STAT 101
Assignment 3

Posted 7 Feb 2012; due 21 Feb 2012. This assignment will NOT be marked before the midterm. I will post solutions on the 21st, however.

1. From the text: # 8.34 on page 220.
2. From the text: # 8.42 on page 221.
3. From the text: # 8.44 on page 222.
4. From the text: # 9.28 on page 241.
5. From the text: # 9.44 on page 245.
6. From the text: # 9.46 on page 246.
7. I own a four sided die; the sides are labelled 1 to 4. I throw the die and drop a thumbtack which lands either point up (U) or tipped over (O). Make a table of the elements of the sample space and their probabilities assuming that the four sided die is fair and that the probability that the thumbtack lands point up is 0.8.
8. From the text # 10.46, page 286.
9. From the text # 13.2, page 341.
10. From the text # 13.8, page 347.
11. From the text # 13.10, page 351.
12. From the text # 13.12, page 351.
13. From the text # 13.36, page 357.

Midterm Guidance: I expect there to be, on the midterm, questions about flaws in surveys (non-response, selection bias, etc.) as in the questions from Chaper 8; 8.42 is closest to the sort of question I might ask. There will be a question about flaws in experiments, the dangers of observational studies and so on as in 9.28. There will be a question about a normal approximation to a binomial (13.10, 13.12, 13.36 – 13.8 is a step on the way and you have to be able to do that question to do the others) and may be a question about whether or not a certain random quantity has a binomial distribution (13.2 – look at 13.22 and 13.23 as well).