

tion, the others being meteorological, geographical, and physical. It is intended to be supplementary to the logarithmic tables in use by all computers. The contents are: Table I, five place values of  $\log \sinh u$ ,  $\log \cosh u$ ,  $\log \tanh u$ ,  $\log \coth u$ ; Table II, five place values of the four natural functions; Table III, five place values of  $\sin u$ ,  $\cos u$ ,  $\log \sin u$ ,  $\log \cos u$ , the argument  $u$  being in radians; Table IV,  $\log_{10} e^u$  to seven places; Table V, five place natural logarithms; Table VI, gudermannian of  $u$  to seven places in radians and corresponding degrees, minutes, and seconds; Table VII, anti-gudermannian to hundredths of a minute (meridional parts for a spherical globe); Table VIII, radians into degrees. The introduction contains definitions and formulas.

The book is clearly printed and easy of reference. Some of the tables are borrowed, but a large number of entries are new computations either for this collection or for checking old values. The tables cannot fail to be of great service in advancing the use of the hyperbolic functions.

JAMES BYRNIE SHAW.

*Problèmes et Exercices de Mathématiques générales.* By E. FABRY. Paris, Hermann et Fils, 1910. 8vo. 420 pp. 10 fr.

THE volume on General Mathematics preceding this was reviewed in the BULLETIN, volume 15 (1909), pages 395-399. The present book contains problems and their solutions, to accompany the text proper. The problems occupy 80 pages, the solutions 336. There are 235 problems in algebra, 231 in analytics, 173 in analysis, and 90 in mechanics. These are solved in full in the remaining pages. As a whole the problems would demand considerable ingenuity on the part of the student. For an average student, who knew only what is to be found in the *Traité*, there are many which would be beyond his range. They are not in this sense exercises. But as a collection of solved illustrations of the subjects treated in the *Traité*, the book is quite valuable. The student would undoubtedly acquire considerable skill in following these models. This is an excellent storehouse from which extra problems might be drawn for the ambitious students in our American classes.

JAMES BYRNIE SHAW.