care is taken with the applications. These are unusually numerous and excellent for the purpose intended, and very many of them are solved in detail in the text. This makes the book easy reading and adapts it to self-study for one who wants a modern and rigorous practical grounding in this most important branch.

As was suggested above, more might well have been left for the student to do; but with large classes and meager time allowance, of course, the German professor would feel this procedure very doubtful and dangerous. Then there is a liberal number of problems that are not worked out, distributed in well-chosen places, on which the student may develop "mental muscle." The treatments of continuity, limit, integration, the indeterminate forms, convergency and divergency, if not concise, are clear, strong, and practical. On the whole, fulness is a close concomitant of clearness, and soundness. Fulness is not in this case wordiness, but conscientious didactics. It is in the interest of guaranteeing insight. Bulkiness therefore, if a fault at all here, at least leans to the side of virtue. Every teacher of calculus to collegiate sophomores would do well to have this book at hand for problem material, for pedagogic suggestion, and for inspiration.

The few trivial errors that have appeared, all of them typographical, are not worth mentioning. The publisher might well be commended for the excellence of his work, if his name were not already a sufficient guarantee of typographical excellence. The binding is however decidedly frail for so heavy a book.

G. W. MYERS.

Wahrscheinlichkeitsrechnung. Von Prof. Dr. FRANZ HACK. Leipzig, Teubner, 1911. 122 pp.

THIS is a worthy sample of the Sammlung Göschen, covering in six parts the fundamentals of the calculus of probabilities. The treatment is rather too condensed for the very beginner, but is well adapted to the reader who has once learned the elements and, having grown a little rusty on reasons, wishes to recover enough of the theory to make rational use of it.

The first part is on the basic theory; the second, on applications of the theory to special problems; the third, on the laws of large numbers; the fourth, on a comparison of the theory of probability with experience; the fifth, on the theory