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Nota di contenuto	1. The Sheffer A-Type 0 Orthogonal Polynomial Sequences and Related Results -- 2. Some Applications of the Sheffer A-Type 0 Orthogonal Polynomial Sequences -- 3. A Method for Analyzing a Special Case of the Sheffer B-Type 1 Polynomial Sequences.
Sommario/riassunto	On the Higher-Order Sheffer Orthogonal Polynomial Sequences sheds light on the existence/non-existence of B-Type 1 orthogonal polynomials. This book presents a template for analyzing potential orthogonal polynomial sequences including additional higher-order Sheffer classes. This text not only shows that there are no OPS for the special case the B-Type 1 class, but that there are no orthogonal polynomial sequences for the general B-Type 1 class as well. Moreover, it is quite provocative how the seemingly subtle transition from the B-Type 0 class to the B-Type 1 class leads to a drastically more difficult characterization problem. Despite this issue, a procedure is established that yields a definite answer to our current characterization problem, which can also be extended to various other characterization problems as well. Accessible to undergraduate students in the mathematical sciences and related fields, This book functions as an important reference work regarding the Sheffer sequences. The author takes advantage of Mathematica 7 to display unique detailed code and increase the reader's understanding of the implementation of

Mathematica 7 and facilitate further experimentation. In addition, this book provides an excellent example of how packages like Mathematica 7 can be used to derive rigorous mathematical results.

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