ARRANGEMENTS, ENTERTAINMENT, AND RECREATION

The Committee on Arrangements for the meeting consisted of Everett Pitcher, Chairman; H. L. Alder, J. W. Brace, M. W. Oliphant, G. L. Walker.

Registration headquarters were located in the Caucus Room on the first floor of the Willard Hotel. The book exhibits were located in the Jackson Room on the first floor and the employment register in room 220. The Willard Hotel was the official hotel for the meeting, but the Washington Hotel (next door to the Willard) and the Raleigh Hotel (two blocks away) cooperated in reserving blocks of rooms.

HENRY L. ALDER, *Secretary*

THE APRIL MEETING OF THE METROPOLITAN NEW YORK SECTION

The nineteenth annual meeting of the Metropolitan New York Section of the Mathematical Association of America was held at the City College of New York on April 2, 1960. Dr. B. G. Gallagher, President of the City College, gave the address of welcome. Professor J. P. Russell, Collegiate Vice-Chairman of the Section, presided at the morning session and Dr. George Grossman, High School Vice-Chairman, presided at the afternoon session. One hundred eighty-three persons, including 103 members of the Association, attended the meeting.

Professor Azelle B. Waltcher, Chairman of the Section, presided at the business meeting. The following proposal to amend the By-laws of the Section was approved: "The Executive Committee of the Section will include, in addition to the other members provided by the By-laws, one or more representatives of science and industry to be selected by the officers of the Section." Previously, the By-laws provided for only one such representative on the Executive Committee. Reports were presented by the Treasurer, Mr. Aaron Shapiro, by Professor J. N. Eastham for the Speaker's Bureau, and by Professor C. T. Salkind for the Committee on Contests and Awards.

The following papers were presented at the meeting:

1. *Nonstandard models of axiomatic theories*, by Professor Elliot Mendelson, Columbia University.

From the completeness theorem for first-order logic, it follows that axiomatic set theory has a model of every infinite power, and, in particular, a denumerable model, in apparent (but not real) contradiction of the fact that the existence of nondenumerable sets is provable in the theory. There are also nonstandard models in which the collection of ordinals of the model is not well-ordered by ϵ. For any infinite power, there are at least $2^{\aleph_0}$ models of that power for formalized elementary number theory, and, even stronger, models having all elementary properties (including Goldbach's conjecture and Fermat's theorem or their negations) in common with the nonnegative integers.

2. *Some aspects of numerical analysis*, by Dr. H. H. Goldstine, International Business Machines, Yorktown Heights, New York.

The author first discussed the number system and arithmetical processes of digital calculation and showed the circumstances under which the familiar associative, distributive and commutative laws hold. Secondly, he discussed the topic of numerical stability and illustrated the concept with an analysis of the Bessel recurrence relations.

3. *The graph of a group*, by Professor Wilhelm Magnus, New York University.

The graph of a group was introduced by A. Cayley 100 years ago and utilized as an instrument of research by M. Dehn in 1910. It offers an access to group theory which has the advantage of giving a geometric (*i.e.*, visible) interpretation to groups. Also, the idea that a group element may be interpreted as a path provides an easy transition from group theory to some of its applications in topology, at least in an intuitive manner.

MARY P. DOLCIANI, *Secretary*