

The second part of the memoir is devoted to the determination of the group of rationality of a differential equation with rational (or algebraic) coefficients. A new classification of homogeneous linear groups enables the author to refer the determination of the group of rationality to the resolution of the problem of determining whether a linear differential equation with rational coefficients admits of an integral whose logarithmic derivative is rational or algebraic; hence the conclusion that we can always determine the group of rationality of a linear equation of order two, three or four, or refer the determination to the study of an abelian integral. The author thus finds all the possible cases of reduction of a linear equation of the fourth order. He refers the integration problem to its canonic form. The method used extends itself immediately to equations of higher order.

In the concluding chapter the work of von Koch\* is applied to the study of the question of finding whether a linear equation with rational coefficients admits of an integral whose logarithmic derivative is meromorphic (normal integral), to which problem Marotte refers the determination of the group of monodromism attached to a singular point of a linear equation.

M. Marotte's second thesis was on the general principles of dynamics.

5. The remarkable thesis of Drach calls for more extended notice than can be given to it in the space at command for this article. A suitable review of the memoir will appear in a subsequent number of the BULLETIN.

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## NOTES.

At the annual meeting of the Society, December 28, 1899, President R. S. WOODWARD will deliver a presidential address on "The century's progress in applied mathematics."

THE president (Lord KELVIN), the vice-presidents and the secretaries of the London mathematical society have been renominated to serve in the same capacity on the council for the ensuing year. Professor W. BURNSIDE,

\* *Acta Math.*, vol. 18 ; *Comptes rendus*, 1893.