



frequently updated, popular software packages—Minitab and SAS JMP—the third edition of Applied Reliability is an easy-to-use guide to basic descriptive statistics, reliability concepts, and the properties of lifetime distributions such as the exponential, Weibull, and lognormal. The material covers reliability data plotting, acceleration models, life test data analysis, systems models, and much more. The third edition includes a new chapter on Bayesian reliability analysis and expanded, updated coverage of repairable system modeling. Taking a practical and example-driven approach, the book includes numerous illustrations of software implementation throughout and more than 150 worked-out examples done with JMP, Minitab, and several spreadsheet programs. In addition, there are nearly 300 figures, hundreds of exercises, and additional problems at the end of each chapter, and new material throughout. Software and other files are available for download online.

This Third Edition provides a solid and well-balanced introduction to probability theory and mathematical statistics. The book is divided into three parts: Chapters 1-6 form the core of probability fundamentals and foundations; Chapters 7-11 cover statistics inference; and the remaining chapters focus on special topics. For course sequences that separate probability and mathematics statistics, the first part of the book can be used for a course in probability theory, followed by a course in mathematical statistics based on the second part, and possibly, one or more chapters from the third part. For a course in mathematical statistics, the first part of the book can be used for a course in probability theory, followed by a course in mathematical statistics based on the second part, and possibly, one or more chapters from the third part. The book includes numerous worked-out examples, and 200 side notes for reader reference. Numerous figures have been added to illustrate examples and proofs, and answers to select problems are now included. Many parts of the book have undergone substantial rewriting, and the book has also been reorganized. Chapters 6 and 7 have been interchanged to emphasize the role of asymptotics in statistics, and the new Chapter 7 contains all of the needed basic material on asymptotics. Chapter 6 also includes new material on resampling, specifically bootstrap. The new Further Results chapter includes a new chapter on regression analysis, which has also been added and contains sections on linear regression, multiple regression, subset regression, logistic regression, and Poisson regression.

For courses in Mathematical Statistics Introducing the principles of statistics and data modeling Written by famous statistician John Tukey, Introduction to Mathematical Statistics and Its Applications, 6th Edition is a high-level calculus student's first exposure to mathematical statistics. This book provides students who have already taken three or more semesters of calculus with the background to apply statistical principles. Meaty enough to guide a two-semester course, the book touches on both statistics and experimental design, which teaches students and realistic exposure to identifying data models.

Statistics and Probability for Engineering Applications