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Exercises 3e; 3.7 Introducing Further Explanatory Variables; 3.7.1 General Theory; 3.7.2 One Extra Variable; Exercises 3f; 3.8 Estimation with Linear Restrictions; 3.8.1 Method of Lagrange Multipliers; 3.8.2 Method of Orthogonal Projections; Exercises 3g
3.9 Design Matrix of Less Than Full Rank3.9.1 Least Squares Estimation; Exercises 3h; 3.9.2 Estimable Functions; Exercises 3i; 3.9.3 Introducing Further Explanatory Variables; 3.9.4 Introducing Linear Restrictions; Exercises 3j; 3.10 Generalized Least Squares; Exercises 3k; 3.11 Centering and Scaling the Explanatory Variables; 3.11.1 Centering; 3.11.2 Scaling; Exercises 3l; 3.12 Bayesian Estimation; Exercises 3m; 3.13 Robust Regression; 3.13.1 M-Estimates; 3.13.2 Estimates Based on Robust Location and Scale Measures; 3.13.3 Measuring Robustness; 3.13.4 Other Robust Estimates; Exercises 3n
Miscellaneous Exercises 34 Hypothesis Testing; 4.1 Introduction; 4.2 Likelihood Ratio Test; 4.3 F-Test; 4.3.1 Motivation; 4.3.2 Derivation; Exercises 4a; 4.3.3 Some Examples; 4.3.4 The Straight Line; Exercises 4b; 4.4 Multiple Correlation Coefficient; Exercises 4c; 4.5 Canonical Form for H; Exercises 4d; 4.6 Goodness-of-Fit Test; 4.7 F-Test and Projection Matrices; Miscellaneous Exercises 4; 5 Confidence Intervals and Regions; 5.1 Simultaneous Interval Estimation; 5.1.1 Simultaneous Inferences; 5.1.2 Comparison of Methods; 5.1.3 Confidence Regions
5.1.4 Hypothesis Testing and Confidence Intervals5.2 Confidence Bands for the Regression Surface; 5.2.1 Confidence Intervals; 5.2.2 Confidence Bands; 5.3 Prediction Intervals and Bands for the Response; 5.3.1 Prediction Intervals; 5.3.2 Simultaneous Prediction Bands; 5.4 Enlarging the Regression Matrix; Miscellaneous Exercises 5; 6 Straight-Line Regression; 6.1 The Straight Line; 6.1.1 Confidence Intervals for the Slope and Intercept; 6.1.2 Confidence Interval for the x-Intercept; 6.1.3 Prediction Intervals and Bands; 6.1.4 Prediction Intervals for the Response
6.1.5 Inverse Prediction (Calibration)

Sommario/riassunto

Concise, mathematically clear, and comprehensive treatment of the subject.* Expanded coverage of diagnostics and methods of model fitting.* Requires no specialized knowledge beyond a good grasp of matrix algebra and some acquaintance with straight-line regression and simple analysis of variance models.* More than 200 problems throughout the book plus outline solutions for the exercises.* This revision has been extensively class-tested.