

The computer lab is in **Neckers 258** (2 doors from my office). Hopefully, Minitab is on computers 11–13, 18–21, 23–25. Minitab is hard to use since different computers have different set ups. You can get the datasets from Minitab 17 as shown below, but most computers have Minitab 19. For Minitab 19, use File>open then enter the path to the data set you got from email. You could save the file to a flashdrive or to the desktop. “Double click” means press the rightmost “mouse” button twice in rapid succession. “Drag” means hold the mouse button down. This technique is used to select “menu” options. After your computer is on,

A) (HW2 problem 1): Pooled t test and confidence interval (CI). This data set is for famous men and women. In general women live longer than men, but perhaps famous men live as long as famous women.

- 1) Log in to a computer.
- 2) Click on the Minitab 17 icon, you may need to type Minitab in the lower left search box.
- 3) In a few seconds, the Minitab session and worksheet windows fill the screen. At the top of the screen there is a menu. The NW corner has the menu option “File.” Move your cursor to “File” and drag down the option “Open Worksheet.” (A window may appear. You may need to double click on the icon “Student 9.” This will display a large number of data sets.) You may need to click on a “Open sample Minitab data” near the bottom of the screen. Then you may need to click on Student 9.
- 4) In the middle of the screen there is a “scroll bar,” a gray line with left and right arrow keys. Use the right arrow key to make the data file *Age.mtw* appear. Double click on “Age.mtw.” A window will appear. Click on “OK.” Denote these commands as “File>open worksheet> (Student 9 >) Age.mtw.”
- 5) The worksheet window will now be filled with data. The top of the screen has a menu. Go to “Stat”, drag down “Basic Statistics,” “2-Sample t.” (Write this as Stat>Basic Statistics>2-Sample t).
- 6) A window will appear. Click on the “Each Sample in its own (different) column” option and press *Tab*. Select “C1 DAgeF” for the “First” box and “C2 DAgeM” for the “Second” box. To get output for a pooled 2 sample t test and confidence interval (CI), click on Options then “Assume equal variances” then click on OK.
- 7) The required output will appear in the session window. You can view the output by using the vertical scroll bar on the right of the screen. Copy and paste the output in Word. (Search for Word in the box in the lower left corner. Choose blank sheet.
- 8) Use the commands Graph>dotplot and click on the “Multiple Y’s simple option. Select “C1 DAgeF,” “C2 DAgeM” and click on “OK.” (You may need to click in the *Variables* box before selection.) Right click on the graph, select copy graph, and press “Ctrl v” in Word.
- 9) You can probably save your Word file on a flashdrive and then print it. Alternatively, you can email the Word file to me.

B) (HW2 problem 2): Matched Pairs test and CI. For this data, 14 males suffering from high cholesterol were randomly assigned to a diet that included either corn flakes or oat bran. After 2 weeks, their LDL cholesterol levels were recorded. Then each man repeats the process with the other cereal.

1) Use the command File>Open Worksheet. You may need to click on a “Open sample Minitab data” near the bottom of the screen. Then you may need to click on Student 14. Then double click on *Chol.mtw*. A window will appear. Click on “OK.”

2) Use the command Stat>Basic Statistics>Paired t.

3) A window will appear. Press Tab. Select “C1 CornFlke” for the “First” box and “C2 OatBran” for the “Second” box. Click on “Graphs,” “Boxplot of differences” and click on OK, then click on OK. 4) The required output will appear in the session window. Copy and paste the output and graph into *Word*. See A 8) for getting a plot in *Word*.

C) (5.18. HW3 problem 4): One way ANOVA. This data set has 30 three month old infants randomized into five groups of 6 each. Each infant is shown a mobile of one of five multicolored designs, and the goal of the study is to see if the infant attention span varies with type of design of mobile. The times that each infant spent watching the mobile are recorded. Use the command File>Open Worksheet. You may need to click on a “Open sample Minitab data” near the bottom of the screen. Then you may need to click on Student 14. Then double click on *Baby.mtw*. A window will appear. Click on “OK.”

1) Choose Stat>Basic Statistics>Display Descriptive Statistics, select “C1 Time” as the “Variable,” click the “By variable” option (and press *Tab* if necessary). Select “C2 Design” as the “By variable.”

2) Copy and paste the output into Word.

3) Select Stat>ANOVA>One-way, select “C1-time” as the response, press “Tab” and select and “C2-Design” as the factor. From the storage option, click on “Store residuals” and click on “Store fits.” Then click on “OK.” Copy and paste the output and the plot into Word. Scroll down to see the plot. See A 8) for getting a plot in *Word*.

4) To make a residual plot, select Graph>Scatterplot. Click on the “Simple” icon. Select “Res1” for “Y” and “Fits1” for “X” and click on “OK.” Copy and paste the plot into Word.

5) To make a response plot, select Graph>Scatterplot. Select “C1 Time” for “Y” and “Fits1” for “X” and click on “OK.” Copy and paste the plot into Word. (You may need to click on Res1 and then on Delete to get C1 Time into Y.)

To get out of Minitab, move your cursor to the “x” in the NE corner of the screen. When asked whether to save changes, click on “no.”

Feel free to get help from other students. I would be grateful if knowledgeable students would give help to students having trouble. Since my office is next door, feel free to get help from me.