EdPsych/Psych/Soc 589
Applied Categorical Data Analysis
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Homework 4
Due October 10, 2019

1. For this problem use the data in Table 2.7 on alcohol consumption and infant malformation on page 42 of Agresti (2007).

   (a) Using the scores $\{0, 0.5, 1.5, 4, 7\}$, fit a linear probability model, a logit model and a probit model. Interpret and compare observed sample proportions with fitted values

   (b) Compare the fitted values from the linear, logit, and probit models. Which model appears to fit the data the best?

   Suggestion: a plot of the observed and fitted by the explanatory variable helps a lot in part (b). For an example of how to make such a plot, see the R or SAS code on the web-site for the linear, logit, and probit models fit to HSB data.

2. Problem 3.11 on page 93–94 of Agresti (2007), except for part (d) find the 99% confidence interval for μ_A/μ_B.

3. Problem 3.12 on page 94 Agresti (2007).