784 Hmk – Multinomial Regression

#1



1. Create a preliminary analysis and comment
2. Fit the model using main effects only and test the proportional odds assumption
3. Check for goodness of fit and model fit for the model
4. Report the cumulative probabilities for a nonpositive result for each type of therapy and compare
5. Report the individual probabilities for each type of positive result for each type of therapy and compare
6. What recommendation would you make to the experimenter?

#2

Researchers were interested in generating estimates of activity limitation for the civilian population of the United States for small areas such as individual states. The explanatory variables were age (10-14 group – 1, 15-19 group – 2), gender (male – 1, female – 2) and poverty (low - 1, medium – 2, high – 3). The response variable in this situation was level of activity as major, other and none. In this case, the major category means that more activity occurred than in the other category and no activity occurred in the none category. The data is in a file called activity.txt.

* 1. Create a preliminary analysis and comment
  2. Determine the best model using model selection based on each of the variables and their interactions
  3. Assess goodness of fit and model fit for the model you found in part a)
  4. Determine the odds ratio for the major vs. the other category for the remaining variables and comment
  5. Determine the individual probabilities for each of the level combinations left in the model and comment