MATHEMATICS IN PRINTING*

THIS book, published by the Oxford University Press, is the first of its kind and deserves a hearty welcome by writers and printers of higher mathematics. Written in a simple style and finely printed in a type face that is mostly used for scientific, especially mathematical work, it should find a prominent place on the book-shelf of everyone connected with the printing of higher mathematics

The book is divided into three chapters, written by different members of the Press, who had ample experience in their own fields. The first chapter relates very briefly, but clearly, how the mathematical "writings are transformed to the orderliness of a printed page" The author describes the important function of the hand compositor, stressing the difficulties he is confronted with. The workings of the monotype operating and casting machines have been described with the help of figures, pointing out their scope as well as their limitations

No mention has however been made of the "mathematical" keyboard devised by the Lanston Monotype Corporation of America, which claims to eliminate 90 per cent. of the hand composing. Also the possibility of utilising the mono-photo machine for mathematical composition could have been hinted at.

On pp. 14 and 15 are reproduced a "copy", the same in mono-casting and its transformation into composed matter ready for printing A comparison between the last two clearly shows that the maker-up has to remove the unwanted types and spaces cast by the machine and set the correct ones in their places; he has also to add a large number of types with proper justification. Considering the time lost in operating, casting and removing the unwanted types, and the wages paid to the operator and castor, as compared to those of the hand compositor, one is convinced that it will be economically wise to entrust the intricate formulæ to the hand compositor, leaving only text and single-line display formulæ to the operator

The first chapter is largely introductory while the second chapter contains many valuable suggestions. This is the most important chapter of the three. It gives a sort of paternal advice to the novice on preparing his "copy" for neat printing. It also recommends some new and easy-to-print symbols and notations in place of the existing cumbersome ones. These suggestions and recommendations, if carefully considered and adopted, will, to a considerable degree, facilitate the task of the printer. Especially, the notation (appearing on p 32) in the field of theory of numbers, is worth consideration by mathematicians.

The third chapter gives systematic and detailed instructions regarding the composing of mathematics. Though written for the compositors, it deserves careful study by the mathematical authors, who should get familiar with the style of the press. The authors of this book are aware of the various styles in vogue but differ from them for "good reasons". It would have been better had these reasons been stated somewhere very briefly, as it would have enabled other authorities to weigh them. At the end of the chapter are given a "supposed mathematical proof" with marks of corrections and the proof after the corrections have been carried out. Though the page is flooded with corrections, it lacks the following: (*i*) transfer of words from a closely set line to previous or the next line, and (*ii*) shifting to the right or left (apart from centering)

The book closes with three appendices and an index Appendix A, giving a sample of legible handwriting deserves no comment. Appendix B gives a list of various Monotype series used in mathematical composition and also a list of mathematical signs. (The Hebrew "Aleph" is unfortunately missing.) This list will be of use to other printers to compare with their own list of mathematical signs and will serve as a useful guide. Appendix C gives standard abbreviations of general terms and periodicals. This is followed by an exhaustive Index

The book, on the whole, is a welcome addition to books on printing, and should be of much use and guidance to printers and authors of mathematics alike. We are sure, by the time the next edition comes out, photo-composing would have made tremendous advances, and the process in our opinion will lend itself very nicely to mathematical printing.

The Commercial Printing Press, Bombay. S. RAMU

* *The Printing of Mathematics*, by T. W. Chaundy, P. R. Barrett and Charles Batey. (Published by the Oxford University Press), 1954. Pp. ix + 105. Price 15 *sh.*