students in an introductory college economics class were asked how many credits they

had earned in college, and how certain they were about their choice of major. *Research question:*

At *α* = *.*01, is the degree of certainty independent of credits earned?

*Credits Earned Very Uncertain Somewhat Certain Very Certain Row* Total

*0–9* 12 8 3 23

*10–59* 8 4 10 22

*60 or more* 1 7 11 19

*Col Total* 21 19 24 64

***Instructions****:* In all exercises, include MegaStat, Excel, or MINITAB exhibits to support your calculations.

State the hypotheses, show how the degrees of freedom are calculated, find the critical value of chisquare

from Appendix E or from Excel’s function =CHIINV(alpha, deg\_freedom), and interpret the *p*-value.

Tell whether the conclusion is sensitive to the level of significance chosen, identify cells that contribute

the most to the chi-square test statistic, and check for small expected frequencies. If necessary, you can

calculate the *p*-value by using Excel’s function =CHIDIST(test statistic,deg\_freedom).