The book is carefully written and printed and is excellent for purposes of a thorough drill in business principles, but it is not conducive to rigorous and independent thinking.   It would probably prove very useful as a textbook in a business school.

<div align="right">C. H. FORSYTH.</div>

Empirical Formulas.   By THEODORE R. RUNNING.   No. 19 of Mathematical Monographs edited by Mansfield Merriman and Robert S. Woodward.   New York, Wiley, 1917. 144 pp.

ONE of the problems of the engineer, chemist, physicist or statistician is the finding of a formula, simple as possible, by means of which an approximate value of one variable may be computed from a given value of another variable.   The volume under review is concerned with this indeterminate problem, which is not necessarily the problem of determining the physical law connecting the variables in question.   In the first five chapters, which make up the principal part of the book, twenty different forms of equations are taken up, tests are given to show when each type of equation may be suitable for given data, and methods for determining constants are discussed and in many cases illustrated by a concrete example worked out in detail.

For example, one form of equation discussed, No. XVI, is

$$(x + a)(y + b) = c.$$

To test a given set of data thought to follow this law, we plot

$$x - x_k, \qquad \frac{x - x_k}{y - y_k},$$

where x_k, y_k are any two corresponding values from the data. If these points lie on a straight line, then it may be assumed that x and y are related as above and we may proceed to find the constants.   To illustrate this case the results of a set of experiments giving the potential difference and the current in an electric arc are used and the problem worked out in detail.

Included in these twenty types of equations is the Fourier's series with a limited number of terms to which a whole chapter is devoted.   Twenty figures in an appendix show some of the forms of curves belonging to each equation considered.   The

last three chapters are on the method of least squares, inter-
polation and numerical integration.

The book is clear and very easy reading even for the under-
graduate. There is perhaps too much detail. The presenta-
tion on the page is pleasing and there are few errors. The
few found when the book was used in a class were not im-
portant. The reviewer regrets that the author stopped short
of a discussion of the method of moments and of frequency
curves. These however could be included in a companion
volume.

<div style="text-align:right">A. R. CRATHORNE.</div>

NOTES.

THE American association for the advancement of science
will hold its seventy-first meeting at Chicago from December
27, 1920, to January 1, 1921. What has been heretofore
Section A, mathematics and astronomy, of the Association
has been divided into two sections, A, mathematics, and D,
astronomy. Of Section A, Professor D. R. CURTISS has been
elected vice-president and Professor W. H. ROEVER secretary,
Professors DUNHAM JACKSON, A. D. PITCHER, G. A. BLISS,
J. M. PAGE, and H. L. RIETZ members of the sectional com-
mittee, Professor G. A. MILLER member of the council, and
Professor E. V. HUNTINGTON member of the general committee.
Professor JOEL STEBBINS has been elected vice-president and
Professor F. R. MOULTON secretary of Section D.

THE British association for the advancement of science will
meet at Cardiff, beginning August 24, under the presidency
of Professor W. A. HERDMAN. Professor A. S. EDDINGTON
has been appointed president of Section A, mathematics and
physics.

THE Mathematical society of Greece announces the publica-
tion of an official journal, the *Bulletin of the Mathematical
Society of Greece*, of which the first volume appeared in 1919.
Articles for insertion in the *Bulletin* should be addressed to
Professor NILOS SAKELLARIOU, Rue Asklipiou 96, Athens.