Mathematics : History of Mathematics

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Cauchy's Calcul Infinitésimal

An Annotated English Translation

- The first English translation of Résumé des leçons sur le calcul infinitésimal
- Complete with annotations throughout
- Allows wider audience to experience Cauchy's original, complete text on calculus
- Provides historical supplement to traditional calculus texts

This book is a complete English translation of Augustin-Louis Cauchy's historic 1823 text (his first devoted to calculus), Résumé des leçons sur le calcul infinitésimal, "Summary of Lectures on the Infinitesimal Calculus," originally written to benefit his École Polytechnic students in Paris. Within this single text, Cauchy succinctly lays out and rigorously develops all of the topics one encounters in an introductory study of the calculus, from his classic definition of the limit to his detailed analysis of the convergence properties of infinite series. In between, the reader will find a full treatment of differential and integral calculus, including the main theorems of calculus and detailed methods of differentiating and integrating a wide variety of functions. Real, single variable calculus is the main focus of the text, but Cauchy spends ample time exploring the extension of his rigorous development to include functions of multiple variables as well as complex functions. This translation maintains the same notation and terminology of Cauchy's original work in the hope of delivering as honest and true a Cauchy experience as possible so that the modern reader can experience his work as it may have been like 200 years ago. This book can be used with advantage today by anyone interested in the history of the calculus and analysis. In addition, it will serve as a particularly valuable supplement to a traditional calculus text for those readers who desire a way to create more texture in a conventional calculus class through the introduction of original historical sources.

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