Repertorium der Höheren Mathematik. E. Pascal. Second edition; second volume, *Geometry*; second section, *Geometry of Space.* Edited by H. E. Timerding. Leipzig, B. G. Teubner, 1922. xii + 628 pp.

The first section of the volume on analysis and also of the one on geometry of this second edition of Pascal's *Repertorium of Higher Mathematics* appeared in 1910. They were reviewed in this BULLETIN (volume 19, pp. 372–374). The second section of the volume on geometry, after being on the eve of publication for nearly ten years, has now appeared.

This section is devoted to geometry of space. In a subject so extensive, the first problem is a proper selection of topics for consideration. Somewhat more than half of the work is devoted to algebraic surfaces. Of the remainder, about one third is devoted to algebraic curves, a third to differential geometry and the remainder to line geometry and algebraic transformations of space. It is to be regretted that some of the more recondite portions of these subjects were not omitted in favor of the elements of synthetic, particularly of projective, geometry of space.

The treatment of the various topics is always good and occasionally excellent. In so brief and comprehensive a volume, the treatment of any subject must devote itself mainly to fundamentals and be of interest chiefly to those who are not specialists in that subject. The needs of such readers are accordingly borne constantly in mind. Occasionally, the limitations of a theorem are not adequately stated, but in some of these cases the error is due to the carelessness of the investigator to whom the theorem is due. Occasionally also, technical terms are used which are neither explained in the context nor to be found in the index.

The authors have given in clear and compact form the principal facts of the topics discussed. Mathematicians in every field will find this a useful work for reference.

C. H. SISAM

Tables Logarithmiques à treize décimales. By H. Andoyer. Paris, J. Hermann, 1922. x + 26 pp.

This pamphlet gives the logarithms of numbers from 100 to 1000 and of numbers from 100,000 to 101,000 to thirteen places besides some shorter tables of first and second differences. The tables are designed, of course, for use in work in which the usual tables to seven or eight places would not give the desired accuracy. A mechanical computer would be a great aid in the use of the tables.

In using the tables every number N is first resolved into two factors n and N' where, in general, n is taken to be the first three digits of N but in any case the three digits so that the first three digits of N' shall be 100. It remains then merely to add to the logarithm of n taken from the first table the logarithm of N' taken from the second table. The table of corrections corresponding to the first and second differences is used, of course, in obtaining the logarithm of N'. The inverse problem of finding the antilogarithm of a logarithm involves no additional principles.

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