and

$$\frac{\partial \omega}{\partial y} y' + \frac{\partial \omega}{\partial x} = 0$$

are identical. Hence

$$\xi \frac{\partial \omega}{\partial x} + \eta \frac{\partial \omega}{\partial y} = \chi(\omega_1) = F(\omega). \tag{5}$$

UNIVERSITY OF MISSOURI,
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ON THE DISCONTINUOUS ζ-GROUPS DEFINED BY RATIONAL NORMAL CURVES IN A SPACE OF n DIMENSIONS.

BY PROFESSOR J. W. YOUNG.

(Read before the Chicago Section of the American Mathematical Society, January 1, 1910.)

THE present note completes in an important particular a paper* which I presented to the Society some two years ago. I there considered the discontinuous groups Γ_n of linear fractional transformations

$$\zeta' = \frac{\alpha\zeta + \beta}{\gamma\zeta + \delta} \tag{1}$$

on the complex variable ζ, defined as follows by a rational normal curve C_n in a space S_n of n dimensions : The given C_n is transformed into itself by a group of ∞^3 collineations

$$z_i' = \sum_{k=0}^{n} a_{ik} z_k \qquad (i = 0, 1, \cdots, n) \tag{2}$$

in S_n. Each of these collineations subjects the parameter ζ of the points of C_n to a substitution (1), so that the continuous three-parameter groups of transformations (1) and (2) are simply isomorphic. If now the transformations (2) be restricted to those whose coefficients a_{ik} are rational integers with determinant $|a_{ik}| = 1$, the resulting subgroup of the three-parameter group of transformations (2) will be properly discontinuous.

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* "A fundamental invariant of the discontinuous ζ-groups defined by the normal curves of order n in a space of n dimensions," BULLETIN, vol. 14 (1908), pp. 363–367.