**ANLY500 Homework 5**

7.2. A business school has a goal that the average number of years of work experience of MBA applicants is at least 3 years. Based on last year’s applicants, it was found that among a sample of 47, the average number of years of work experience is 2.57 with a standard deviation of 3.67. What conclusion can the school reach?

7.5. A financial advisor believes that the proportion of investors who are risk–averse (i.e., try to avoid risk in their investment decisions) is at least 0.7. A survey of 32 investors found that 20 of them were risk-averse. Formulate and test the appropriate hypotheses to determine whether his belief is valid.

7.11. The State of Ohio Department of Education has a mandated ninth-grade proficiency test that covers writing, reading, mathematics, citizenship (social studies), and science. The Excel file *Ohio Education Performance* provides data on success rates (defined as the percent of students passing) in school districts in the greater Cincinnati metropolitan area along with state averages. Test null hypotheses that the average scores in the Cincinnati area are equal to the state averages in each test and also for the composite score.

7.22. Determine if there is evidence to conclude that the mean GPA of males who plan to attend graduate school is larger than that of females who plan to attend graduate school using the data in the Excel file *Graduate School Survey*.

7.29. A college is trying to determine if there is a significant difference in the mean GMAT score of students from different undergraduate backgrounds who apply to the MBA program. The Excel file GMAT Scores contain data from a sample of students. What conclusion can be reached using ANOVA?

7.32. An online bookseller is trying to determine whether customers’ gender is independent of the genre of books they most often purchase. A sample of customers revealed the following:

|  | **Genre** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Gender** | **Literature** | **Magazine** | **Nonfiction** | **Popular Fiction** |  |
| Female | 12 | 28 | 9 | 37 |  |
| Male | 8 | 15 | 22 | 29 |  |

What can the bookseller conclude?