ABSTRACTS OF PAPERS

SUBMITTED FOR PRESENTATION TO THIS SOCIETY

The following papers have been submitted to the Secretary and the Associate Secretaries of the Society for presentation at meetings of the Society. They are numbered serially throughout this volume. Cross-references to them in the reports of the meetings will give the number of this volume, the number of this issue, and the serial number of the abstract.

58. Dr. L. S. Kennison: *Conformal transformations in function space.*

Conformal transformations of the space L_2 are defined and shown to form a group. The following analog of Liouville's theorem is proved: All conformal transformations in function space are composed of translations, rotations, transformations of similitude, and inversions. (Received January 19, 1932.)

59. Dr. L. S. Kennison: *Note on homogeneous functionals.*

The analog for functionals of Euler's theorem for homogeneous functions of n variables was proved by E. Freda in 1915. This note contains a proof of this theorem for a more general case, also a proof of the theorem, not proved by Freda, that if $F[\lambda\phi(x)] = K(\lambda)F[\phi(x)]$, then $K(\lambda)$ is a power of λ. (Received January 19, 1932.)

60. Professor J. H. Roberts: *Concerning spaces which are uniordered relative to systems of closed and compact point sets.*

G. T. Whyburn has raised the following question (see Fundamenta Mathematicae, vol. 16, p. 170): *Can every separable metric space S which is uniordered relative to a system Z be transformed by a biunivalued and continuous transformation into a separable metric space S^* in which every point P^* is contained in arbitrarily small neighborhoods with boundaries belonging to Z?* The space S is uniordered relative to Z if for every point P there exists a monotonic sequence of domains $U_1, U_2, \cdots$, containing P, each bounded by an element of Z, and such that $P = \Pi(\overline{U}_i)$. By a "system Z" is understood a collection Z of closed point sets such that every closed subset of an element of Z is an element of Z, and the sum of every two elements of Z is an element of Z. An example shows that the answer to Whyburn's question is in the negative. However, it is proved that with the additional hypothesis that the elements of Z be *compact* the answer is in the affirmative. (Received January 15, 1932.)