guide to all those who are faced with having to come up with numerical answers to multiple-integration problems.

W. G.

1. S. HABER, "Numerical evaluation of multiple integrals," *SIAM Rev.*, v. 12, 1970, pp. 481–526.
2. I. M. SOBOL', *Multidimensional Quadrature Formulas and Haar Functions*, Izdat. "Nauka", Moscow, 1969. (Russian).
3. I. P. MYSOVSKIKH & V. IA. CHERNITSINA, "Answer to a question of Radon," *Dokl. Akad. Nauk SSSR*, v. 198, 1971, pp. 537–539. (Russian)

15[5, 13.05, 13.15].—G. DUVAUT & J. L. LIONS, *Les Inéquations en Mécanique et en Physique*, Dunod, Paris, 1972, xx + 387 pp., 25 cm. Price 118 Fr.

Important advances in "classical" mathematical physics have been made in the last two decades, due to the consistent application of new techniques in studying partial differential equations. The book under review is a contribution in this direction. For the most part, the text is concerned with providing rigorous proofs of existence and uniqueness theorems for certain classes of partial differential equations of continuum mechanics that have inequalities as boundary conditions. The authors have made some effort to explain the physical meaning of these problems as well as to provide some context for the methods of functional analysis and Sobolev spaces used to solve them. The diverse areas discussed include the equations of plasticity and (linear) elasticity, non-Newtonian (Bingham) fluids, and boundary value problems for Maxwell's equations, among others.

The book consists of seven chapters that can be read independently. In each chapter, various physical problems are formulated in terms of partial differential equations and boundary conditions and then shown to possess "generalized solutions." A reader cannot help but admire the virtuosity of the authors, yet he is left in doubt concerning the deeper aspects and implications of the subject.

A sequel on numerical methods for the problems considered is promised in the near future.

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16[7].—LUDO K. FREVEL, *Evaluation of the Generalized Error Function*, Department of Chemistry, The Johns Hopkins University, Baltimore, Maryland. Ms. of 8 typewritten pp. deposited in the UMT file.

The author tabulates to 5S (unrounded) the "natural" error function

$$\ni(x) = \frac{1}{\Gamma(1 + 1/\nu)} \int_0^x e^{-t^\nu}\, dt$$