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E. G. Chambers

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# STATISTICAL CALCULATION FOR BEGINNERS

BY

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## Preface to Second Edition

In the ten years that have elapsed since this book was first published, certain additional statistical methods of particular value to research workers have been developed. These methods, presented as simply as possible, are included in this new edition. The whole of the original text has been revised and some small arithmetical errors corrected. I am grateful to those who have pointed out these mistakes.

The original numbering of the chapters and sections has been preserved as far as possible. The chief additional material is as follows. An account of the nature and use of the binomial distribution is given in Chapter IV. The calculation of  $t$  from arbitrary origins, of the variance ratio and of the standard error of the difference between proportions is included in Chapter V. In Chapter VII the Kendall coefficient of rank correlation is introduced and in Chapter IX a method of fitting linear and logarithmic curves to observational data is explained. Chapters X and XI are entirely new, the latter giving a short introduction to the method of analysis of variance. There are also some hitherto unpublished tables in the Appendices F–K. Exercises on the new material are provided, with answers. I am especially grateful to Mr J. W. Whitfield and Miss V. R. Cane for helpful comments and criticisms.

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## Preface to First Edition

The purpose of this book is to explain as simply as possible how to perform the calculations involved in the commoner statistical methods. It is not in any sense a treatise on the theory of statistics, only sufficient theory being given to enable the student to understand the use and application of the methods described.

No assumption of mathematical ability on the part of the reader is made; the calculations described involve the use of arithmetic only. A worked example of each method given is provided and abundant exercises with answers are supplied.

Whilst the book is chiefly addressed to students of the biological sciences, especially Psychology, the methods described are fundamental to statistical work and should, it is hoped, prove useful to anyone who has to make use of elementary statistical methods.

I should like to express my sincere gratitude to Dr J. O. Irwin, who very kindly read the whole of the manuscript and made many extremely helpful criticisms, and to Dr J. Wishart, who made some very valuable suggestions when the manuscript was approaching its final form. I wish to acknowledge also the kindness of Professor R. A. Fisher and his publishers, Messrs Oliver and Boyd, in allowing me to print extracts from various statistical tables given in his book *Statistical Methods for Research Workers*, and in the statistical tables by Fisher and Yates, also published by Oliver and Boyd. Full references to these two works are made in the text.

E. G. CHAMBERS

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