

The first volume of Professor Müller's book was reviewed in the *BULLETIN*, volume 16, page 136. This first instalment of the second volume maintains the same standard and vigor as the first volume, and furnishes a comprehensive compendium as well as a text-book on the subject.

The volume begins with horizontal projection, and applies it to topography, roof construction, and excavations, the scope and treatment being rather similar to that given by Professor Low. Then follows a chapter on axonometry, with application to the representation of curve surfaces, including a number of metrical problems. An interesting feature is the extensive historical development, given in the form of foot-notes.

In this set of four books, one American, and three European, we find a good representation of the relative states of the science, as viewed by the different countries. When shall we be able to regard descriptive geometry as a science co-extensive with projective and analytic geometry?

VIRGIL SNYDER.

CORNELL UNIVERSITY,
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SHORTER NOTICES.

Zahlentheorie. By KURT HENSEL. Berlin and Leipzig, G. J. Göschen, 1913. 356+xii pp.

As a knowledge of the elements of the theory of congruence of integers is essential in many branches of mathematics, and as the higher parts of the theory of numbers have enthusiastic devotees, it is not surprising that there are published yearly several books treating the theory of numbers from various standpoints. The usual topics on congruences, including the reciprocity law for quadratic residues, are treated in the present book, but at widely separated intervals, the interspersed material being of quite a different nature described below. Consequently, a reader desirous of acquiring rather quickly a knowledge of the classical theory of congruences will not find the present book so well adapted to his needs as most of the texts available. However, there will be readers who appreciate the opportunity of being able to pick up incidentally this useful information while enjoying