This conic is tangent to the curve at $t = 0$, $t = \infty$, and intersects the curve at six other points. At one of the latter points a tangent to the conic is tangent to the curve at some other point. We may summarize with this theorem: *The self-dual plane rational quintic admitting of the greatest possible number of correlations is invariant under a G_{12} consisting of collineations and correlations.*

THROOP COLLEGE,
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GROUPS CONTAINING A RELATIVELY LARGE NUMBER OF OPERATORS OF ORDER TWO.

BY PROFESSOR G. A. MILLER.

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§ 1. *Introduction.*

IT is well known that every group which contains at least one operator of order 2 must contain an odd number of such operators and that there is an infinite number of groups such that each of them contains exactly $2m + 1$ operators of order 2, where m is an arbitrary positive integer or 0. It is also known that if exactly one half of the operators of a group are of order 2 then the order of this group must be of the form $2(2m + 1)$ and it must be the dihedral or the generalized dihedral group of this order. Moreover, it has been proved that a group G of order

$$g = 2^\alpha(2m + 1)$$

cannot contain more than $2^\alpha m + 2^\alpha - 1$ operators of order 2, α being an arbitrary positive integer, and whenever G contains this number of operators of order 2 it is either the abelian group of order 2^α and of type $(1, 1, 1, \cdots)$ or it is the direct product of the abelian group of order $2^{\alpha-1}$ and of type $(1, 1, 1, \cdots)$ and the dihedral or the generalized dihedral group of order $2(2m + 1)$.*

* G. A. Miller, this BULLETIN, vol. 13 (1907), p. 235.