



R Code for Examples in the book
“Statistics: The Art and Science of Learning from Data”
 by Agresti, Franklin and Klingenberg, 5th edition

Chapter 11

Example 3: Happiness and Income – Chi-Squared Statistic

Reading in data:

```
mytable <- as.table(matrix(c(29, 178, 135, 83, 494, 277, 104, 314, 119),
                             nrow = 3, byrow = TRUE,
                             dimnames = list(income =
                                                  c('above', 'average', 'below'),
                                                  happy =
                                                  c('not', 'pretty', 'very'))))

mytable # viewing the table
```

```
##           happy
## income      not pretty very
##   above      29    178   135
##   average   83    494   277
##   below    104    314   119
```

To perform a chi-squared test, you can use the `chisq.test()` function

```
mytest <- chisq.test(mytable)
```

To view the chi-squared test statistic

```
mytest$statistic

## X-squared
##  54.04308
```