Mid-Term Comments

1. The technique in EXCEL to calculate LL(0) only works for Poisson family of count-data models (Poisson and negative binomial). It does not work for logit models, duration models, or any other model estimated by maximum likelihood. Each of these models calculates their likelihood functions in a completely different way.

2. If you estimate a random parameters negative binomial you need to do compare it with a simple fixed parameters negative binomial to show that it is better. You can do this with a likelihood ratio test with the degrees of freedom equal to the number of estimated random parameters (see page 321 Equation 13.30).

3. It is fine to compare the mean and the standard deviation to see if a Poisson or negative binomial is appropriate, but the statistical significance of the negative binomial disturbance term is the only statistically justifiable confirmation.

4. Marginal effects give the effect of a one unit change in x. So if the marginal effect for a variable that is 1 if female and 0 if not in the cooking model is 1.23, it means that women cook 1.23 more times per week on average than men. Note that it is "on average" since the reported marginal effect is and average because each observation has its own marginal effect.

5. For reporting random parameters you must explicitly say what is "in parentheses" and that all terms are normally distributed. There reader cannot be assumed to make assumptions here when reading the Table, you must exactly define every term.

6. Never write equations with parameter estimates in them. This is something you would do in high school or perhaps for a project report, but not for an academic paper.

7. Some people used variables such as nuclear power, forgetting how to turn a screw driver, etc. These variables can be very hard to justify and should be avoided. If you really want to use these, you need to find some previous research to support your reasoning.

8. Note that the ordered probability model can be used as an approximation for a count model, particularly when the counts are low.

9. Some people are still putting too many numbers after the decimal in their tables. You should not present more than 2 or 3 as additional numbers beyond this are not really significant.

10. The order of your write up should follow the table exactly. Start by discussing the variables at the top and work your way down.

11. The count model in this test should not be truncated. Some people can cook more than three meals a day. Truncated models tend to have a lot of observations just before the truncation (as in assignment #2).

12. Rho-squareds do not really give the percent of variance explained like R-squareds do. Rho-squared are based on the convergence of the log-likelihood function which is not like R-squared which are based on explained variance.

13. Watch for indicator variables with low means. There are just 5 African Americans and just 1 Native American. You cannot use these variables in your model.

14. If you get a line-search error or any other kind of error at any point in your estimation you cannot use the results of that estimation. This is caused by highly correlated variables and you must remove variables and re-estimate the model. You will often get silly results when this type of error occurs, such as a negative binomial dispersion parameter that has a t-stat of zero.

15. Do not use the restricted log-likelihood for anything ever. Unless it says restricted at constant or restricted at beta=0 you have no idea what Limdep is calling restricted.