essential maths

on the bbc and electron computers

basic routines for programming

czes kosniowski

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Contents in detail

Preface

This book is written for owners of a BBC microcomputer or an Electron, who would like to know that little bit more about some mathematical techniques. You probably know what program you want to write but maybe you are not quite sure of the mathematics needed. Is it COS, ABS, or SGN that you need?

All the mathematical functions that you find on the BBC/Electron are described and their use is illustrated in short programs. You can ' lift' these programs and utilize them within your own programs.

But this book is not just an introduction to these basic mathematical functions. It contains background information and programs on such diverse subjects as codes and cryptography, random numbers, sequences, trigonometry, prime numbers, and statistical data analysis. You can utilize this information in both serious and games programming.

Many thanks to Ann, Kora and Inga for bearing with me during the writing of this book.

Czes Kosniowski
Newcastle upon Tyne, January 1984

Program notes

The programs have been written in MODEs 0 to 6, to make them accessible to both the BBC and Electron microcomputers. Some minor changes to the programs may be necessary if you have a BBC micro with an old operating system. Lines involving an INPUT statement with a semicolon may need the semicolon to be changed to a comma. For instance, the line

```
100 INPUT "What is your name ";N$
```

may need to be changed to the following

```
100 INPUT "What is your name ",N$
```

Note: The symbol ^ sometimes appears as ↑ in certain MODEs.

When entering programs from the listings in this book, please ensure that they are keyed in correctly. The quality of the hardcopy from the printer may make some characters look similar — in particular, a comma may look very like a full stop at first glance.