

als in the solution formulae. There are interesting sections on geometrical optics and pulses in a stratified medium.

The book is notable for its success in applying certain aspects of the modern general theory of hyperbolic differential equations to specific problems. There is also a nice balance of analytical and geometrical methods throughout. This work should interest both pure and applied mathematicians.

G. F. D. Duff, University of Toronto

Engineering Mathematics, by Robert E. Gaskell. The Macmillan Company of Canada Ltd., (Dryden Press), 1958. \$7.25.

Most of the branches of mathematics applied by engineers are treated in this text of 450 pages and 14 chapters. The style is clear, the exercises well chosen, and answers given throughout. One should not expect an exhaustive treatment in each chapter and many instructors may feel the need of supplementary texts in certain fields. The text is written mainly for electrical engineers but applications cover other departments quite thoroughly.

Linear differential equations and use of operators is followed by a chapter on elementary matrix theory and determinants, then one on applications to oscillations, stability and resonance. Complex numbers and variables, including conformal mapping and line integrals are next, followed by simple nonlinear equations. Now a chapter on Fourier Series, and one on numerical methods (curve fitting, solution of algebraic and transcendental equations, Picards method and interpolation formulae for differential equations).

In the last third of the book, we have Elliptic integrals, Gamma functions, Bessel functions, Vector Algebra and Calculus, and second order partial differential equations. These last are treated by Fourier Series, and the Laplace transform, for which a fairly thorough development is given for real  $s$  only.

The writer feels that this may be a good text for a general course in mathematics for engineering students, subsequent to the elementary calculus.

F. M. Wood, Queen's University