

Preface to the English Edition

This book on the construction of number systems first appeared in 2013 in a German edition with the same title. It can be seen from the following preface to that edition that the goal of this book is to present a basic and comprehensive construction of number systems, beginning with the natural numbers and ending with Hamilton's quaternions, while providing relevant algebraic knowledge along the way. As a supplement to the German edition, an appendix has been added to each chapter in this English edition, which in contrast to the rigorous style of the rest of the book, presents in the more casual form of a survey some related aspects of the material of the chapter, including some recent developments.

We would like to offer our most heartfelt thanks to the translator, David Kramer, for his competent work, which has contributed significantly to this English version and in many places led to a more felicitous presentation of the material.

We hope that this book will help students and teachers of mathematics as well as all those with an interest in the subject to fill in any gaps in their mathematical education related to the construction of number systems and that the appendices will inspire some readers to pursue further mathematical studies.

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