STA 302 / 1001 (A. Gibbs)
Additional Practice Problems for Chapter 3 of Sheather

1. Suppose that a simple linear regression is carried out. What would you expect to see in a plot of: (1) $\hat{e}_i$ versus y_i? (2) $\hat{e}_i$ versus $\hat{y}_i$? Which plot is more meaningful?

2. Suppose that the error terms in a regression model satisfy the Gauss-Markov conditions and are normally distributed. What can you say about the error terms if the transformation $x' = 1/x$ is used? Is this also true if the transformation $y' = 1/y$ is used?