

"An involution of rays contains one, but only one, rectangular pair." On the next page, likewise in italics, is a second theorem: "An involution having more than one rectangular pair has all its pairs rectangular." These two theorems are, on their face, somewhat contradictory. Of course there is no difficulty in understanding their relation to each other, and there might be little cause for comment were it not for the fact that too many instances of this sort of infelicity in style are present. On page 68 the author states: "A plane figure may therefore be considered either as a configuration of points or as a configuration of straight lines. This is the principle of duality." Such a statement seems hardly definite enough to cover the case. The matter of dividing by factors which may be zero, the various special cases which may arise, in fact the whole modern demand for a greater accuracy in geometric work is not sufficiently regarded.* Apart from this the work has much to commend it. And those for whom the book was especially written will probably not think the defect very serious. To the reader, whoever he be, the uncommonly good index will be of great service.

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Differential- und Integralrechnung; Zweiter Band: Integralrechnung. Von W. FRANZ MEYER. Mit 36 Figuren. Leipzig, C. J. Göschensche Verlagshandlung (Sammlung Schubert, number XI), 1905. 16 + 443 pp.

THE present volume is a direct continuation of the preceding one on differential calculus, to which constant references are made. Integration is first defined as the inverse of differentiation. It is treated analytically and applied to elementary algebraic, logarithmic, and trigonometric functions. The idea of summation is introduced by a very detailed discussion of successive approximations to the area of the parabola, then extended to any plane curve, first with equal intervals, then for any law of division. The oscillation of a function, and superior and inferior integrals are repeatedly mentioned and strongly emphasized.

The first theorem of mean value is introduced by the aid of a figure, then made precise and applied to several problems.

* See for example M. Bôcher on "A problem in analytic geometry with a moral," *Annals of Math.*, vol. 7, p. 44 (October, 1905).