

### Finding the Mean, Median, Quartile Ranges and Standard Deviation

1 - From **HOME**, choose the List & Spreadsheets App (#4)

2 - Arrow to the TOP of the column and NAME your list.

3 - Input your data in the cells below

A x	B y
=	
1	1 8
2	2 9
3	3 10
4	

4 - Press **MENU / 4: STATISTICS / 1: STAT CALCULATIONS / 1: ONE VARIABLE STATISTICS /** Select the column name you want to choose, press **ENTER**.

5 - The information on the right will appear on your screen

$\bar{x}$  = mean  
 $\sigma_x$  = standard deviation  
n = number of entries  
min = minimum number  
Q1 = lower quartile  
Med = median  
Q3 = upper quartile  
max = maximum value

\* To clear a list: **CTRL W**

### Using the Graphing Calculator to make a Box and Whisker Plot:

1 - From **HOME**, choose the Calculator App (#1)

2 - Press **CTRL / RIGHT PARENTHESIS** TO GET { }

3 - Input your data values separated by commas, then arrow right once to get out of brackets

4 - Press **CTRL / VAR**. This will give you a  $\rightarrow$  to store your information. Enter the name of the data being stored (for example: grades, heights, weights, etc.)

5 - Press **HOME /** Arrow down to select **ADD DATA & STATISTICS /** press **ENTER**

6 - Use NavPad, move to bottom and click to add x-variable list name. Choose the name you just entered.

\* Note: the default graph is a DOT PLOT

7 - Press **MENU / 1: PLOT TYPE / 2: BOX PLOT**

8 - If you hover over the box and whiskers, the Lower Extreme, Lower Quartile, Median, Upper Quartile, and Upper Extreme are displayed on the screen, respectively.

9 - If you want to extend the whiskers to the extremes, press **MENU / 2: PLOT PROPERTIES / 3: EXTEND BOX PLOT WHISKERS**

### Using the Graphing Calculator to make a Histogram:

1 - From **HOME**, choose the Calculator App (#1)

2 - Press **CTRL / RIGHT PARENTHESIS** TO GET { }

3 - Input your data values separated by commas, then arrow right once to get out of brackets

4 - Press **CTRL / VAR**. This will give you a  $\rightarrow$  to store your information. Enter the name of the data being stored. (for example: grades, heights, weights, etc.)

5 - Press **HOME /** Arrow down to select **ADD DATA & STATISTICS /** press **ENTER**

6 - Use NavPad, move to bottom and click to add x-variable list name. Choose the name you just entered.

\* Note: the default graph is a DOT PLOT

- 7 - Press **MENU / 1: PLOT TYPE / 3: HISTOGRAM**
- 8 - Since we need intervals, we need to change how it is displayed on the screen. Press **MENU / 2: PLOT PROPERTIES / 2: HISTOGRAM PROPERTIES / 2: BIN SETTINGS / 1: EQUAL BIN WIDTH**
- 9 - Enter the range of your interval into the width space (for example 40 – 49 has a width of 10 since there are 10 #s in the interval) and the Alignment is where the data starts. TAB / OK
- 10 - Next, you must change your window. Press **MENU / 5: WINDOW/ZOOM / 2: ZOOM - DATA**
- 11 - If you hover over each bar, the interval is given using interval notation, along with the # of points within that range.

### **Determining the Line of Best Fit, Plotting Scatter Plots, and displaying the Correlation Coefficient for Line of Best Fit**

- 1 - From **HOME**, choose the List & Spreadsheets App (#4)
- 2 - Arrow to the TOP of the column and NAME your list(s).
- 3 - Input your data in the cells below each list
- 4 - If you ONLY need Regression Equation and r-value:
  - 4a - Press **MENU / 4: STATISTICS / 1: STAT CALCULATIONS / 3: LINEAR REGRESSION (mx + b)\***
  - 4b - Select the titles of your lists, then press **OK**

5 - The information on the right will appear on your screen



```
Title: Linear Regression Equation  
RegEqn: m*x+b  
m:  
b:  
r2:  
r:  
Residuals: { }
```

To see the scatter plot, after data is entered into list(s).

- 1 - Press **HOME** / Arrow down to select **ADD DATA & STATISTICS** / press **ENTER**
- 2 - Use NavPad, move to bottom and click to add x-variable list name, then move left and click to add y-variable list name.
- 3 - Press **MENU / 4: ANALYZE / 6: REGRESSION / CHOOSE APPROPRIATE REGRESSION EQUATION**

\* You can also perform Quadratic Regression or Exponential Regression when necessary. Choose the appropriate Regression when you press MENU.

### **Finding/Viewing Residual Plots**

- 1 - Once above steps for Linear Regression are performed, press **MENU / 4: ANALYZE / 7: RESIDUALS / 2: SHOW RESIDUAL PLOT**

\* Note: If Regression is not performed first, #7: Residuals will not show as an option.

- 2 - To view EACH residual value, press **4: ANALYZE / A: GRAPH TRACE** / Use the arrow keys to click on each point. The y-value for each point is the residual value.