equation for one root we are then able to find 2 roots* of the $(t-1)$th resolvent and 2^t roots of the original equation. The procedure for finding the m remaining roots is obvious.

It is a fairly simple matter to write out formulas, by this method, for the roots of equations of lower degree than the sixth, but for higher degree equations the work becomes extremely complicated.

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THE CONDITIONS FOR A FIXED POINT IN PROJECTIVE DIFFERENTIAL GEOMETRY

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1. *Introduction.* In the projective differential geometry of Wilczynski, as applied to various special theories, a local frame of reference is found to be useful. When theorems† which involve fixed points are proved by Wilczynski's methods, the conditions satisfied by the coordinates of such points, referred to such local frames, are naturally of importance. It is a conspicuous fact that these conditions invariably involve the adjoint system‡ of differential equations. This fact the present paper undertakes to explain.

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* This requires the solution of odd degree equations only. See *On the solution of algebraic equations with rational coefficients*, AMERICAN MATHEMATICAL MONTHLY, June, 1924, p. 286.

† See A. F. Carpenter, *Some fundamental relations in the projective differential geometry of ruled surfaces*, ANNALI DI MATEMATICA, (3), vol. 26 (1917), pp. 285 et seq. Also A. L. Nelson, *Plane nets with equal invariants*, RENDICONTI DI PALERMO, vol. 41 (1916), pp. 251 et seq.

‡ More precisely, *geometric adjoint* system, in the language of Green (cf. *Memoir on the general theory of surfaces and rectilinear congruences*, TRANSACTIONS OF THIS SOCIETY, vol. 20 (1919), p. 106). This will be further discussed in §2.

The term "system of differential equations" will be understood in this paper to mean "completely integrable system of partial differential equations," and to include the system of one or more ordinary differential equations as a special case.