THE JUNE MEETING IN PORTLAND

The five hundred fourth meeting of the American Mathematical Society was held at Reed College, Portland, Oregon, on Saturday, June 19, 1954, following the meeting on Friday of the Pacific Northwest Section of the Mathematical Association of America.

Attendance at the meetings was approximately 85, including 63 members of the Society.

By invitation of the Committee to Select Hour Speakers for Far Western Sectional Meetings, Professor V. L. Klee, Jr., of the University of Washington delivered an hour address entitled *Convex sets in linear spaces*. Professor Klee was introduced by Professor R. A. Beaumont.

There were two sessions for contributed papers, at which Professors A. T. Lonseth and Harold Chatland presided.

On Friday evening preceding the meeting there was a joint dinner of the Society and Association, at which the visitors were greeted by President Ballantine of Reed College.

Abstracts of papers presented at the meeting follow. Abstracts whose titles are followed by "*t*" were presented by title. Mrs. Lehmer was introduced by the Associate Secretary, Mr. Rall by Professor Lonseth, Professor Nash by Professor W. T. Martin, and Mr. Krabble by Professor C. B. Morrey.

ALGEBRA AND THEORY OF NUMBERS

588*t*. W. E. Barnes: *Primal ideals in noncommutative rings.*

In any associative ring R an element x is not right prime (nrp) to an ideal A if $yRx\subseteq A$ for some $y\notin A$. An ideal is primal if the elements nrp to it form an ideal. These definitions differ from those of Curtis (Amer. J. Math. vol. 76 (1952) pp. 687–700) but reduce to them for rings with unit and A.C.C. for ideals. They also reduce to Fuchs' (Proc. Amer. Math. Soc. vol. 1 (1950) pp. 1–8) for commutative rings. An ideal B is nrp to A if every element of B is nrp to A. Maximal nrp to A ideals always exist and their intersection is called the adjoint of A. In a class of rings, called uniform, the maximal nrp ideals of any ideal are prime. The A.C.C. implies uniformity, but not conversely. Results (similar to the classical Noether theory) on representations of an ideal as the intersection of primal ideals with prime adjoints are obtained which include those of Fuchs and Curtis. (Received May 3, 1954.)

589. W. E. Barnes: *Principal component ideals in noncommutative rings.*

If A and B are ideals in any associative ring such that $A\subseteq B$, the lower right isolated B-component of A, $L(A, B)$, is the ideal sum of all ideals Am^{-1}, where m is right prime to B (see previous abstract) and $Am^{-1}=\{x \mid xRm\subseteq A\}$. The upper right isolated B-component of A, $U(A, B)$ (which always contains $L(A, B)$) is the intersection