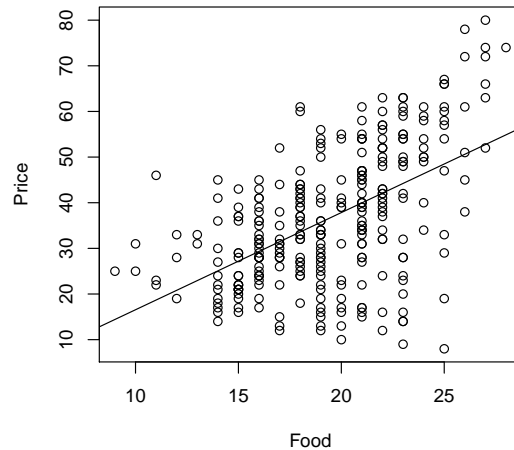


Regression Model Assumptions

STAT-UB.0003: Regression and Forecasting Models

Linear regression model

1. Here is the least squares regression fit to the Zagat restaurant data:



Here is the Minitab output from the fit:

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
12.5559	27.93%	27.68%	26.86%

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	-4.74	3.95	-1.20	0.232	
Food	2.129	0.200	10.64	0.000	1.00

Regression Equation

Price = -4.74 + 2.129 Food

- What are the estimated intercept and slope?
- Use the estimated regression model to estimate the average dinner price of all restaurants with a quality rating of 20.
- In the estimated regression model, what is the interpretation of the slope?
- In the estimated regression model, why doesn't the intercept have a direct interpretation?

