

Page 4, III. *Method of Computation*: formula (3)

$$\text{reads } b_m = \sum_{r=0}^{[(n-m)/2]} \sum_{j=0}^{[(n-m)/2]-r} c_{m+2j, n-m-2r-2j} a^{m+2j} b^{n-m-2r-2j}$$

$$\text{should read } b_m = \sum_{r=0}^{[(n-m)/2]} \sum_{j=0}^{[(n-m)/2]-r} c_{m+2j, n-m-2r-2j} a^{m+2j} b^{n-m-2r-2j}.$$

Page 4, line -6,

*reads* where  $t$  is the general  $\dots$

*should read* where  $\left(\frac{s}{t}\right)$  is the general  $\dots$

Page 15, column 3, sixth entry,

*reads*  $28555887360a^{10}b^4$   
*should read*  $28555887360a^{20}b^4$ .

Note from DIAMOND ORDNANCE FUZE LABORATORIES

## NOTES

John von Neumann

1903-1957

John von Neumann died in Washington, D. C. on 8 February. It is probable that no other person had done more to advance the development and application of modern electronic computers to their present state.

His contribution to this advancement was on at least three fronts; he realized the computational potential of components build of modern electronic components; he formulated and helped solve the real logical difficulties which stood in the way of exploiting this potential; he recognized and fearlessly attacked problems of importance whose solution involved millions and tens of millions of multiplications.

In another way his geniality, his reputation, and his most remarkable talent for clear exposition initiated, more than anything else, the acceptance, first by the Government and then by industry, of our present large program of construction of machines.

His interest in electronic calculators continued to the end of his scientific career. He expounded doctrines of increasing the size and complexity of these machines when componentry was available; also he studied the analogy between the operations they carried out and the operations of human thought. He considered deeply the question of reliable computation with unreliable components. He contributed in countless other ways to the development of the computing devices presently available.

His interest was not only in the device, but in the applications, and many examples attest to his use of the new machines in deep and scholarly researches. In addition, he pioneered in the researches in numerical weather prediction, in Monte Carlo techniques, and in many other numerical procedures which are currently subjects of active research. So penetrating was his thought on these matters and so lucid his explanations that the present support of many of these research projects is almost wholly attributable to him. Much of the inspiration of the people continuing to work on these projects must also have been induced by von Neumann.

Von Neumann's remarkable expository talent seemed to lie in his ability to grasp and to state the most elementary principles upon which a problem depends and upon his ability to take an elegant and direct path from such statement of principles to the solution of the problem. I have never known of any problem attacked by him without an outcome of direct constructive suggestions; the field of the problem and the competence of the investigator approaching him seemed immaterial, for von Neumann still made valuable and profound contributions to all problems he agreed to examine. His speed in this was astounding.

He was a man devoted to his ideals, and his last years were spent almost wholly in government service. At the time of his death he was a member of the Atomic Energy Commission, and he performed services for this Commission after his illness had advanced to a degree which made such service seem impossible. At the same time, so long as he was able, he continued his genial and illuminating advice on a profusion of topics covering almost the whole of mathematics and mathematical physics.

Few men have lived who could apply themselves to as wide a range of problems as von Neumann could; he seemed to bring immense power to bear instantly on any problem which interested him, and there was never any inertial delay in adjusting himself to the analysis of the new problem.

His charm and graciousness were such that almost every person who knew him hoped to be his friend and was made to feel that he was a friend. This was partly due to the alert mind which always found something to analyze in a most fascinating way—he was interested in everything from abstruse mathematics and physics to our illogical social mores and our even less logical spelling. I remember him explaining to my very young son who had a large bump on his head that "Everybody falls on his head sooner or later, some just seem to have fallen a little too hard." During the same visit he told my wife his theory of entertaining babies: "Just say 'goo, goo' and poke them gently here." When the son was five he came on a conversation on our porch in which von Neumann was analyzing words which had some quaint touch when spelled backwards. Von Neumann was perplexed when the son asked what OPPO spelled and he was fascinated with the answer—OPPO spells POOP inside out. My son, now seven, feels a real sense of loss in the death of von Neumann.

It must go without saying that those of us who realize that we owe so much of our knowledge, our advancement, and possibly even our civilization to him feel an unspeakable loss.

C. B. T.

### NBS-NSF Training Program

The National Bureau of Standards has announced that a *Training Program in Numerical Analysis for Senior University Staff Members* is now under way in Washington, D. C., with support from the National Science Foundation. The dates are February 11 to June 9, 1957. The program is under the general direction of Mr. John Todd, Chief of the Numerical Analysis Section, Applied Mathematics Division, National Bureau of Standards, with the assistance of Dr. F. L. Alt, Dr. H. A. Antosiewicz, Dr. P. Davis, Dr. Ky Fan, Dr. M. Marcus, Dr. M. Newman, Dr. F. Oberhettinger, Dr. O. Taussky, and others.

The participants, limited to twelve in number, are selected regular university staff members who will receive training to enable them to direct the operation of university computing centers, and to organize training and research in numerical analysis in their own institutions upon completion of this course.

The training program has been divided into three parts:

- a) Two weeks—Introduction to numerical analysis and to programming for automatic computers,
- b) Thirteen weeks—Survey of various chapters in numerical analysis and observation of operation of a general purpose computation laboratory,
- c) One week—Administrative problems.

The program consists of formal instruction by *mathematicians for mathematicians*. Special topics will be covered by guest lectures.

From NBS Announcement

### Wayne State University

#### Conference on Matrix Computations

The Department of Mathematics of Wayne State University announces that a Conference on Matrix Computations will be held on campus on September 3–6, 1957. The Conference will be concerned with the basic problems of matrix algebra, the mathematical methods used to solve systems of linear equations, to compute the inverse of a matrix, and to find characteristic values and characteristic vectors. Papers suggesting new methods for the solution of standard problems will be presented and new problems demanding the efforts of mathematicians will be stressed. Smaller groups with well defined common interests will form discussion panels in the afternoons.

Further announcements may be procured from Professor Wallace Givens, Department of Mathematics, Wayne University, Detroit 2, Michigan.

### CORRIGENDA

HARVARD UNIVERSITY, Computation Laboratory, *Annals, Tables of the Function*  $\arcsin z$ , *MTAC*, v. 10, 1956, Review 66, p. 229, line 3

<i>for</i> Marcell	<i>read</i> Marcel
<i>for</i> d'Études	<i>read</i> d'Étude;