Binary Logistic Regression: Tutorial Sheet

1. Under what sort of modelling problem would you use Binary Logistic Regression?
2. What is a logit? How can you transform it into a probability?
3. Suppose that the probability of a success is 0.70. Compute the corresponding odds.
4. The usual assumptions placed on the error terms in ordinary least squares regression are:
   * independently distributed
   * identically distributed (equal variance)
   * normally distributed

   Which of these assumptions are violated when dealing with binary response data? Explain briefly how each is violated.
5. What is a dummy variable? Explain how it is used in Logistic Regression. Support your answer with an example.
6. There are three variants for the forward selection procedures used by SPSS. Name these three.
7. What is the Likelihood Ration Test? Describe how it used in Logistic regression.
8. Suppose the odds of an outcome are 4. What is the probability of that outcome?
9. Suppose the probability of an outcome is 70%. What is the odds of that outcome occuring?
10. What is a logit? how is it computed into a probability?
11. Suppose that, out of a samle of 100 women and 100 men, 80 men drank alcohol in the last week, while 20 women drank alcohol in past week. Compute the odds ratio for Women to men
12. What is logistic regression? How does it differ from linear regression? Under what circumstances would you use it?