

and its intersection with the third curve will give the corresponding value of the function. The new edition includes circular and set-square-index nomograms. For the theory, the authors rely upon determinants and Cartesian co-ordinates.

#### Introduction to the Theory of Equations

By Prof. Louis Weisner. Pp. ix+188. (New York: The Macmillan Company, 1938.) 10s. net.

THE distinctive feature of this book is the emphasis on the concept of a field. This serves as a unifying principle connecting the various parts of an elementary course in the theory of equations, including complex numbers, the theorems of Sturm, Budan, and Descartes, elimination, symmetric functions, cubic and quartic equations, but excluding determinants, which are assumed to be known. The fundamental theorem of algebra is treated, rather unusually, by Gordan's method, reducing the theorem to a property of continuous functions which is stated without proof. The final chapter deals with ruler and compass constructions. There are many examples.

#### Gewöhnliche Differentialgleichungen

Von Prof. Dr. Guido Hoheisel. (Sammlung Götschen, Band 920.) Dritte neubearbeitete Auflage. Pp. 126. (Berlin: Walter de Gruyter und Co., 1938.) 1.62 gold marks.

THIS slender little volume covers much more ground than would be expected from its size. In addition to the usual elementary account of ordinary differential equations of the first and higher orders, including existence theorems, solution by series, and singular points, there is a chapter dealing with boundary value problems. This deals with Green's function, Sturm-Liouville expansions, proper values, and periodic boundary value systems. An appendix discusses the dependence of solutions of a system of differential equations upon a parameter, and upon the initial values of the variables.

#### Le superficie razionali

Per Fabio Conforto. Pp. xv+554. (Bologna: Nicola Zanichelli, 1939.) 80 lire.

THE present treatise is divided into two parts; the first, which occupies less than half the volume, is devoted to a systematic exposition, from the modern point of view, of the quadric, the cubic surface and the rational quartic surfaces. Here the reader will find a résumé of the classical results due to Cremona, Clebsch, Noether and others, with the various adjustments that critical considerations have necessitated. The second part deals with general theory; beginning with Noether's theorem on surfaces containing a pencil of rational curves, it proceeds to the discussion of surfaces having rational or elliptic sections, and thence to plane involutions and rational double planes. Of the latter important topic, the author gives a detailed account, the first that has ever appeared in book form. The work concludes with a chapter on Castelnuovo's theorem concerning the rationality of plane involutions.

As the author states in his preface, the work is based on lectures given by Prof. Enriques at the University of Rome; and in fact the book bears the hall marks of the collaborations (Enriques-Chisini, Enriques-Campedelli), which have provided the present generation of geometers with its standard text-books. There is the same leisurely exposition, interspersed with interesting historical information and critical notes, and the co-ordination of the material testifies to the master's skill. The work will be a valuable reference-book for every teacher of geometry.

#### Medicine

##### Vāgbhata's *Aṣṭāṅgahrdayasamhitā*

Ein altindisches Lehrbuch der Heilkunde, aus dem Sanskrit ins deutsche Übertragen mit Einleitung, Anmerkungen und Indices. Von Dr. Luise Hilgenberg und Prof. Willibald Kirfel. Lief. 5. Pp. 257-320. Lief. 6. Pp. 321-384. Lief. 7. Pp. 385-448. (Leiden: E. J. Brill, Ltd., 1939.) 3.50 guilders each.

THESE three tracts form more instalments of Hilgenberg and Kirfel's scholarly translation from the Sanskrit into German of Vāgbhata's treatise on medicine, the earlier parts of which have been noticed in NATURE.

The first half of Part 5 continues the discussion of the etiology and symptoms of diseases, such as boils and erysipelas, skin diseases including leprosy, abdominal swellings, which it is noted may be due to enlargement of the spleen, and rheumatism. Under rheumatism, the pain, stiffness and lameness, the involvement of the joints and of bone, are all mentioned.

The remainder of Part 5 and Parts 6 and 7 deal with treatment, mostly medicinal. The remedies prescribed are for the most part herbal ones, and have been identified by the translators; mineral remedies scarcely appear, and mixtures containing mice and other unpleasant ingredients, so commonly used in medieval medicine, are the exception. Another part should complete this work.

##### Modern Anæsthetic Practice

Edited by Sir Humphry Rolleston and Dr. Alan A. Moncrieff. (The Practitioner Handbooks, No. 3.) (Published on behalf of *The Practitioner*.) Pp. 231. (London: Eyre and Spottiswoode (Publishers), Ltd., 1938.) 10s. 6d. net.

THIS work consists of twelve articles, six of which had previously been published in *The Practitioner* and have since been revised by the authors, while six are new contributions. Every aspect of the subject has been discussed, including volatile anæsthetics, nitrous oxide anæsthesia in surgery, basal anæsthesia, endotracheal anæsthesia, spinal anæsthesia, anæsthesia and analgesia in midwifery, anæsthesia in the child, anæsthesia in dentistry, local anæsthesia and analgesia, the anæsthetic aspects of post-operation care, and the risks of explosion, so that the aim of the book to provide a practical manual for the general practitioner in his daily work has been admirably fulfilled.