Example 1: Use dataset available on <http://users.stat.ufl.edu/~winner/data/pricequal.dat>

1. Model each attribute using an appropriate probability model.
2. Provide a logical estimation for parameters models.
3. Provide a predicted value based on (a) and (b).

Example 2: In a manufacturing company, two manufacturing lines produces markers.

1. In the first line 30 items are packed. From previous experience, 10 percent is allowed to be defective to pass the QC. Using company’s benchmark, 5 samples are observed and QC is passed if at most one item is defective. Find the probability of passing QC of such product.
2. In the second line 4 types of markers are built, the processer of this line shows that the ratio of type 1 is twice as the type 2 and the ratio type 3 and 4 is equal to type 1. What is the best model to quantify uncertainty of the number of markers with different items?
3. Find the probability of having (3,5,2,4) in a sample taken from second line.