postulate systems for Boolean algebras and distributive lattices. (Received January 23, 1946.)

94. Archie Blake: *A Boolean derivation of the Moore-Osgood theorem.*

The process of proving a mathematical theorem is represented in symbolic logic by the transformation of logical expressions. This fact is illustrated in the case of the Moore-Osgood theorem, the central features of the derivation of which are shown to be representable in the *Prädikatenkalkul.* (Received January 12, 1946.)

95. Ira Rosenbaum: *Hegel's observations on the differential and integral calculus and its foundations.*

Attention is invited to an extended discussion of the differential and integral calculus and its foundations which appears in Hegel's *Science of logic.* The technical content, character, and interest of Hegel's discussion is indicated by citing authors, texts, methods, and problems with which Hegel dealt. The evidence relating to Hegel's knowledge of mathematics is presented and a picture of the development of Hegel's views is traced; relevant portions of the first and later editions of the *Logic* are compared. Hegel's relation to his contemporaries in mathematics is pointed out. The relevant literature is reviewed critically and after indicating the prevalent neglect of Hegel's discussion, it is concluded that such examination of Hegel's relation to the calculus as does exist is (1) dated, (2) incomplete and/or inadequate, (3) generally independent of earlier and contemporary work in the same field, and (4) limited in scope and point of view. An instance of the unsatisfactory state of the literature on this subject is considered. Hegel's observations on the calculus are examined, placed in their proper historical context, and his views compared with those of his predecessors, contemporaries, and successors. Evaluation from the standpoint of the modern logico-mathematical foundations of analysis is undertaken. (Received February 1, 1946.)

Statistics and Probability

96. G. W. Brown and J. W. Tukey: *Some distributions of sample means.*

It is shown that certain monomials in normally distributed quantities have stable distributions with index 2^{-k}. This provides, for $k>1$, simple examples where the mean of a sample has a distribution equivalent to that of a fixed, arbitrarily large multiple of a single observation. These examples include distributions symmetrical about zero, and positive distributions. Using these examples, it is shown that any distribution with a very long tail (of average order greater than or equal to $x^{-3/2}$) has the distributions of its sample means grow flatter and flatter as the sample size increases. Thus the sample mean provides *less* information than a single value. Stronger results are proved for still longer tails. (Received January 14, 1946.)

Topology

97. R. H. Bing: *Generalization of a theorem of Janiszewski.*

Suppose that H and K are plane sets neither of which cuts the point A from the point B, that the boundary of H is compact, that the junction of H and K is equal to