TI-Nspire Calculator Directions for Statistics

Inputting Data

- Homescreen
- **New Document (right side)**
- **Add Lists & Spreadsheet**
- In box A, type a title.
- In box 1, start typing data (only one number per box). Press **enter** after you type each number. Be sure to press **enter** after you type in the last number.

Finding Mean and Median

- While still in the spreadsheet, press **menu** then **statistics** then **stat calculations** then **one-variable statistics**.
- When the small box comes up with num of lists, press the down arrow to highlight **OK** and press **enter**.
- When the detailed box comes up, press the down arrow to highlight **OK** then press **enter**.
- Scroll up or down until you see the one-variable statistics in the right column.

Important Symbols (One-Variable Stats)

$\bar{x}$ is the mean.
Σx is the sum of all the data.
Σx^2 is the sum of all the squared data.
sx is the sample standard deviation.
σ x is the population standard deviation.
n is the sample size.
Minx is the smallest number in the set.
Q_1X is the median of the left half of the data.
Median X is the median of all the data.
Q_3X is the median of the right half of the data.
MaxX is the greatest number in the set.
SSX is the sum of squared deviations.

Creating a Box Plot

- Input the data in a spreadsheet.
- Insert a new page (Ctrl I).
- Select **Add Data & Statistics**.
- Double click on the bottom with the mouse.
- Press **enter** then **Plot Type** then **Box Plot**.
- Move the cursor to the end of the whiskers and the edges of the box to see the numbers for each.

Creating a Histogram

- Input the data in a spreadsheet.
- Insert a new page (**Ctrl I**).
- Select **Add Data & Statistics**.
- Double click on the bottom with the mouse.
- Press **enter** then **Plot Type** then **Histogram**.
- Move the cursor over each bar to see the interval and how many points are in the bar.
- Bin Settings controls the width of each bar. The greater the bin setting, the fewer the bars. To change the bin setting, press **Ctrl menu** then **Bin Settings** then **Equal Bin Width**. Change the width of the bar then press the down arrow to highlight **OK** and press **enter**.

Zoom to See Entire Plot

- Press **menu** then **Window/Zoom** then **Zoom-Data**.

r is the correlation coefficient:

1 is strong positive
0 is no correlation
-1 is a strong negative

r^2 is the coefficient of determination:

- **expressed as a percentage**
- **The larger the %, the more x causes or effects y.**

Creating a Scatter Plot

- New Document (**Ctrl N**)
- **Add Lists & Spreadsheet**
- Input data in List A and List B (be sure to put a title at the top of each list).
- Insert New Doc (**Ctrl I**)
- **Add Data & Statistics**
- Click at the bottom and choose the independent variable. Click on the side and choose the dependent.

Creating a Linear Regression Line

- Make sure your cursor is not near an axis label.
- **Menu** then **Analyze** then **Regression** then **Show Linear (mx+b)**

Finding the Correlation Coefficient:

- Input data into two lists.
- **Menu** then **Statistics** then **Stat Calculations** then **Linear Regression (mx+b)**
- X List is the title of your first column and Y List is the title of your second column.
- Press the down arrow to **OK** the press **enter**.
- **r** is the correlation coefficient.

Creating the Residual Plot:

- Input data into two lists and create a scatter plot.
- Create the linear regression line.
- **Menu** then **Analyze** then **Residuals** then **Show Residual Plot**