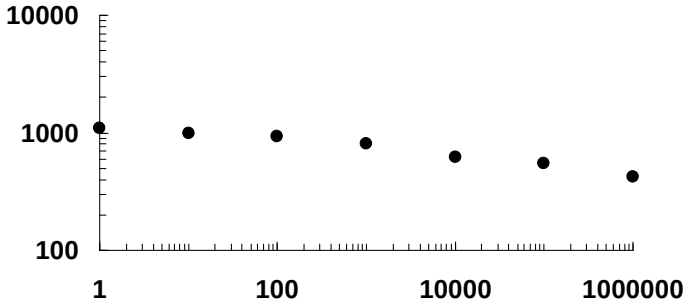
Solution 17.24

A log-log plot of stress versus N suggests a linear relationship.



We regress $\log_{10}$(stress) versus $\log_{10}$(N) to give

$$\log_{10}(\text{stress}) = 3.075442 - 0.06943 \log_{10} \text{N}$$

Therefore, $\alpha_2 = 10^{3.075442} = 1189.711$ and $\beta_2 = -0.06943$, and the power model is

$$\text{stress} = 1189.711\text{N}^{-0.06943}$$

The model and the data can be plotted on untransformed scales as