a mass of formulas, without realizing what they are all about. In Tanner and Allen's Brief Course in Analytic Geometry, an abridgment of the same authors' Elementary Course, this difficulty appears to have been overcome. After a brief introductory chapter, giving a review of the parts of algebra and trigonometry the student will have use for, the notion of rectangular coordinates is carefully explained; elementary applications, including the distance between two points, the area of a triangle, slopes of parallel and perpendicular lines, are given; and the relation between the graph and the equation is clearly stated and brought home to the student by numerous examples given for him to solve. Then, and not until then, is the student introduced to the various forms of the equation of the straight line, and the numerous formulas connected with it.

In the treatment of the conic sections, also, the authors' arrangement is somewhat unusual. After the circle has been discussed in detail, the equations of the conic sections with reference to coordinate axes in any position are worked out and the general second degree equation is discussed. Then follows a treatment of secants, tangents, normals, and diameters for all conics, and finally a separate study of each conic with its geometric properties.

That the authors believe that students learn by doing is evidenced by the sixty-six lists of exercises, containing eight hundred and fifty-one problems, given in the first part of the book, which covers plane geometry. That they realize also the difficulties of literal notation and general proofs is shown by their "introduction of the demonstration of general theorems by numerical examples."

The subject of solid geometry is very briefly treated in the second part of the book, which contains also a short discussion of higher plane curves.

CORA B. HENNEL.

Gedenktagebuch für Mathematiker. Von Prof. Dr. FELIX MÜLLER. Dritte Auflage. Leipzig und Berlin, Teubner, 1912. iv + 121 pp.

MANY office and desk calendars of more or less pretentious proportions are widely distributed—and early—each year and many of these give honorable mention on the proper

dates throughout the year to some noteworthy deed or name on which the mind might like to dwell for an instant in the midst of the labors of the day.

In the lists of men whose birthdays, or the anniversaries of whose deaths are considered worthy of mention, we find many famous statesmen, authors, painters, musicians, and the like but, alas! very few if any mathematicians, physicists, or astronomers. Why should not the order of prominence be reversed? And it is in the Gedenktagebuch under review. In a neat little volume of 121 pages are gathered for each day of the year, with great care and the kindly spirit which seems to radiate from the genial face of the author whose frontispiece adorns the book, a great mass of miscellaneous information concerning the deeds and names of celebrities in the fields of mathematics, physics, and astronomy from the time where history becomes authentic to the present.

Many a man now living may not agree with the selection of names as listed for honorable mention—especially if his is not included. Such criticism will always be directed at any catalog of men famous for their deeds and jealous of their rank. Besides the Gedenktagebuch aims to be international in scope. Those who feel that others—or they—should have this mention not now given them might fill in at the proper places on the alternate blank pages any such additional facts as would please them or add to this feature of the history of the three sciences whose noteworthy deeds and dates are so carefully chronicled.

ERNEST W. PONZER.

Technische Infinitesimalrechnung. Von Prof. Dr. F. EBNER, Oberlehrer an der Königl. höheren Maschinenbauschule zu Aachen. Berlin, Verlag von Otto Salle, 1912. vii + 172 pp.

IN attempting to classify properly this interesting pamphlet the reviewer has come to the conclusion that it might serve a most excellent purpose as a correspondence school text in the calculus for engineering students. It is primarily a collection of problems involving fundamental calculus notions which arise in engineering practice. Sufficient detail is given in the solutions of these problems to enable the reader to follow readily through to the results obtained.