I shall close with one further observation as to the properties of the set M. Mazurkiewicz calls* a set M quasi-connected if for every point m of M there corresponds a positive number λ such that there does not exist any division of M into two mutually separated sets M_1 and M_2 such that M_1 contains m and the diameter of M_1 is less than λ. He gives† an example of a quasi-connected set which contains no true quasi-components. That the set M constructed above is another example of such a set is easily shown; indeed, the value of λ may be taken *uniformly* equal to unity for all points of M.

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A SIMPLE METHOD FOR NORMALIZING TCHEBYCHEFF POLYNOMIALS AND EVALUATING THE ELEMENTS OF THE ALLIED CONTINUED FRACTIONS‡

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1. *Introduction.* Consider a system

$$P_n(x), \qquad (n = 0,1,2, \cdots), \tag{1}$$

of orthogonal, but not normal, Tchebycheff polynomials corresponding to a given (finite or infinite) interval (a, b) with the characteristic function $p(x)$. The corresponding *normalized* system of polynomials will be denoted by

$$\phi_n(p\,;\,x) \equiv \phi_n(x) = a_n(p)\left[x^n - S_n(p)x^{n-1} + \cdots\right], \qquad (n = 0,1, \cdots, a_n > 0). \tag{2}$$

We have, then,

$$\int_a^b p(x)\phi_m(x)\phi_n(x)dx = \begin{cases} 0, m \neq n, \\ 1, m = n. \end{cases} \tag{3}$$

* *Sur les ensembles quasi-connexes*, Fundamenta Mathematicae, vol. 2 (1921), pp. 201–205.

† Loc. cit.

‡ Presented to the Society, April 16, 1927.