Homework # 7, Stat 526

1. The data is based on a sample described by Madsen(1976) of 1681 residuals of twelve areas in Copenhagen. The variable are type of housing (H), degree of contact with other residents (C), feeling of influence on apartment management (I), and satisfaction (Response) with housing conditions.

   (a) Fit a proportation odds model with all the main and interaction effects. Test the goodness of the fit. You need to relevel the Response such that "Low" less than "Medium", and "Medium" less than "High".

   (b) Fit a proportation odds model with all the main effects only. Test the goodness of the fit. Test the null hypothesis that at least one of the four interaction effects are significant.

   (c) Test each of the interaction effects sequentially by HIC, IC, HI, and HC by excluding one after another from the model in (a).

2. Problem 7.1 (d), (e), (f), and (i) on page 147 textbook.

3. Problem 7.4 (b), (c), and (e) on page 149 textbook. In (c) and (e), I add the computation of the prediced probability when year is 25.