price and handsome physical appearance. They are a "must" on the analyst's bookshelf.

<div align="right">PAUL T. BATEMAN</div>

Methods of mathematical physics. By R. Courant and D. Hilbert. Vol. I. 1st English ed. New York, Interscience, 1953. 16+561 pp. $9.50.

This book is mainly a translation of the second German edition of the celebrated textbook written by Courant and his collaborators at the University of Göttingen. While Hilbert did not take any active part in its preparation his name was put as a co-author to indicate the tremendous influence which he exerted on the mathematical thinking of his surroundings and indeed of the whole mathematical world. Since the content of the book is well known to every worker in the field, let us recall only that the text covers the following subjects: linear transformations and quadratic forms, development of arbitrary functions in series of orthogonal functions, linear integral equations, calculus of variations, eigenvalue and vibration problems, application of variational calculus to eigenvalue problems, and special functions.

This work presents a cross-section of the subject matter as it appeared to Courant's school in Göttingen in 1931. It is, of course, not a valid criticism that the translation contains no newer developments, inasmuch as the author states in his preface that the pressure for publication of an English "Courant-Hilbert" became irresistible. However, regardless of its contents as seen today, one may reasonably ask what will be the reaction of some students who will miss the possibility of using the work as a reference book in which each theorem is stated and numbered in a precise way. Instead of a catalogue of theorems, the reader will find an artistic exposition of the profound meaning of mathematical thinking. The author is greatly aided in his exposition by his natural inclination to somewhat fluid statements which greatly stimulate the imagination of the reader. The reviewer gratefully acknowledges being one of the large community of scientists outside of Göttingen who were influenced by Courant's book.

Very few additions and alterations have been included in the English edition; of these, only the interesting appendix by W. Magnus has been mentioned in the preface. This appendix deals with the question of how a set of linearly independent spherical harmonics in three variables is transformed if the coordinate system is rotated.

The main addition not mentioned in the introduction is a paragraph entitled: Reciprocal quadratic variational problems (chapter 4, §11, pp. 252–257), which complements a preceding section (§9) de-