STAT 2132:
Applied Statistical Methods II
HW #1
Due Wednesday, January 19

When asked to do computations, use either R or SAS. The data sets for the problems in KNNL can be found either on the CD in the back of the book or at http://www.stat.ufl.edu/ rrandles/sta4210/Rclassnotes/data/textdatasets/.

1. KNNL 13.10 on page 550

2. Refer to the analysis of the enzyme kinetics in problem 1:

   (a) Plot the estimated nonlinear regression function and data on the same graph. Does the fit appear to be adequate?

   (b) Plot the residuals against the fitted values and obtain the normal qq-plot. Comment on the fit of the model.

   (c) Assume that the fitted model is appropriate and that large sample inference can be employed. Report the test statistic and two-sided p-value of the test of $H_0 : \gamma_1 = 20$.

3. Refer to the analysis of the enzyme kinetics in problems 1 and 2. Perform a bootstrap with 1000 samples, and compute 95% percentile confidence intervals for γ_1. Is it close to the confidence interval based on the large sample theory?