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Sommario/riassunto	The fourth edition of this book continues to deal with a number of mathematical topics that are of great importance in the study of classical econometrics. The major expansion involves a more complete coverage of basic aspects of mathematics that continue to play an increasingly significant role in the literature of econometrics. Thus, the chapter on difference equations has been expanded to include enhanced treatment of lag operators (backward shift operators in the statistical literature) that are important not only in the context of the dynamic simultaneous equation GLSEM (general linear structural econometric model), but also time series analysis. New features in this edition include chapters on probability theory and the probabilistic basis of classical econometrics. There is a lengthy chapter on matrix algebra, which takes the reader from the most elementary aspects to the partitioned inverses, characteristic roots and vectors, symmetric, and orthogonal and positive (semi) definite matrices. The book also covers pseudo-inverses, solutions to systems of linear equations, solutions of vector difference equations with constant coefficients and random forcing functions, matrix differentiation, and permutation

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matrices. Its novel features include an introduction to asymptotic expansions, and examples of applications to the general-linear model (regression) and the general linear structural econometric model (simultaneous equations). Also unique to this edition are two fairly extensive chapters on applications to the GLM (general linear model), GLSEM and time series analysis which treat issues relevant to their underlying theoretical bases, estimation and forecasting. Professor Dhrymes is currently Professor of Economics at Columbia University. Earlier he taught at Harvard, University of Pennsylvania, University of California at Los Angeles, and Monash University in Australia. He is a fellow of the Econometric Society and the American Statistical Association. He has been a managing editor and editor of the International Economic Review, and one of the founding editors of the Journal of Econometrics. Professor Dhrymes serves on the Editorial Advisory Boards of the Journal of Econometrics and Econometric Theory.