MATRICES AND THEIR APPLICATIONS

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NOTTINGHAM COLLEGE OF EDUCATION

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PREFACE

THE power and adaptability of the matrix as a mathematical tool is evident by matrix techniques becoming used in an increasing number of fields. No mathematical education is now complete without some knowledge of their use.

The material in this book has come from a course in matrices and their applications given to students training as mathematics teachers. In each section, the starting point is an application or situation in which matrices arise. Techniques are then developed for dealing with the situation, and exercises and investigations are provided through which the reader may extend his understanding of the ideas.

We hope that students in sixth forms, Colleges of Education and of Technology, and in the first year at University will find this material useful. Teachers will find material suitable for extending their own knowledge of the subject, and also some situations which could form the basis of lessons for secondary school children.

We are indebted to our own students on whom we have tried out this material; to Dr. T. J. Fletcher (H.M.I.) for many of the ideas on which Chapters 7 and 8 are based; to the editor of the Monograph series, Mr. A. J. Moakes, for his generous help and encouragement and to the publishers.

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