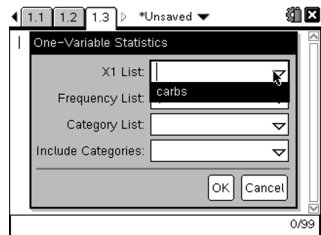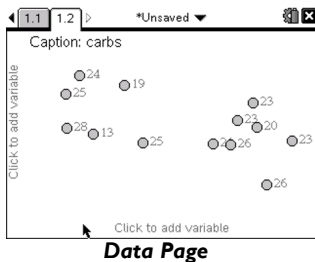# Data & Statistics

with TI NSpire

Inputting Data

- Create a new page and choose "4: Add Lists & Spreadsheets"

- Move your cursor to the top cell next to the column letter and type of the name of your column.

- Hit (enter) and then input your data.

- To add a new column, move your cursor to the next column and input your data.

Choosing One Variable Stats

Data Page

One-Variable Stats

- Press (ctrl) - I to create a new page and choose "1: Add Calculator"

- Press (menu) and choose "6: Statistics". Then choose "1: Stat Calculations".

- Choose "1: One Variable Statistics". You may choose other options based on your needs.

- Type the number of lists for which you want to perform the operation.

- Use the dropdown menu for X1 to choose the column name you want. Then hit (enter).
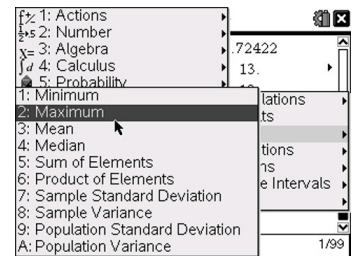

Histogram Page
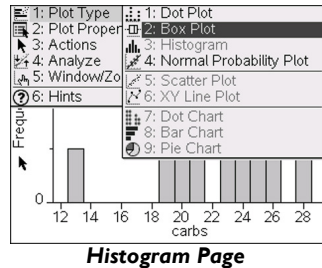
List Operations

Nspire will quickly determine various values for a single list such as the maximum, minimum, average, and sum of the elements.

- To perform one of the operations above, go to a calculator page and press (menu).

- Choose "6: Statistics" and then "3: List Math".

- Choose the operation you want and then, in the parentheses, type the name of the column you want the information for.

- Finally, hit (enter).

Column Name   **Column Letter**

List Screen

List Math Screen

Other List Options

Linear Regression

- To get the linear regression equation, create a calculator page.

- Press (menu) and then choose "6: Statistics".

- Choose "1: Stat Calculations" and then choose either 3 or 4.

- Use the dropdown menu to choose the list that you want to compare.

Sorting

- To sort a list in increasing or decreasing order, create a calculator page.

- Press (menu) and then choose "6: Statistics".

- Choose "4: List Operations" and then choose either 1 or 2.

Displaying Data

The Nspire easily displays data as a graph.

- First create a new page and choose "5: Data & Statistics". The data points will appear randomly on the page.

- To make a vertical dot plot, click on "Click to Add Variable" text at the bottom of the screen.

- You will be given an option to choose the data you want to display by the name. That is why you must name your data prior to displaying it.

- You can change the frequency of your dot plot by grabbing the axis and moving it left and right.

- You can also make your dot plot horizontal by moving your cursor along the left side of the screen until a white box appears. Click in the box.

Box-Whisker Plots

- Once your dot plot has been made, press (menu) and choose "1: Plot Types".

- Choose "2: Box Plot". The plot will automatically change.

- Choose "3: Histogram" to make a vertical histogram.

Advanced Plot Menu

- To change the width of the histogram, press (menu) and choose "2: Plot Properties" and then "2: Histogram Properties"

- Choose "2: Bin Settings".

- Under the "Actions" menu, you can also place a standard curve over your histogram.

Data & Statistics with TI NSpire

Creating Scatter Plots
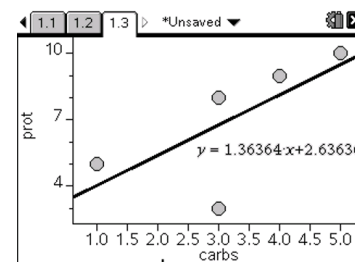
- Input your data in a list page. Remember to title your columns.

- Press (ctrl) - I to insert a new Data page.

- Click on "Click Here to Add Variable" at the bottom of the page to choose your independent variable.

- Click on "Click Here to Add Variable" at left side of the page to choose your dependent variable.
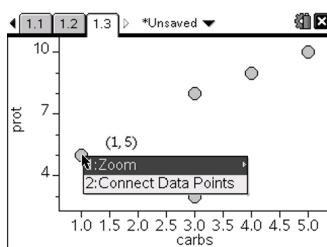
More Scatter Plots

- Connect your dots by pressing (ctrl) (menu) on one of the dots and choose "Connect Data Points".

- Move the cursor over a point to see the coordinates.

- To change either the independent or dependent variable, click on the variable you want to change and then choose the variable with which to replace it.

Linear Regression
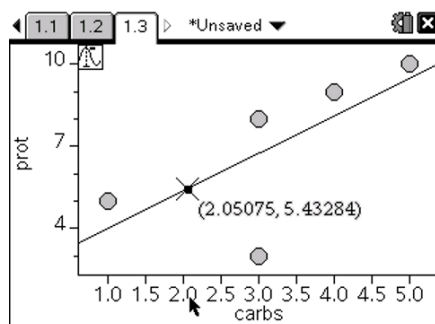
- Once the scatter plot has been made, plot the regression line by pressing (menu) and then "4: Analyze."

- Choose "6: Regression." Choose the type of regression that you want.

- The regression line or curve will automatically appear with the regression equation under it.
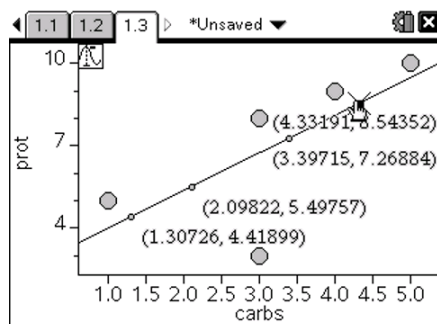

$y = 1.36364 \cdot x + 2.63636$

Scatter Plot with Regression Line

Scatter Plot

(2.05075, 5.43284)

Graph Trace of Regression Line

(4.33191, 8.54352)
(3.39715, 7.26884)
(2.09822, 5.49757)
(1.30726, 4.41899)

Plotting Points Using Graph Trace Tool

Graph Tracing

You can trace points along the regression line in your scatter plot.

- To trace a graph, press (menu) and then choose "4: Analyze".

- Then choose "A: Graph Trace".

- Press the left or right direction arrows to move along the graph.

- The coordinates of the exact point will appear.

You can plot an infinite number of points on the regression line using the "Graph Trace" tool.

- While using the "Graph Trace" tool, click or hit enter at any point. A point and its coordinate will appear.

- Move the cursor to the next point you want to plot and repeat the above step.

- Continue until all of your points have been plotted.