

The April Meeting of the Metropolitan New York Section

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7. An application of matrix methods to a recent postulate system for m-valued functional calculi, by Professor D. L. Webb, University of Arizona.

Professor Webb discussed an application of row matrices to the postulate system of J. B. Rosser and A. R. Turquette (*Journal of Symbolic Logic*, vol. 13, pp. 177–192). He compared the properties of the operators of the 2-valued and the *m*-valued cases.

8. Further analysis of Fermat's congruence for composite moduli, by Professor A. W. Boldyreff, University of New Mexico.

A method of finding all values of x satisfying the congruence $x^{n-1} \equiv 1 \pmod{n}$, when n is a product of two odd primes was discussed.

9. Interpretation of singular solutions of ordinary differential equations of the first order by geometric means, by Professor R. L. Westhafer, New Mexico College of A. & M. A.

Using the definition of singular and regular line element of the differential equation F(x, y, p) = 0 as given by E. Kamke, in which the locus in 3-space of F(x, y, z) = 0 is considered, the types of loci which give rise to singular line elements are seen to be isolated points and curves and their limit points, three dimensional regions of points, intersections of surfaces, and boundary points of the projections of the locus on the xy-plane.

- 10. On certain analogies between measure and category, by Manfred Fliess, New Mexico College of A. & M. A., introduced by the Secretary.
- 11. On the three dimensional distribution of a bomb, by M. S. Hendrickson, University of New Mexico, read by R. C. Hildner.
- 12. A problem in maximum range for rockets, by Keith Guard, New Mexico College of A. & M. A., introduced by the Secretary.
- 13. Results of placement tests for sectioning college algebra, by H. P. Rogers, University of New Mexico.
- 14. On the high school training in mathematics of our freshmen, by Professor Earl Walden, New Mexico College of A. & M. A.

B. D. Roberts, Secretary

THE APRIL MEETING OF THE METROPOLITAN NEW YORK SECTION

The eighth annual meeting of the Metropolitan New York Section of the Mathematical Association of America was held at Brooklyn College, Brooklyn, New York, on Saturday, April 9, 1949. Professor T. F. Cope, Collegiate Vice-Chairman of the Section presided at the morning session, and Professor R. A. Johnson, Chairman of the Section, presided at the afternoon session.

One hundred and twenty-five persons attended the sessions, including the following seventy-three members of the Association: Brother Bernard Alfred, R. G. Archibald, H. C. Ayres, Frances E. Baker, Samuel Borofsky, C. B. Boyer, A. D. Bradley, Benjamin Braverman, Paul Brock, A. B. Brown, Jewell Hughes Bushey, Hobart Bushey, Margaret C. Byrne, John Clark, T. F. Cope, J. E. Darraugh, J. G. Deutsch, I. A. Dodes, J. N. Eastham, J. E. Eaton, Samuel Ei-

lenberg, Carolyn Eisele, J. M. Feld, Edward Fleisher, R. M. Foster, Marion C. Gray, Harriet Griffin, George Grossman, G. C. Helme, T. R. Humphreys, Solomon Hurwitz, L. C. Hutchinson, R. A. Johnson, Aida Kalish, L. S. Kennison, H. S. Kieval, M. S. Klamkin, Edna Kramer-Lassar, A. W. Landers, J. A. Larrivee, Nathan Lazar, A. A. LePori, M. E. Levenson, Emanuel Levine, May H. Maria, F. H. Miller, L. T. Moore, A. J. Mortola, D. S. Nathan, C. V. Newsom, M. A. Nordgaard, P. B. Norman, Walter Prenowitz, James Quinn, R. M. Reed, Moses Richardson, G. J. Ross, S. G. Roth, C. T. Salkind, Arthur Schack, Harry Schor, Aaron Shapiro, Edward Shapiro, James Singer, F. E. Smith, E. R. Stabler, Mildred M. Sullivan, Nelly Ullman, Israel Wallach, Alan Wayne, J. M. Wolfe, Margaret Y. Woodbridge, H. J. Zimmerberg.

The officers elected at the business meeting were: Chairman, B. P. Gill, The City College of the College of the City of New York; Collegiate Vice-Chairman, L. F. Ollman, Hofstra College; High School Vice-Chairman, Alan Wayne, Brooklyn High School of Automotive Trades; Secretary, James Singer, Brooklyn College; Treasurer, Aaron Shapiro, Midwood High School. The ninth annual meeting will be held in the Spring of 1950.

The following papers were presented:

- 1. Address of welcome, by Dr. W. R. Gaede, Dean of Faculty, Brooklyn College.
- 2. Generalizations of the law of cosines, by Professor L. W. Cohen, Queens College (introduced by Professor T. F. Cope).
- 3. Interference patterns in the teaching of mathematics, by Dr. Nathan Lazar, Bureau of Reference, Research and Statistics, Board of Education, New York City.

Experienced teachers of mathematics will not let a homework assignment consist of one type of exercise only, but will choose examples of each of several types. Nevertheless it is a common practice when introducing a topic to present only one aspect and to give almost exclusive drill on examples illustrating that new topic before any other topic is presented, no matter how closely related these topics may be.

This writer claims that the repetition of even one exercise without any significant variation in its pattern tends to encourage the student to perform mathematical operations without insight and understanding, and to make adventitious and unjustifiable inductions from the "model example" worked out. Further repetition of the same pattern will encourage the student to believe in the correctness of his procedure, and make it harder for him to adjust himself to a new type of the same pattern where his ad hoc hypothesis will not work.

It is therefore recommended that the successive presentation of examples illustrating the same mathematical concept be so varied as to prevent the formation of undesirable associations. This approach may not yield the immediate feeling of success that the traditional one gives. It may even require at first more time and more careful preparation than one is accustomed to. This effort will, however, be justified by the end result—a real understanding of the nature of mathematical operations, of the purposes underlying them, and of the mathematical laws governing them.

4. The indebtedness of Greek to Babylonian exact sciences, by Professor O. Neugebauer, Brown University (introduced by Professor T. F. Cope).

In 1928 J. K. Fotheringham published in the Monthly Notices of the Royal Astronomical Society

an article on *The Indebtedness of Greek to Chaldean Astronomy*. In discussing this subject twenty years later, we can add Babylonian mathematics to the comparison. The vast increase of material has also considerably contributed to the complication of the problem and to the realization that there are huge gaps in our records. Greek and demotic papyri show that Babylonian arithmetical methods were used simultaneously with the geometrical astronomical models of Hipparchus and Ptolemy. Babylonian algebra developed methods which are paralleled in Greek "geometrical algebra." Babylonian number theory shows a development previously assumed to be "Pythagorean." The "Pythagorean" theorem was used a thousand years before Pythagoras. Yet it is very difficult to indicate the process by which these discoveries were transmitted to the Greeks. Theoretical astronomy still remains the only field where we are able to see some points of direct contact between Greek and Babylonian science.

5. Some educational trends in New York State and their significance to the mathematicians, by Dr. C. V. Newsom, Assistant Commissioner for Higher Education, University of State of New York.

This paper discussed some of the trends in education on all levels in New York State. Particular attention was given to the new program for the training of elementary and secondary teachers, the development of the new syllabus in mathematics for the secondary level, and the expanded program anticipated by the State in the field of higher education. The report contained many personal observations as the result of the author's actual visitation of institutions.

JAMES SINGER, Secretary

CALENDAR OF FUTURE MEETINGS

Thirty-third Annual Meeting, New York City, December 30, 1949.

International Congress of Mathematicians, Cambridge, Massachusetts, August 30-September 6, 1950.

The following is a list of the Sections of the Association with dates of future meetings so far as they have been reported to the Secretary.

ALLEGHENY MOUNTAIN

ILLINOIS, Southern Illinois University, Carbondale, May 12-13, 1950.

Indiana, Wabash College, Crawfordsville, April 29, 1950.

Iowa, State University of Iowa, Iowa City, April 21–22, 1950.

Kansas, Spring, 1950.

Kentucky, University of Kentucky, Lexington, April 29, 1950.

LOUISIANA-MISSISSIPPI, Centenary College, Shreveport, Louisiana, Spring, 1950.

Maryland-District of Columbia-Virginia, Fall, 1949.

METROPOLITAN NEW YORK, Spring, 1950.

Michigan, March, 1950.

MINNESOTA, Macalaster College, St. Paul, May 6, 1950.

MISSOURI, Spring, 1950.

Nebraska, Nebraska Wesleyan University, Lincoln, May 6, 1950. Northern California, Berkeley, January 28, 1950.

Оніо, Denison University, Granville, April 22, 1950.

OKLAHOMA

PACIFIC NORTHWEST, University of Washington, Seattle, June, 1950.

Philadelphia, Haverford College, November 26, 1949.

ROCKY MOUNTAIN, University of Denver, April, 1950.

SOUTHEASTERN, University of Florida, Gainesville, March, 1950.

SOUTHERN CALIFORNIA, Immaculate Heart College, Hollywood, March 11, 1950.

SOUTHWESTERN, Spring, 1950.

Texas, Abilene, Spring, 1950.

UPPER NEW YORK STATE, Syracuse University, Spring, 1950.

Wisconsin, Marquette University, Milwaukee, May, 1950.