

Mathematical Economics, by R. G. D. Allen. 2nd edition, Macmillan, London, 1959. xviii + 812 pages. \$10.75.

This is a text on economic theory written in mathematical terms. In the author's words: "The present work is not mathematics for the economist, nor is it econometrics. It aims at a fairly systematic treatment of some of the more important and simpler parts of mathematical economics."

The author has, wisely, developed the mathematics needed in chapters separate from those devoted to economics. There are seven chapters devoted to complex numbers, linear differential equations, linear difference equations, vectors and matrices, matrix algebra, game theory, and linear programming. Two appendices deal with the algebra of operators and linear systems, and the algebra of sets, groups, and vector spaces. The chapters on economics include an account of macrodynamic problems, trade cycles, economic regulation, input-output analysis, applications of linear programming, theory of the firm, value theory, and the aggregation problem.

The major changes from the first edition (1956) are in some critical sections on time lags in dynamic models, general economic equilibrium, and the dual problem in linear programming. The second appendix mentioned above (on modern algebra) is new to this edition.

This book can be highly recommended not only to economic theorists, but to mathematicians who occasionally like to see what can be done with mathematics in other disciplines.

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Analytic Geometry, by C. E. Love and E. D. Rainville. 5th edition, Macmillan, New York, 1955. 302 pages. \$4.25.

In addition to the plane analytic geometry of the usual text-books the student will find in the present book sections on algebraic curves, parametric equations, exponentials and logarithms. As an application of the trigonometrical functions simple harmonic motions are studied. A chapter on curve fitting concludes the part on plane geometry.

The second part of the book deals with solid geometry in a conventional way.