspects of the theory, is a fantastic and economical find. Each chapter walks you through the basics of understanding how people react in "Games" with other people. It builds from simple thought exercises with clear answers between two actors to situations between near-infinite numbers of actors with ambiguous outcomes.Although labeled "Nontechnical," I would assume a bit of background is needed to fully realize the usefulness of this text. I think it is non-technical because it lacks the mathematical justification behind the "answers" to the problems and instead relies on a narrative track to explain the consequences of the models built in the theory.The biggest take-away here is this: be selfish. Humans act far from rationally, especially if there are no consequences from a chance encounter with a stranger.

This book delivers on it’s promise. It is a nontechnical introduction to game theory and because of it, I think I understand more about what game theory is and what it can do. I was only really able to understand the first level of games, the "two person zero-sum" games. I was more or less lost in the later chapters covering the more complex games, though. But then I only really wanted to know more about the basics of the theory than to master it, so the book served it’s purpose.

Great book! So many interesting game theory concepts.This purchase was required for a university class on Game Theory. I always hated math, but following this book definitely made it more interesting. I would highly recommend, even if only for a leisure read!

The book is very well written, and surprisingly easy to read, considering how dry the subject matter can be at times. Gives a very nice introduction to the topic, and finishes off with a more formal discussion of some advanced topics.If you are a mathematician, this book is probably excruciatingly easy for you, and probably has little academic value. But, if you are a layman, with an interest in systems and games, it really gives you a lot to think about, and a new way to think about it. It introduces a method of determining possible outcomes, as well as giving a nice overview of more sophisticated concepts, should you decide to explore the topic more fully.Each chapter begins with some questions to consider while reading, and detailed answers to help at the back of each chapter. The only real issue I found with the book is that the questions are missing from chapter one, yet the answers are there. Odd.

Great intro to Game Theory for those of us with little or no education on the subject.

Even though it claims to be a "nontechnical" approach, it is still a heavy read. But all in all, I think I'll enjoy the book and hopefully, learn something.

SEASON, KOVAC/LISKA BOOKS, HENNESSY BOOKS, QUAID HORSES, DOUCET BOOKS, DEER LAKE BOOKS, ELENA ESTES BOOKS, OAK KNOLL BOOKS BY TAMI HOAG Mathematical Introduction to Linear Programming and Game Theory (Undergraduate Texts in Mathematics) Mathematics and the Imagination (Dover Books on Mathematics) One Hundred Problems in Elementary Mathematics (Dover Books on Mathematics) Mathematics for Quantum Mechanics: An Introductory Survey of Operators, Eigenvalues, and Linear Vector Spaces (Dover Books on Mathematics) The Nature and Power of Mathematics (Dover Books on Mathematics) Mathematics for the Nonmathematician (Dover Books on Mathematics) Understanding Infinity: The Mathematics of Infinite Processes (Dover Books on Mathematics) Mathematics and the Physical World (Dover Books on Mathematics)