set of positive integers δ_i such that $Q_1(y_0, y_1^{\delta_1}, \cdots, y_\nu^{\delta_\nu})$ would be resolvable into more than K_m factors, which is not the case. Each of the functions (7) is a factor of $f(x)$.

When we multiply together the simple functions coming from the irreducible binomial factors of Q which do not involve y_0 and the irreducible functions coming from the remaining irreducible factors of Q, we have a resolution of $f(x)$ into factors belonging to the class C. It is easily seen that this factorization is unique. Thus we have the following theorem.

THEOREM. *A function $f(x)$ belonging to the class C can be expressed in one and only one way as a product*

$$f(x) = I_1(x) \cdots I_m(x) S_1(x) \cdots S_n(x),$$

where each factor belongs to C, the I's are irreducible functions, and the S's are simple functions, $b_0 + \sum b_i \exp(\beta_i x)$, such that the ratio of any two β's in different functions is irrational.

BELL TELEPHONE LABORATORIES

THE NUMBER OF TRISECANTS OF A SPACE CURVE OF ORDER m WHICH MEET AN i-FOLD SECANT*

BY L. A. DYE

The number of trisecants of a space curve C_m, of order m, which meet a general line was determined by Zeuthen,† but if the line happens to be an i-fold secant, $i > 2$, it lies on the ruled surface of trisecants and the formula fails. In algebraic geometry some extension of Zeuthen's work to cover this neglected case is often necessary, so by means of a correspondence we show that the number of trisecants of a C_m which meet an i-fold secant l is

$$(m-2)[h - m(m-1)/6] - i(h-m+2) + i(i-1)(i-2)/6,$$

where h is the number of apparent double points of C_m.

In the plane determined by l and one of the $h' = h - i(i-1)/2$

* Presented to the Society, October 27, 1934.

† H. G. Zeuthen, *Sur les singularités des courbes gauches*, Annali di Matematica, (2), vol. 3 (1869), pp. 175–217.