BUSINESS MATHEMATICS BY EXAMPLE

By the same author

BUSINESS STATISTICS BY EXAMPLE

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Preface

Teachers of business studies today face the double problem of the growing importance of quantitative methods in the constituent subjects and the declining standard of numeracy of otherwise capable students in this field. Business mathematics takes selected but diverse strands of material from a wide range of topics, in traditional and modern mathematics, and I hope that the simple pattern I have attempted to weave will give a unified and useful picture of the subject for readers approaching it for the first time. Some of the techniques described will be useful to readers who enter the more specialised fields of econometrics, mathematical economics and other quantitative subjects.

As in the companion volume, *Business Statistics by Example*, I have taken advantage of inductive exposition, for students have been found to gain both confidence and interest by working on practical examples from the start: and facility at calculation can often lead to familiarity with theory. Indeed, a book of fewer than 30,000 words could hardly cover the essentials of several distinct mathematical disciplines on the conventional method — proof — application pattern, and to interlard working accounts with overmuch theory would delay rather than advance the learning process. But I hope that some readers will be curious about methods they are expected to accept on trust, and for them an Appendix exposes some of the foundations of the structure they have been using. Ultimately, a knowledge of theory will enhance practical skill, because the use and limitation of particular mathematical tools will be better understood. Induction and deduction are complementary and not conflicting processes.

A larger book could have built the subject from the level of elementary arithmetic. I assume in the reader a basic knowledge of algebra. Chapter 1 attempts a quick revision of algebra, and some teachers may find it valuable where students have no previous knowledge: I have used some of the material with students in this very situation.

In preparing and writing the book I have received great help. I would like to acknowledge the courtesy of the publisher's staff, and the encouragement received from their Editor for Social Sciences and Humanities, Higher Education Division, Mr Shaie Selzer. The structure and content of the book have benefited greatly from initial discussions with a former colleague, Mrs Sonia Yuan B.A., M.Sc., Senior Lecturer in Statistics at Oxford Polytechnic, and her detailed and constructive reading of the whole of the manuscript. I would like also to thank my typist, Mrs Beryl Perry, who cheerfully faced a daunting mathematical manuscript and produced to a tight dead-line an effective typescript, despite extensive voluntary and domestic commitments.

I have tried to make the book adequate and accurate within the chosen topics, but I know the problems of presenting in a small volume an account

of subjects which are sometimes treated in greater depth and length in single-subject volumes. For any shortcomings, I take full responsibility: and I shall be grateful to hear from readers who can suggest improvements in a book which, in so vast a subject, is inevitably a kind of compromise.

Melling, 1976

A. E. Innes

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