

from any lengthy discussion. Some of the logical phases of Hilbert's axioms are instructively pointed out in a controversy between Frege and Korselt in the *Jahresbericht der Deutschen Mathematiker-Vereinigung*.*

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Vorträge über den mathematischen Unterricht an den höheren Schulen. KLEIN-SCHIMMACK. Teil I. *Von der Organisation des mathematischen Unterrichts.* Leipzig, 1907, pp. ix + 236.

PROFESSOR KLEIN has for years been calling attention to the fact that it is the duty of the universities to furnish instruction not only in the subject matter of mathematics but also in the questions relative to the teaching of the subject, since teaching is the profession to which the great majority of the students are looking forward; and in his own university (Göttingen) he has admirably been putting into practice what he preaches. The present volume makes accessible to the wider public the substance of a course of lectures thus delivered at Göttingen in 1904-5.

It is a work that at once commanded thoughtful attention in all quarters of the nation for which it was especially intended, but it also deserves and will receive careful study far beyond the national confines.

The work is divided into the following sections, whose titles give a general idea of its plan and scope:†

Introduction, pages 1-9; I. Elementary schools, 10-18; II. The six lower classes‡ of the (boys') higher schools, 19-43; III. Girls' schools and trade schools, 44-66; IV. The historical development of instruction in mathematics in the German higher schools, 67-99; V. The three upper classes§ of the higher schools according to the curricula of 1901, 100-126; VI. Propositions for reform in the upper classes of the higher schools, 127-159; VII. The universities and technical schools, 158-189; Conclusion, 189-190; Appendix (containing re-

* See vol. 12 (1903), pp. 319, 368, 402; vol. 15 (1906), pp. 293, 377, 423; vol. 17 (1908), p. 98.

† With each numbered title, except No. IV, the words "mathematics in" are of course implied.

‡ In mathematics these six classes correspond roughly to our grades 4 to 8, and the first year of the high school.

§ In mathematics these classes correspond roughly to the second and the third year of the high school and the freshman year in college.