STAT 110: Quiz Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Points: 20

**Note: This quiz is coming directly from p61 of the Chapter 4 notes.**

Example 4.4.6 The Minnesota Department of Corrections often creates reports for the Minnesota State Legislature to identify the importance of funding programs that are known to improve public safety. The following data was presented in one such report. The following question and supporting data were provided on p17 of their report.

Source: <http://www.doc.state.mn.us/publications/documents/sosupreport.PDF>



1. Use the data provided above in the table to construct the more appropriate 100% stacked column graph for this data. (4 pts)

 *Delete my plot and paste a copy of your plot in its place.*



1. Obtain the Expected Counts, p-value, decision, and conclusion for this investigation.

|  |  |
| --- | --- |
| Research Question | Is completion of sex offender treatment while on probation associated with a change in the recidivism rate? |
| Analysis in Excel | Conduct the appropriate analysis in Excel. You must calculate the Expected Counts for each cell in the table. Use the =CHITEST() function in Excel to obtain the appropriate p-value. (8 points)*Delete my output and paste a copy of your output in its place.*What is the p-value from your test? (1 pt)P-Value = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Decision | Make the appropirate statistical decision. (1 pt)Decision: If the p-value < 0.05, then data is said to support the research question.* Data supports research question
* Data does not support research question
 |
| Conclusion | Write an appropriate conclusion in context and in laymen’s terms. (3 pts) |

1. Suppose the Completed group was removed from consideration and only the Never Entered group was compared against the Quit / Terminated group. Would you expect the p-value from this analysis to increase, decrease, or not change? Briefly explain. (3 pts)

The p-value would: Increase | Decrease | Not Change

Explain: