Auslese aus meiner Unterrichts- und Vorlesungspraxis. By HERMANN SCHUBERT. 3 volumes. G. J. Göschen, Leipzig, 1905, 1906.

IN these little books the veteran teacher and editor treats a great variety of topics more or less closely connected with the mathematical subjects studied in the German gymnasium. Originality and elegance of presentation, even in the case of the most hackneyed topics, make the lectures of interest and value. The keynote is struck in the following sentence from the author's preface:

"Denn die mathematische Didaktik sollte sich nicht auf oft erfolglose Verbesserungsvorschläge bezüglich der Verteilung und der Ausdehnung des Lernstoffs beschränken, sondern sollte umgekehrt die Pflicht fühlen und erfüllen, den zu bewältigenden Lernstoff so einfach und zugänglich zu gestalten, dass auch der minder begabte Schüler in der nun einmal von oben herab vorgeschriebenen Zeit mehr lernt und begreift, als es bisher der Fall war."

Two of the chapters deal with the calculation of logarithms, the first intended for students of the Untersekunda, the second for the Prima. The first treatment presupposes merely a knowledge of the expansions of $(a-b)(a+b)$, $(a-b)^2$, $(a-b)^3$, $(a-b)^4$, and the theorems concerning the logarithms of products and quotients, and is based on the inequality

$$2\log x - \log(x-1) - \log(x+1) > 0.$$

The second treatment presupposes the general binomial theorem and is based on the so-called "Tripelformel" originally presented in the author's pamphlet "Elementare Berechnung der Logarithmen" (Göschen, 1903). With these elementary means, without any reference to infinite processes, the logarithms of the prime numbers less than a hundred are worked out to eight decimal places.

Many of the lectures are devoted to topics from the theory of numbers. A section of almost a hundred pages shows how the leading theorems on congruences, including quadratic remainders and the Pell equation, may be easily and rapidly obtained by starting out with the discussion of continued fractions.

The applications of number theory in elementary geometry are treated very fully. Here many of the results, not merely