



## Introduction to Analysis in One Variable

Michael E. Taylor, *University of North Carolina, Chapel Hill, NC*

This is a text for students who have had a three-course calculus sequence and who are ready to explore the logical structure of analysis as the backbone of calculus. It begins with a development of the real numbers, building this system from more basic objects (natural numbers, integers, rational numbers, Cauchy sequences), and it produces basic algebraic and metric properties of the real number line as propositions, rather than axioms. The text also makes use of the complex numbers and incorporates this into the development of differential and integral calculus.

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## Introduction to Analysis in Several Variables

Advanced Calculus 

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This text was produced for the second part of a two-part sequence on advanced calculus, whose aim is to provide a firm logical foundation for analysis. The first part treats analysis in one variable, and the text at hand treats analysis in several variables.

After a review of topics from one-variable analysis and linear algebra, the text treats in succession multivariable differential calculus, including systems of differential equations, and multivariable integral calculus.

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