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Autore	Cook R. Dennis
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3.1 Slicing a Scatterplot; 3.2 Estimating $E(y | x)$ by Slicing; 3.3 Estimating $E(y | x)$ by Smoothing; 3.4 Checking a Theory; 3.5 Boxplots; 3.6 Snow Geese; 3.6.1 Snow Goose Regression; 3.6.2 Mean Function; 3.6.3 Variance Function; 3.7 Complements; Problems; 4 Bivariate Distributions; 4.1 General Bivariate Distributions; 4.1.1 Bivariate Densities; 4.1.2 Connecting with Regression; 4.1.3 Independence; 4.1.4 Covariance; 4.1.5 Correlation Coefficient; 4.2 Bivariate Normal Distribution; 4.2.1 Correlation Coefficient in Normal Populations; 4.2.2 Correlation Coefficient in Non-normal Populations; 4.3. Regression in Bivariate Normal Populations; 4.3.1 Mean Function; 4.3.2 Mean Function in Standardized Variables; 4.3.3 Mean Function as a Straight Line; 4.3.4 Variance Function; 4.4 Smoothing Bivariate Normal Data; 4.5 Complements; 4.5.1 Confidence Interval for a Correlation; 4.5.2 References; Problems; 5 Two-Dimensional Plots; 5.1 Aspect Ratio and Focusing; 5.2 Power Transformations; 5.3 Thinking about Power Transformations; 5.4 Log Transformations; 5.5 Showing Labels and Coordinates; 5.6 Linking Plots; 5.7 Point Symbols and Colors; 5.8 Brushing; 5.9 Name Lists; 5.10 Probability Plots; 5.11 Complements; Problems; PART II. TOOLS; 6 Simple Linear Regression; 6.1 Simple Linear Regression; 6.2 Least Squares Estimation; 6.2.1 Notation; 6.2.2 The Least Squares Criterion; 6.2.3 Ordinary Least Squares Estimators; 6.2.4 More on Sample Correlation; 6.2.5 Some Properties of Least Squares Estimates; 6.2.6 Estimating the Common Variance, $(T^*$; 6.2.7 Summary; 6.3 Using Arc; 6.3.1 Interpreting the Intercept; 6.4 Inference; 6.4.1 Inferences about Parameters; 6.4.2 Estimating Population Means; 6.4.3 Prediction; 6.5 Forbes' Experiments, Revisited; 6.6 Model Comparison; 6.6.1 Models; 6.6.2 Analysis of Variance

Sommario/riassunto

A step-by-step guide to computing and graphics in regression analysis. In this unique book, leading statisticians Dennis Cook and Sanford Weisberg expertly blend regression fundamentals and cutting-edge graphical techniques. They combine and update most of the material from their widely used earlier work, *An Introduction to Regression Graphics*, and Weisberg's *Applied Linear Regression*; incorporate the latest in statistical graphics, computing, and regression models; and wind up with a modern, fully integrated approach to one of the most important tools of data analysis. In 23 chapters,