

Probability: a survey of the mathematical theory, by John Lamperti.
W. A. Benjamin, Inc. N. Y., Amsterdam, 1966. 150 pages. \$3.95

This book is to be highly recommended as an introduction to probability theory, or, as a delightful excursion through the basic results and methods of the Laws of Large Numbers, The Central Limit Problem, and Brownian Motion. Many helpful references to the bases, in analysis and measure theory, of the methods are given. Many extensions of the results are pointed out.

The author suggests, as prerequisites, measure theory to the extent of Royden's text and probability theory to the extent of Feller's first volume. However, it is quite possible that large parts of the book will be helpful to anyone who has a sound intuitive grasp of the notion of integration and who wants to know the nature of the major concerns and contributions of probability theory.

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A first course in Stochastic Processes, by Samuel Karlin.
Academic Press N. Y. and London 502 pages. \$11.95.

Judged against the author's stated objectives of creating more interest in applications among students of theory and more interest in theory among students of application while providing an introductory account of many important topics of stochastic processes, this book is certainly a success. A reader can gain a clear idea of the important properties of stochastic processes, a diligent reader can gain a solid grasp of the mathematical techniques used for the study and development of the theory of stochastic processes.

The first eight chapters give a thorough and detailed account of the theory and application of both discrete and continuous time Markov chains. The latter chapters are devoted to briefer discussions of related topics with applications. The relation between order statistics and Poisson processes with applications to the theory of empirical distribution functions is given in Chapter 9. Brownian motion is introduced in Chapter 10. The last four chapters are a presentation of branching and compound processes and applications to genetics, population growth and queues.

This book is noteworthy for simultaneously presenting complete theoretical treatments and lively and interesting applications of the topics it covers. The development is very systematic although the definitions and examples of the first introductory chapter are deliberately brief. This book is an important contribution to the literature of stochastic processes and it is to be recommended to every serious worker in probability and statistics.

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