

**CALCULATOR WORKSHEET Name Last \_\_\_\_\_ First \_\_\_\_\_**

6 points; DUE Friday of week 1:

**Objective: To learn to enter data into the calculator lists & find one variable summary statistics.**

- TI-83+ & TI-84+: step by step instructions are given on this page.
- These instructions assume your STAT WIZARD is "OFF"
- If you are using a TI-84+ with the STAT WIZARD turned ON, see the next page.

**1. Enter data into the statistics list editor using one list showing all data values and repeating values that occur more than once.**

Individual Data Values: Hours worked per day by a sample of 20 students:

**5, 6, 3, 3, 2, 4, 7, 5, 2, 3, 5, 6, 5, 4, 4, 3, 5, 2, 5, 3**

Data from Table 1.9 Section 1.3 Chapter 1 Introductory Statistics from OpenStax free at <http://cnx.org/content/col11562/1.17>

Press **STAT** press **ENTER** for "EDIT". Put data into list L1 pressing **ENTER** after each value

Press **2<sup>nd</sup> QUIT** to exit stat list editor after you have entered data, checked it and corrected errors.

**Find 1-Variable Summary Statistics using one data list:**

Press **STAT** arrow right to **CALC** press **ENTER** for 1-Var Stats , press **2<sup>nd</sup> L1 ENTER**

(If data are in a different list than L1, indicate the appropriate listname)

**Record the following summary statistics output for 1 Var-Stats: round to 2 decimal places.**

Average  $\bar{X}$  = \_\_\_\_\_ Count n = \_\_\_\_\_ Sample Standard Deviation  $S_x$  = \_\_\_\_\_

Arrow down using cursor key to second screen to find median and quartiles.

First quartile Q1: \_\_\_\_\_ Median \_\_\_\_\_ Third quartile Q3: \_\_\_\_\_

**2. SORT data into ascending order; use sorted data to create a frequency table.**

Press **STAT** then arrow down to "SORTA" press **ENTER** press **2<sup>nd</sup> L1 ENTER**

Calculator shows "DONE"

Press **STAT** press **ENTER** for "EDIT" to see the data now sorted in list L1

Look at the sorted data.

Count how many times each value appears.

The number of times a data value appears is its "FREQUENCY".

Data can be summarized in a frequency table.

X is the number of hours worked.

The frequency is the number of students who worked X hours.

Fill in frequency in the table at the right.

Your frequency column should total 20: check it.

| Hours Worked (X) | Frequency |
|------------------|-----------|
| 2                |           |
| 3                |           |
| 4                |           |
| 5                |           |
| 6                |           |
| 7                |           |

**3. Entering data from a frequency table into the statistics list editor using two lists:**

Press **STAT** press **ENTER** for EDIT Put hours into list L2 and Frequency into list L3

Press **2<sup>nd</sup> QUIT** to exit stat list editor after you have entered data, checked it and corrected errors.

**Find 1-Variable Summary Statistics using two lists (data list and frequency list):**

Press **STAT** arrow right to **CALC** press **ENTER** for 1-Var Stats , press **2<sup>nd</sup> L2 , 2<sup>nd</sup> L3 ENTER**

(If data are in different lists than L2 and L3, indicate the appropriate listnames)

**Record the following summary statistics output for 1 Var-Stats: round to 2 decimal places.**

Average  $\bar{X}$  = \_\_\_\_\_ Count n = \_\_\_\_\_ Sample Standard Deviation  $S_x$  = \_\_\_\_\_

Arrow down using cursor key to second screen to find median and quartiles.

First quartile Q1: \_\_\_\_\_ Median \_\_\_\_\_ Third quartile Q3: \_\_\_\_\_

**CHECK!** Your answers for summary statistics in #1 and #3 above should agree with each other.

**If #1 and #3 do NOT agree, check your work for this whole page to find your errors.**

Get help if you have trouble. You need to master BOTH methods –very important Math 10 survival

## STAT WIZARD Instructions for 1 variable statistics

The newest models of TI-84+ have more capabilities than some of the older TI-84 calculators and the TI-83 calculators.

If you have a TI-83 or TI-83+, you do not have STAT WIZARD. Use the instructions on the first page.

If you have a TI-84 or TI-84+ press MODE.

Arrow down the MODE screen to see if you have an item called STAT WIZARD.

If you do not have STAT WIZARD, use the instructions on the first page of this assignment.

If you have STAT WIZARD, it may be listed on the second "page" of the MODE screen or may be near the bottom of the first page of the MODE screen, depending on which version of the TI-84+ you have.

**If you have STATWIZARD, it's your choice whether to use it or not.**

If you wish to turn the STATWIZARD off, then highlight OFF, press enter  
Then use the instructions on the first page of the assignment.

If you wish to use the STAT WIZARD, then to do 1 variable statistics do the following:

Press **STAT** arrow right to **CALC** press **ENTER** for 1-Var Stats

The STATWIZARD will give you a screen with the following prompts

List:  
FreqList:  
Calculate

### For Question 1

- Enter the listname for the data values where it asks for List. To enter the list name press 2nd and select press the key for L1
- For question 1, you do not have a frequency list, so leave FreqList blank.
- The completed STATWIZARD screen will be  
List: L1  
FreqList:  
Calculate
- Then highlight Calculate and press ENTER.

### For Question3

- Enter the listname for the data values where it asks for List. To enter the list name press 2nd and select press the key for L2
- Enter the listname for the frequencies where it asks for FreqList. . To enter the list name press 2nd and select press the key for L3
- The completed STATWIZARD screen will be  
List: L2  
FreqList: L3  
Calculate
- Then highlight Calculate and press ENTER.

**The output page is exactly the same whether you used STATWIZARD or not.  
Refer back to page 1 for how to read the information from the output screen.**