

Note: If you choose to use STATTOOLS to complete any of the problems below, please include copies of the output along with your answers.

1. Problem 11.5
2. Problem 11.7
3. Suppose you wished to compare the mean age of tuberculosis meningitis in HIV and non-HIV patients. A sample of 37 HIV infected patients yielded an average of 27.9 years and a standard deviation of 5.6 years. A sample of 19 non-HIV infected patients yielded an average of 38.8 and a standard deviation of 21.7.
 - a. Test the null hypothesis that the two populations have the same mean using $\alpha=.05$. Assume that the two true variances are equal.
 - b. Without doing the calculations, would you expect a 95% confidence interval for the true difference of the means to include 0? Explain.
 - c. Section 11.2.2 (page 270) shows how to calculate the t-test and the approximate degrees of freedom if the variances are not equal. Assume that they are not and perform the test.
4. Problem 11.13. The data for this problem are in an excel spreadsheet on the class website (A5P4.xls).
5. Problem 14.7. (Note: Some information for this problem is in Problem 14.6.)
6. Problem 14.12
7. Problem 14.13. (Note: The data for this problem in Appendix B, page B-4. The column of interest is the third column of this table, right after the gender column. A "Yes" represents someone with toxemia.)