

Week 10 homework problems
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1. Do problem **9.8**.
2. Do problem **9.3**. Skip part 9.3.3.
3. Using the data and model fit in problem **9.8**, do the following:
  - a. Perform a test for outliers and interpret the test's results.
  - b. Determine whether any observations are highly influential, as measured by Cook's  $D$ .
  - c. Perform a Durbin-Watson test of independence in the residuals and interpret the test's results
  - d. Obtain a normal probability plot and perform a Shapiro Wilk test of normality in the residuals. Interpret the test's results and the plot.
  - e. Perform a test for non-constant variance in the residuals-vs.-fitted values plot. Interpret the test's results.
  - f. Summarize all your findings from the diagnostics of this model and make a recommendation about whether this model's results should be trusted.