

PRACTICAL MATHEMATICS FOR BEGINNERS



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MACMILLAN AND CO., LIMITED

NEW YORK: THE MACMILLAN COMPANY N. C. C. P.

1904

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First Edition, 1901.
Reprinted, 1902. New Edition, 1903, 1904.



GLASGOW: PRINTED AT THE UNIVERSITY PRESS
BY ROBERT MACLEHOSE AND CO. LTD.

P R E F A C E.

THE view that engineers and skilled artizans can be given a mathematical training through the agency of the calculations they are actually called upon to make at their work, steadily gains in popularity. The ordinary method of spending many years upon the formal study of algebra, geometry, trigonometry, and the calculus may be of value in the development of the logical faculty, but it is unsuitable for the practical man, because he has neither the time nor the inclination to study along academic lines.

But though Practical Mathematics secures more and more adherents, the subject is still in a tentative stage. The recent revision of the syllabus issued by the Board of Education only two years after its first appearance, is evidence of this.

The present volume is designed to help students in classes where the new course of work issued from South Kensington forms the basis of the lessons of the winter session. Such students are supposed to be familiar with the simple rules of arithmetic, including vulgar fractions, hence the present volume commences with the decimal system of notation. The modern contracted methods of calculation, which are so useful in practical problems, are not taught in many schools and they are therefore introduced at an early stage.

In the extensive range of subjects included in the present volume care has been taken to avoid all work that partakes of the mere puzzle order, and only those processes of constant practical value have been introduced. Since, in mathematical teaching especially, "example is better than precept," a prominent place is given to typical worked out examples. In nearly all cases these are such as occur very frequently in the workshop or drawing office.