$B-B\cdot T=H_2+H_1\cdot B$, and $H_2\cdot C=0$, contrary to the lemma.

6. *Conclusion.* In conclusion attention is called to the desirability of clearing up, in the general case, the possibilities for the power of the class of all sets $[H(N)]$ in a compact space for any system T, such as has already been done by Mazurkiewicz and Alexandroff (see papers in Fundamenta Mathematicae, vols. 19 and 20) in the special case of the dimensional components. Also a more detailed study of the structure of continua M of varying degrees of connectivity and local connectivity with respect to the sets $H(N)$, in particular in the case* considered in §5, would be highly desirable.

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INTEGRAL DOMAINS OF RATIONAL GENERALIZED QUATERNION ALGEBRAS†

BY A. A. ALBERT

1. *Introduction.* We shall consider generalized quaternion algebras

$$Q = (1, i, j, ij), \qquad ji = -ij, \qquad i^2 = \alpha, \qquad j^2 = \beta,$$

over the field R of all rational numbers. It is easily shown that, by a trivial transformation on the basis of Q, we may take α and β to be integers without square factors.

Of great interest in the theory of algebras Q are the integral sets of Q. L. E. Dickson‡ has called a set S of quantities of Q an integral set if S satisfies the following postulates:

R: The quantities of S have minimum equations with ordinary whole number coefficients and leading coefficient unity.

C: S is closed under addition, subtraction, and multiplication.

U: S contains $1, i, j$.

M: S is maximal.

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* A further study of this case is made in the author's paper *Cyclic elements of higher order*, to appear in the American Journal of Mathematics, vol. 56 (1934).

† Presented to the Society, June 19, 1933.

‡ See Dickson's *Algebren und ihre Zahlentheorie*, pp. 154–197, for his theory as well as references to the work of Latimer and Darkow. See also Latimer's later paper, Transactions of this Society, vol. 32 (1930), pp. 832–846.