be set up by combining the integral around the boundary with integrals over specified curves interior to the region, or by using area integrals together with line integrals, or by admitting values of the error at isolated points in the expression to be minimized. It is clear that this type of generalization would lead ultimately to the consideration of a Stieltjes integral, though the precise degree of generality that would be practicable remains to be ascertained.

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CONCERNING QUASI-k-FOLD TRANSITIVITY OF PERMUTATION GROUPS*

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1. *Introduction.* Let G denote a permutation group having the property that for every l such that $1 \leq l \leq k$ it is true that when two sets of l letters each are given, taken from the letters on which G operates, then there exists in G a permutation P which transforms the first of these sets of letters in some order into the second. Then it will be said that G is quasi-k-fold transitive.† It is clear that G is transitive in the ordinary sense. Quasi-k-fold transitivity differs from k-fold transitivity in respect to the matter of order in the elements; in the latter a permutation P exists when the order of the l elements in each of the two sets is prescribed such that it transforms the one ordered set into the other; in the former we have to do with the transformations of unordered sets.

G. A. Miller‡ has pointed out that, when p is a prime number of the form $4x+3$, the semi-metacyclic group of degree p is quasi-2-fold transitive, in the sense of our definition, even though it is only singly transitive. In a paper not yet published Miller has easily proved that a quasi-k-fold transitive group is

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† Since the text of this article was put into type Professor W. B. Carver has called my attention to a paper by W. B. Carver and Mrs. Estella Fisher King, this Bulletin, vol. 26 (1920), pp. 319–322, dealing with quasi-k-fold transitivity.

‡ Transactions of this Society, vol. 28 (1926), p. 339.