Solution 17.8

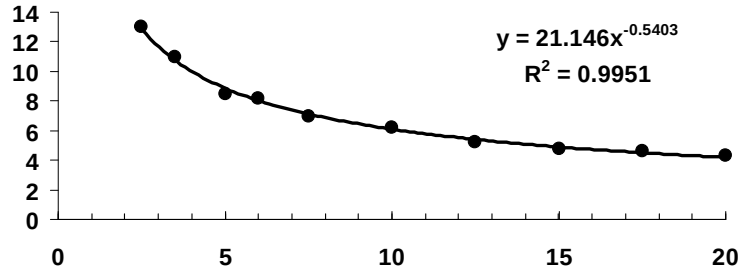
We regress $\log_{10}(y)$ versus $\log_{10}(x)$ to give

$$\log_{10} y = 1.325225 - 0.54029 \log_{10} x$$

Therefore, $\alpha_2 = 10^{1.325225} = 21.14583$ and $\beta_2 = -0.54029$, and the power model is

$$y = 21.14583x^{-0.54029}$$

The model and the data can be plotted as



The model can be used to predict a value of $21.14583(9)^{-0.54029} = 6.451453$.