

Show all work. Your answers must be fully justified.

Use this sheet as a cover sheet and staple all relevant work by hand and any computer printouts to this page.

The significance level for all of the hypothesis tests on this quiz is $\alpha = 0.05$. For each test, you may use either the traditional or p -value method, but clearly indicate which one you are using. If you use Excel or the calculator to complete a hypothesis test, make sure to include enough written work to demonstrate your understanding of the concepts.

1. The data file cholest.xls represents cholesterol levels recorded from 20 male patients (denoted by gender = 1) and 20 female patients (denoted by gender = 2). Using the data from this file, test the claim that the standard deviation of the cholesterol level in men is greater than 70.
2. Using the data from the file cholest.xls, test the claim that the standard deviation of the cholesterol level in men is the same as the standard deviation of the cholesterol level in women.
3. Create the contingency table associated with the data in problem 2.36 on Page 81 in your book. Use it to test the claim that there is no difference proportionately between the optimized and unoptimized programs in the kinds of references that occur in the program.