

AP Statistics

Notes Ch. 3

3.1 Scatterplots and Correlation

DEFINITION: Response variable, explanatory variable

DEFINITION: Scatterplot

How to Make a Scatterplot

DEFINITION: Positive association, negative association, no association

How to Describe a Scatterplot

DEFINITION: Correlation, r

Properties of Correlation

Cautions about Correlation

How to calculate the Correlation r (with and without technology)

Additional Facts about Correlation r

3.2 Least-Squares Regression

DEFINITION: Regression line

DEFINITION: Extrapolation

DEFINITION: Residual

DEFINITION: slope, y intercept

DEFINITION: Least-squares regression line

DEFINITION: Residual plot

How to Interpret a Residual Plot

DEFINITION: Standard deviation of the residuals (s)

DEFINITION: The coefficient of determination: r^2

How to Calculate the Least-Squares Regression Line using Summary Statistics

Correlation and Regression Wisdom

DEFINITION: High leverage

DEFINITION: Outlier

DEFINITION: Influential point

ASSOCIATION DOES NOT IMPLY CAUSATION

3.3 Transforming to Achieve Linearity

DEFINITION: Transforming

DEFINITION: Power model

DEFINITION: Exponential model

How to Choose a Model