$a_{112} = a_{121} = a_{212} = 1$. The trilinear form associated with this matrix is $x_1y_1z_2 + x_1y_2z_1 + x_2y_1z_1$, which is equivalent to L under the transformations $x_1 = x_2'$, $x_2 = x_1'$. Since the matrices of S and K can be taken to be the same, the factorization rank of S is 1. We have proved the following result.

THEOREM. *The factorization ranks of the forms in the sets* (K, S), (R, P, H), *and* (L, Q) *are* 1, 2, *and* 3, *respectively.*

The equivalence of cubics to P, Q, S can be recognized very simply without the use of factorization rank from the theory of my previous Bulletin paper.

ARMOUR INSTITUTE OF TECHNOLOGY

A NOTE ON THE DEGREE OF POLYNOMIAL APPROXIMATION*

BY J. H. CURTISS

Let C be a rectifiable Jordan curve of the finite z plane. We shall say that a function $f(z)$ belongs to the class Lip (C, j, α) if $f(z)$ is regular in the limited region bounded by C (which we shall call the interior of C), if $f(z)$ is continuous in the corresponding closed region, and if the jth derivative of $f(z)$ is also continuous in this closed region and satisfies a Lipschitz condition with exponent α on C:

$$\left| f^{(j)}(z_1) - f^{(j)}(z_2) \right| \leqq M \left| z_1 - z_2 \right|^{\alpha},$$

z_1, z_2 on C. The number α will be positive and not greater than unity. The number j will be a positive integer or zero; we define $f^{(0)}(z)$ to be identically $f(z)$. The object of this note is to establish the following existence theorem.

THEOREM. *Let the point set* S *consist of a finite number of closed limited Jordan regions of the* z *plane bounded by the mutually exterior analytic curves* $C_1, C_2, \cdots, C_\lambda$. *Let the functions* $f_1(z), f_2(z), \cdots, f_\lambda(z)$ *belong respectively to the classes*

$$\text{Lip}\,(C_1, j, \alpha), \qquad \text{Lip}\,(C_2, j, \alpha), \qquad \cdots, \qquad \text{Lip}\,(C_\lambda, j, \alpha),$$

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