

Exercise 8: coffee sales*

The data in Table 1 relate the coffee sales at 14 cafeterias to the number of dispensers put up. Plot the data. Try different transformations to take them into a linear relationship and fit

Cafeteria	Number of dispensers	Coffee sales (hundred gallons)
1	0	508.1
2	0	498.4
3	1	568.2
4	1	577.3
5	2	651.7
6	2	657.0
7	4	755.3
8	4	758.9
9	5	787.6
10	5	792.1
11	6	841.4
12	6	831.8
13	7	854.7
14	7	871.4

Table 1: Data for coffee shop example

a straight line to the transformed data using a regression command. Also fit a second order polynomial. Which is your preferred analysis?

*) Data from:

Neter, J. and Wasserman, W. (1974). Applied linear statistical models. Richard D. Irwin.