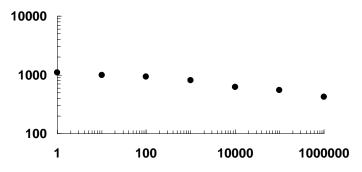
Solution 17.24

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



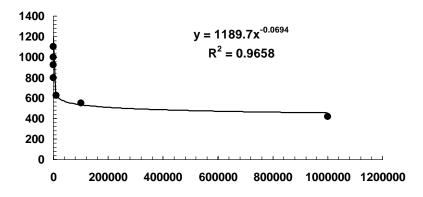
We regress $log_{10}(stress)$ versus $log_{10}(N)$ to give

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

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

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

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



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