of the problem of linear relationship, alias the Riemann problem or (as the author would prefer) the Hilbert problem, the problem being to find a sectionally holomorphic function $F(z)$ with a line of discontinuity L, the boundary values of which from the left and from the right satisfy the condition

$$F^{+}(t) = G(t)F^{-}(t) + f(t) \text{ on } L$$

(except at the ends), where $G(t)$ and $f(t)$ are functions given on L and $G(t) \neq 0$ everywhere on L.

Part VII becomes a little more three-dimensional, dealing with extension, torsion and bending of homogeneous and compound bars.

This is a book to be recommended in the highest terms to every serious student of the mathematical theory of elasticity. And to engineers also, for though they may find some of the work too purely mathematical for their taste, they will be rewarded by solutions of definite problems completely worked out. The reviewer was tickled by the enlivenment imparted to the solution of the torsion problem for a circular cylinder reinforced by an eccentric bar; one part of the solution is due to the cylinder itself and the other part to the "indignation" aroused by the presence of the reinforcement!

J. L. SYNGE

Vorlesungen über Differential- und Integralrechnung. Vol. III. *Integralrechnung auf dem Gebiete mehrerer Variablen.* By A. Ostrowski. Basel, Birkhäuser, 1954. 475 pp., 36 figs. 78 Swiss fr.; paper bound 73.85 Swiss fr.

This is the third and concluding volume of Professor Ostrowski's comprehensive text on calculus. For the reviews of volumes I and II, both by the present writer, the reader is referred to Bull. Amer. Math. Soc. vol. 52 (1946) pp. 798–799 and vol. 58 (1952) pp. 513–515. In this third volume there are seven chapters, all of them dealing to some extent with integration. There is an index for volumes II and III, a glossary of symbols for these two volumes, and a short list of corrections for volumes I and II.

Chapter I deals with the technique of integration. The topics are: complex numbers, partial fractions and integration of rational functions, integration of algebraic and transcendental functions, and the transcendence of e. The discussion of partial fractions is complete, with proofs.

Chapter II, on the definition of multiple integrals, is actually one third devoted to "the general case" of integrals of functions of one variable. The author first discusses sets of zero Jordan content, here-