

Theory of approximation of functions of a real variable, by A. F. Timan. (English translation). Hindustan Publishing Corporation, Delhi 6, India. vii + 631 pages. U.S. \$10.

The present book is an English translation of A. F. Timan's book (in Russian) on approximation of functions of a real variable. An earlier translation into English of the same book by the Pergamon Press has already been in the market since 1963. However, the present translation does not differ in content essentially from the Pergamon Press translation, while the price of the present translation is nearly half the earlier one.

The reviewer notes a number of wrong spellings of names of mathematicians in the text. Thus on pages 578 and 580, "Marcinkiewicz" is distorted out of shape and on page 578, "Tomich" should read "Tomic". However, the new translation is a welcome addition to the literature partly because it is more reasonably priced.

A. Sharma, University of Alberta

Approximations of functions, by G. G. Lorentz (Syracuse University). Holt, Rinehart and Winston, New York, 1966. ix + 188 pages. U.S. \$5.95.

This is perhaps the second book by the author, who is known for his first book on "Bernstein Polynomials", which has stood in the field alone for several years. The present work differs from other books in the market on the subject (of which 21 are listed in the bibliography) in its emphasis on degree of approximation and in the inclusion of a detailed treatment of entropy and its applications.

The author's aim has been, in his own words, 'to write an easily accessible book on approximation of functions, that is simple and without unnecessary details and is also complete enough to include the main results of the theory, including some recent ones'. To a great extent the author has succeeded in this objective, but in avoiding unnecessary details, the book has become a little inaccessible to the reader.

The book is divided into 11 chapters. 1) Possibility of approximation; 2) Polynomials of best approximation; 3) Properties of polynomials and moduli of continuity; 4) The degree of approximation by trigonometric polynomials; 5) The degree of approximation by algebraic polynomials; 6) Approximation by rational functions; 7) Approximation by linear polynomial operators; 8) Approximation of classes of functions; 9) Widths; 10) Entropy; 11) Representation of functions of several variables by functions of one variable.

The book contains considerable interesting material usually not available in English books. The treatment is without unnecessary trappings and is often succinct. A welcome feature of the book is a detailed treatment of saturation of approximation methods. More details on Newman's result on rational approximation and its subsequent extensions by Szűs and Turán and Szabados would add to the value of the book. Also the sections entitled "Notes and Problems" in each chapter could be amplified for the benefit of the reader in the next edition.

There are a few minor printing errors. For example, page 21, line 2[↑] 'A' should read 'A₀'; page 40, line 13[↓], $\|T_n\|$ should read $n\|T_n\|$; page 41, line 6[↑] 'ist' should read 'its'; page 52, line 7[↓] needs correction. On the whole, the book is a welcome addition to the literature. A comprehensive bibliography particularly on Russian literature adds to the value of the book. It is to be hoped that the book