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Miscellany

Publications

The National Bureau of Standards, under a project supported by the National Science Foundation, has begun preparation of a comprehensive *Handbook of Mathematical Tables* containing formulas and graphs. An outgrowth of a conference on mathematical tables held at Massachusetts Institute of Technology on September 15 and 16, 1954, the project is being carried out by the Bureau's computation laboratory and numerical analysis group. One of the principal recommendations made at the 1954 conference was that "an outstanding need is for a 'Computer's Handbook', with usually encountered functions, together with a discussion of their analytic properties and a set of formulas and tables for interpolation and other techniques useful to the occasional computer".

Subsequently, P. A. Smith, chairman of the Mathematics Department of the National Research Council, appointed a committee composed of P. M. Morse (chairman), A. Erdélyi, M. C. Gray, N. C. Metropolis, R. D. Richtmyer, J. B. Rosser, J. W. Tukey, H. C. Thacher, Jr., C. B. Tompkins, and John Todd to advise the NBS staff and help determine the contents of the volume. After several meetings the following points were established:

A. The proposed preliminary table of contents calls for a general introductory section explaining the use of the tables and the following chapters:

1. Powers, Roots, and Related Functions; 2. Binomial Coefficients, Bernoulli Numbers; 3. Fundamental Constants; 4. Circular and Hyperbolic Functions, Logarithms; 5. Sine, Cosine, Exponential, and Logarithmic Integrals; 6. Gamma and Related Functions; 7. Error Function, Fresnel Integral; 8. Legendre Functions; 9. Bessel Functions, including (a) Integral Order, (b) Spherical, Modified Spherical, Fractional Order, (c) Complex Argument, (d) Integrals, (e) Struve Functions; 10. Elliptic Functions and Integrals; 11. Mathieu Functions, Spheroidal Wave Functions; 12. Parabolic Cylinder Functions; 13. Hypergeometric Functions; 14. Confluent Hypergeometric Functions; 15. Miscellaneous Functions; 16. Orthogonal Polynomials; 17. Statistical Tables; 18. Interpolation Coefficients—Quadrature; 19. Radix Conversion Tables; 20. Combinatorial Tables.

B. The tables are not to be given to a uniform number of decimal places or significant figures. The elementary functions are to be given to a high order of

accuracy because they have a basic importance and are essential for the evaluation of higher mathematical functions with the aid of auxiliary functions.

C. The tables will be linearly interpolable to 5D or 5S, as far as possible, although more figures may be given.

D. Polynomial and rational approximations for the various functions are to be given as interpolation and computing aids.

E. Graphs are to be given to demonstrate the behavior of the function or as a means of tabulation in the cases of some of the higher transcendental functions.

F. Auxiliary functions and arguments will be used extensively to simplify interpolation and permit tabulation over the entire range of the argument.

G. Radix and "key values" tables to high order of accuracy will be given.

H. In each of the chapters there will be given the most useful mathematical relations pertinent to the functions, indefinite and definite integrals, infinite series, inequalities, and references supplementing the tables.

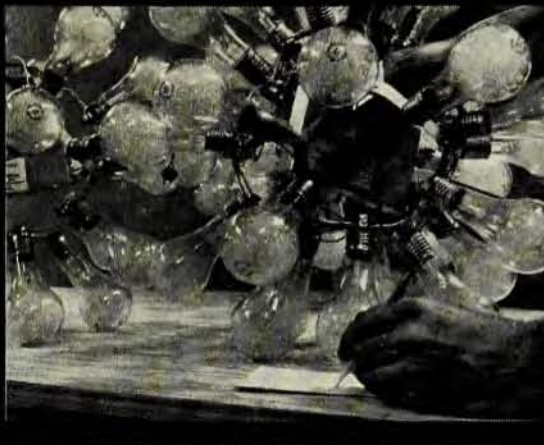
Part of the computations have already been completed and it is hoped that the volume will be completed in about fifteen months. Dr. M. Abramowitz of the NBS Applied Mathematics Division is in charge of the preparation of the tables. Queries and suggestions should be addressed to him at the National Bureau of Standards, Washington 25, D. C.

A new quarterly journal, *The Centennial Review of Arts and Science*, has been launched by the College of Science and Arts of Michigan State University. Designed for readers with broad interests in the liberal arts, the *Review* is intended to present articles "in the principal disciplines of the sciences and humanities in such a manner that the achievements and implications of specialized scholarship may be disseminated over a wide range of fields". The first issue appeared in January. All communications and contributions should be addressed to the editor, Branford P. Millar, 112 Morrill Hall, Michigan State University, East Lansing, Mich.

A new science publication for students in junior and senior high schools, *Tomorrow's Scientists*, is published six to eight times a year by the National Science Teachers Association, 1201 Sixteenth St., N.W., Washington 6, D. C. Edited by Robert H. Carleton, secretary of NSTA, the publication is intended to inform students of recent scientific advances and includes discussions of science activities for students, career and guidance information, reports of projects by students, a science quiz, and announcements of new science books.

Science Education

Proposals are now being accepted by the National Science Foundation for support of summer institutes in 1958 and academic-year institutes during 1958-59. The Foundation's institute program, which is designed to help teachers of science and mathematics improve their



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