STAT 614 CLASSWORK CHAPTER 8 CHISQUARE TEST OF INDEPENDENCE

**Health and Happiness** Are health and happiness related? The following data represent the level of happiness and level of health for a random sample of individuals from the General Social Survey

**Health**

**Excellent Good Fair Poor**

**Very Happy** 271 261 82 20

**Happiness Pretty Happy** 247 567 231 53

**Not to Happy** 33 103 92 36

1) Produce a table showing the row totals, column totals, and the table total.

2) Find the proportion of people in Good health that are Very Happy

3) Find the proportion of all people surveyed who are in Excellent health

4) Find the expected value for the cell **Pretty Happy** and **Poor** by using the formula in the notes

5) State the appropriate null and alternative hypothesis needed to perform the Chisqaure test of independence

6) Use and show R code to find the Chisquare statistic, the degrees of freedom, and the p value.

7) Use your p value to decided if you are going to reject the null hypothesis and then comment on the decision relative to the language of the problem.