I conclude this review by recommending the booklets warmly to readers and also to authors interested in studying a very successful scheme of exposition.

*Queens’ College, Cambridge.*

E. A. Maxwell

**Ancillary Mathematics.** By Sir H. S. W Massey and H. Kestelman. Pp. XVI, 1053. 65s. 1964. (Pitman)

This is the second edition of a book reviewed enthusiastically by my predecessor in *The Mathematical Gazette* for February, 1960. There seems no reason to doubt that subsequent editions will be reviewed equally enthusiastically by our successors for many years.

There is a new chapter, on Linear Algebra and Matrices, covering most of the standard material up to quadratic forms and orthogonal matrices.

It seems worth recording that the 1959 edition gave 990 pages for 75s. whereas the present one gives 1053 for 65s. Perhaps presentation copies might be sent to some Departments of Applied Economics!

E. A. Maxwell


In this “Tutor Text” a lesson given on a teaching page ends with a question, two or more answers being offered, each with a page reference. The choice made, if correct, leads to a new lesson: if wrong, to a detailed solution and the command to return and make a better choice. This method is more acceptable for instruction in slide rule techniques than for teaching many other mathematical topics, and a student faced with a choice of answer is likely to cooperate by trying to get at least one of them. Errors are detected immediately.

Thorough instruction is given in using A, B, C, D, CI, K, L, S, T scales combined in various ways. Since knowledge is required of indices, logarithms, degrees of accuracy, dimensional cancellation and trigonometry as far as sin and cos rules, this is given in condensed form. The examples used have a technical bias. An attempt is made at the difficult task of diagnosing specific errors and there is valuable help in minimising the movement of slide and cursor. But the method enables a student to reach the last page irrespective of the number of errors he makes on the way. Hence there is no external stimulus for him to make his best effort at all times, no taut atmosphere, and only a word in a book to express the approval to which so many pupils respond. It is in this that a book by itself is so much inferior to a teacher: potential high performance may never be realised.

In its own way this Tutor Text certainly does succeed in teaching the use of the slide rule. It will be a great help to an average pupil who does not insist on logical niceties and who can follow wordy instructions without requiring physical demonstration. One wishes that each chapter had concluded with twenty appropriate questions and the command to get fifteen correct before proceeding. Some readers will regret that the varying tertiary divisions of scale get little attention, that the use of the hairline is not insisted upon for all final readings, that a quadrillion is given as $10^{15}$ (American practice) and that printing errors occur at crucial points. In addition, there are serious errors on pages 450 and 463.

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