The author makes much of his use of algorithm models as an aid in unifying the presentation of algorithms and their proofs. It would have been most interesting to see if his approach is more general than that of Zangwill who did the first extensive work in this area. Instead, we are given the sentence, "The following set of assumptions are due to Zangwill [Z1] and can be shown, though not very easily, to be stronger than [my assumptions] . . .". Such distinctions are the meat of research and it is very important not to omit proofs of such statements.

Finally, it is very amusing after the author has written so much about the importance of proposing 'implementable' as opposed to 'conceptual' algorithms to read the following step in at least seven of his 'implementable' algorithms for minimizing an unconstrained function $f^0(z)$. "Step 0. Select a $z_0 \in R^n$ such that the set $C(z_0) = \{z|f^0(z) \leqq f^0(z_0)\}$ is bounded."

This book is important because of the breadth of material it contains. The chapter on the rate of convergence of unconstrained minimization techniques is very up-to-date. For these reasons, it is a useful addition to anyone's library.

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30[2.20, 2.40].—CHIH-BING LING & JUNG LIN, *Values of Coefficients in Problems of Rotational Symmetry*, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, and Tennessee Technological University, Cookeville, Tennessee, February 1972, ms. of 23 typewritten pages deposited in the UMT file.

The finite difference $\Delta^s\sigma_n$ arises frequently in problems of rotational symmetry, where σ_n is the sum of the nth powers of the roots of the equation $u^k - (u-1)^k = 0$, $k \geqq 2$. In general, σ_n is real.

The authors tabulate $\Delta^s\sigma_n$ to 11S for $k = 3(1)8$, with $n = -4(1)65$ and $s = 0(1)k-1$. For $s \geqq k$, values of the differences can be found from the tabulated values by the relation $\Delta^s\sigma_n = \Delta^{s-mk}\sigma_{n+mk}$, where m is a positive integer such that $0 \leqq s - mk \leqq k-1$. In particular, for $k = 2$ we have $\Delta^s\sigma_n = (-1)^s/2^{n+s}$.

AUTHORS' SUMMARY

31[3].—STEFAN FENYÖ, *Moderne Mathematische Methoden in der Technik*, Vol. II, Birkhäuser Verlag, Basel, 1971, 336 pp., 25 cm. Price 62—Fr.

This second volume, in contrast to the first, may be described as dealing with finite methods in applied mathematics. In three chapters, it covers linear algebra, linear and convex programming, and graph theory. While the first two chapters would offer ample opportunity for including computational considerations, the author deliberately omits such topics. He feels that their inclusion would lead beyond