Calcul numérique. Par R. DE MONTESSUS et R. D'ADHÉMAR. Paris, O. Doin et Fils, 1911. 246 pp.

THIS work is in two parts.

The first part (pages 3–138) is by R. de Montessus and is entitled Opérations arithmétiques et algébriques. Its principal content is in the three chapters devoted to the calculation of the roots of numerical algebraic equations and of transcendental equations. For the resolution of these problems a rich variety of methods is given. Many of these are elementary and are usually found in texts on the theory of equations; but others of them are less generally employed. As examples of the latter are those (in Chapter V) in which the calculus of differences is employed for numerical approximations. The methods given are illustrated with many numerical exercises. This part contains a very convenient and readable account of its subject matter.

The second part (pages 141–237) is by R. d'Adhémar and is entitled Intégration. It is concerned primarily with quadratures and differential equations, but contains a short digression on implicit functions and equations, the latter being treated by the method of successive approximations. The author has attempted only an introduction to his subject; this is desirable and is indeed all that could be done in the short space employed.

R. D. CARMICHAEL.

Elementary Theory of Equations. By L. E. DICKSON. New York, John Wiley and Sons, 1914. v + 184 pp.

IT is a good omen for the development of mathematics in this country when some of our most brilliant men of research are willing to take the time to prepare elementary texts suited to the needs of beginners. It is therefore a pleasure to welcome this excellent book, by Professor Dickson, on the elementary theory of equations.

Naturally, no treatment of the difficult Galois theory is given. On the subject of invariants one finds merely a few illustrative examples and no systematic exposition. These omissions will probably be approved by every one who desires to use the book in his classes. The remaining and more elementary aspects of the theory of equations are developed with sufficient fulness to meet the needs of all teachers who are likely to employ such a book for purposes of instruction.