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Nota di contenuto	An Introduction to Linear Programming and Game Theory; Contents; Preface; 1 Mathematical Models; 1.1 Applying Mathematics; 1.2 The Diet Problem; 1.3 The Prisoner's Dilemma; 1.4 The Roles of Linear Programming and Game Theory; 2 The Linear Programming Model; 2.1 History; 2.2 The Blending Model; 2.3 The Production Model; 2.4 The Transportation Model; 2.5 The Dynamic Planning Model; 2.6 Summary; 3 The Simplex Method; 3.1 The General Problem; 3.2 Linear Equations and Basic Feasible Solutions; 3.3 Introduction to the Simplex Method; 3.4 Theory of the Simplex Method 3.5 The Simplex Tableau and Examples3.6 Artificial Variables; 3.7 Redundant Systems; 3.8 A Convergence Proof; 3.9 Linear Programming and Convexity; 3.10 Spreadsheet Solution of a Linear Programming Problem; 4 Duality; 4.1 Introduction to Duality; 4.2 Definition of the Dual Problem; 4.3 Examples and Interpretations; 4.4 The Duality Theorem; 4.5 The Complementary Slackness Theorem; 5 Sensitivity Analysis; 5.1 Examples in Sensitivity Analysis; 5.2 Matrix Representation of the Simplex Algorithm; 5.3 Changes in the Objective Function; 5.4 Addition of a New Variable 5.5 Changes in the Constant-Term Column Vector5.6 The Dual Simplex

Algorithm; 5.7 Addition of a Constraint; 6 Integer Programming; 6.1 Introduction to Integer Programming; 6.2 Models with Integer Programming Formulations; 6.3 Gomory's Cutting Plane Algorithm; 6.4 A Branch and Bound Algorithm; 6.5 Spreadsheet Solution of an Integer Programming Problem; 7 The Transportation Problem; 7.1 A Distribution Problem; 7.2 The Transportation Problem; 7.3 Applications; 8 Other Topics in Linear Programming; 8.1 An Example Involving Uncertainty; 8.2 An Example with Multiple Goals 8.3 An Example Using Decomposition 8.4 An Example in Data Envelopment Analysis; 9 Two-Person, Zero-Sum Games; 9.1 Introduction to Game Theory; 9.2 Some Principles of Decision Making in Game Theory; 9.3 Saddle Points; 9.4 Mixed Strategies; 9.5 The Fundamental Theorem; 9.6 Computational Techniques; 9.7 Games People Play; 10 Other Topics in Game Theory; 10.1 Utility Theory; 10.2 Two-Person, Non-Zero-Sum Games; 10.3 Noncooperative Two-Person Games; 10.4 Cooperative Two-Person Games; 10.5 The Axioms of Nash; 10.6 An Example; A Vectors and Matrices; B An Example of Cycling
C Efficiency of the Simplex Method D LP Assistant; E Microsoft Excel and Solver; Bibliography; Solutions to Selected Problems; Index

Sommario/riassunto

Praise for the Second Edition: "This is quite a well-done book: very tightly organized, better-than-average exposition, and numerous examples, illustrations, and applications."-Mathematical Reviews of the American Mathematical Society An Introduction to Linear Programming and Game Theory, Third Edition presents a rigorous, yet accessible, introduction to the theoretical concepts and computational techniques of linear programming and game theory. Now with more extensive modeling exercises and detailed integer programming examples, this book uniquely illustrates ho
