correlation

secolinsky

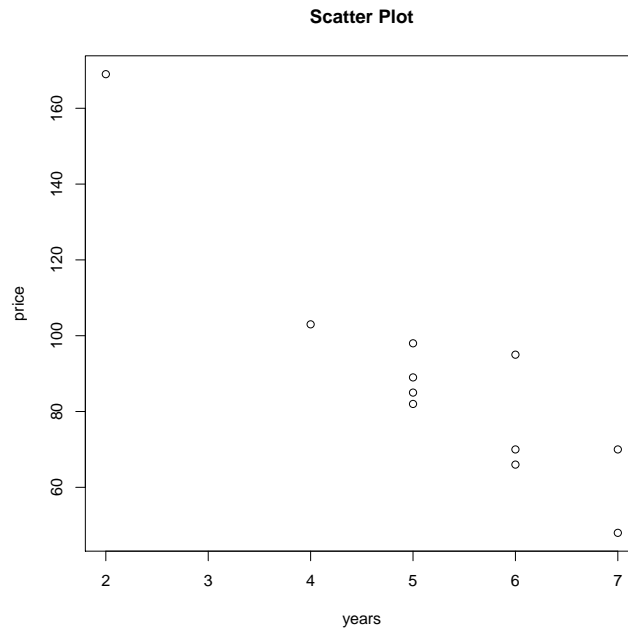November 29, 2017

Contents

1 Hypothesis Test

Goal is to calculate correlation coefficient and do the following hypothesis test

$$H_0 : \rho = 0; H_1 \rho \neq 0$$

using the data below

age	price
5	85
4	103
6	70
5	82
5	89
5	98
6	66
6	95
2	169
7	70
7	48

Scatter Plot

From R we have that $\rho \approx -0.9804$ rounded to the fourth decimal place and that the p-value ≈ 0.00004882.

For the linear regression model, we have that the y-intercept is 195.47 and the slope is -20.26. To fit the model with the data, we use R to produce the following graph:

Linear Regression Model