

Preface

This English edition differs from the Russian original by the addition of a new chapter. In this new Chapter 3 we give an account of the theory of train tracks for automorphisms of free groups, which was developed in the seminal paper of M. Bestvina and M. Handel [9]. Our exposition is more algebraic than in this paper, but it is less technical than the account in the book [29] of W. Dicks and E. Ventura. In Section 10 of Chapter 3 we consider two examples in detail. We have added an appendix containing the famous Perron–Frobenius Theorem on nonnegative matrices, which is used in this chapter. Also we have added solutions to selected exercises.

The reader is assumed to have the knowledge of algebra expected after the first semester of university (permutations, fields, matrices, vector spaces; see [23], [39] or [55]).

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