
Preface

This book was written for graduate students looking for an introduction to some basic methods of analytic number theory. It is suitable as a textbook for an introductory one-semester course at the beginning graduate level, but contains more material than can be comfortably covered in such a course. However, by suitably selecting chapters, it is possible to teach courses going in various directions.

Readers should be familiar with ε - δ calculus, have completed an undergraduate course in complex analysis, and possess the proficiency in abstract and linear algebra to be expected of a beginning graduate student. No familiarity with graduate-level analysis is assumed. The first four chapters presuppose no complex analysis beyond simple properties of the exponential function.

Each chapter is followed by notes with references and historical remarks. At the end of many of the sections there are references to more detailed treatments of the topic under consideration.

I wish to thank anonymous referees for suggestions that have improved the book. Naturally I alone remain responsible for all errors and imperfections that remain.

This seems an appropriate place to express my gratitude to Hugh Montgomery, Imre Ruzsa, and the late Sigmund Selberg, from whose teaching of analytic number theory I have benefited.

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