

Analyze Data

by – Winnie Miller (original version created by another Fast Tracker)

Activity overview

This is an introduction to the TI-Nspire Data and Statistics feature. Real data from Subway is used to find the mean, create a histogram and box and whisker plots, and find a regression equation.

Concepts

Central tendencies spread of data, histogram, box and whisker plots, and regression equation.

Teacher preparation

Define mean, histograms, box and whisker plots, regression equations and their relationships. Show a variety of examples and the situations they are describing.

Classroom management tips


Work with a partner or small group for collaboration and discussion.

TI-Nspire Applications


Data and Statistics and My Documents features; nutritioninfo.tns

Step-by-step directions


Open a saved document

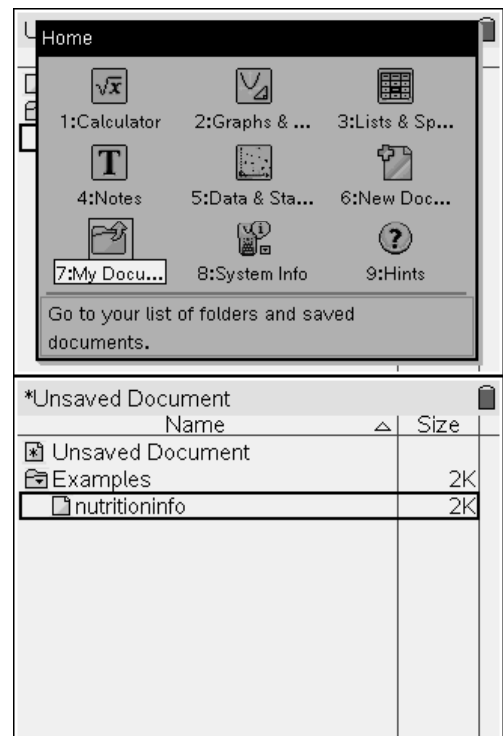
Press the  key.

Choose 7: My Documents

Press .

Choose the file named *nutritioninfo.tns*

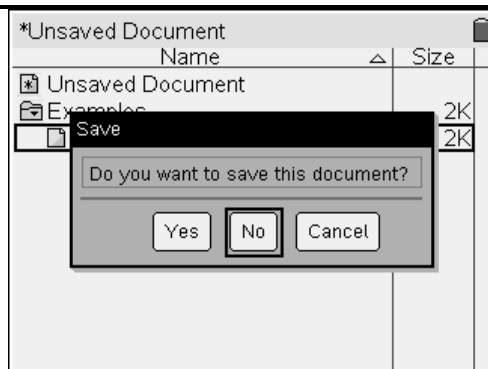
Press .



Do you want to save this document?

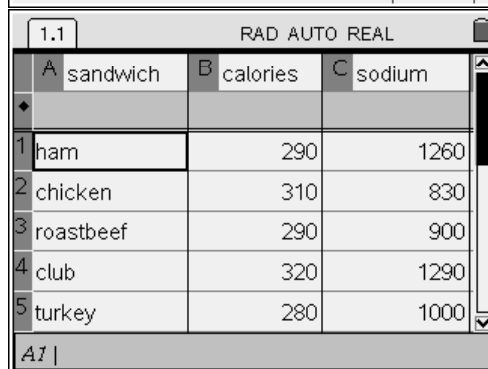
Choose: No

Note: This message may not appear if there was no open file on the handheld



Insert a Data & Statistics page.


Press  .

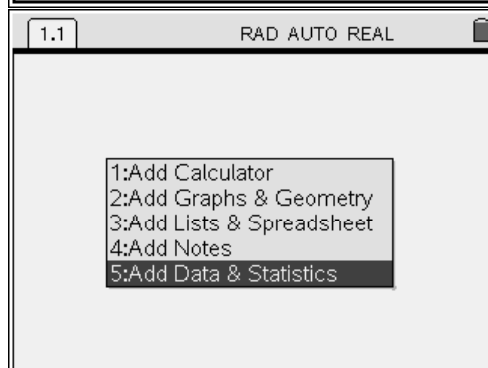


	A	B	C
1	ham	290	1260
2	chicken	310	830
3	roastbeef	290	900
4	club	320	1290
5	turkey	280	1000


Note: This data can be found at www.subway.com

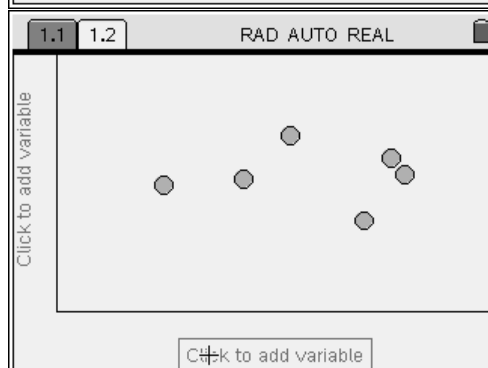
Choose 5: Add Data & Statistics

Press .




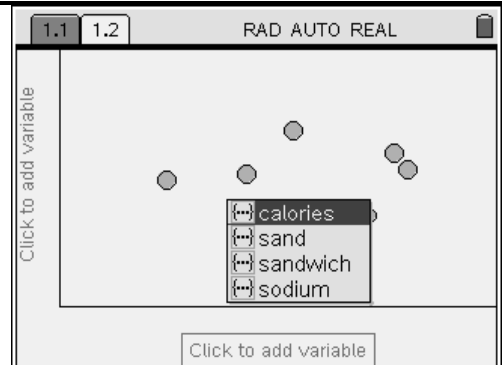
Use the NavPad to cursor to the horizontal "Click to add variable".

Press .

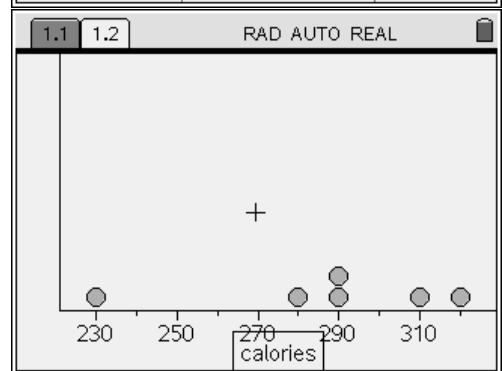


Select **calories**.


Press .



Notice how the values have been plotted.

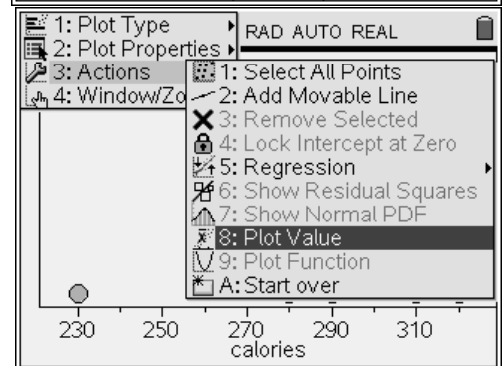



Insert the mean of calorie data.

Press .

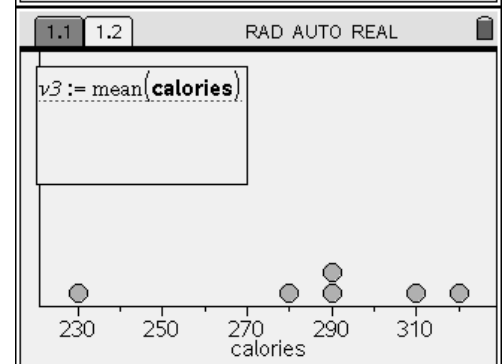
Choose 3: Actions


Choose 8: Plot Value

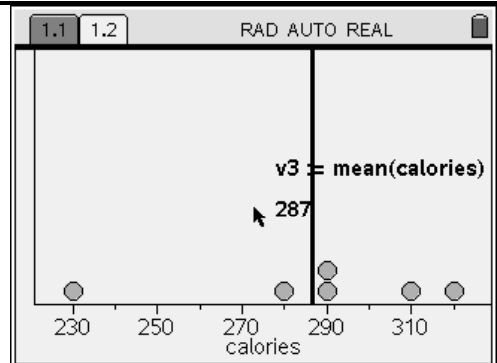


Press .


Press **M E A N**  **C A L O R I E S** .



Press .

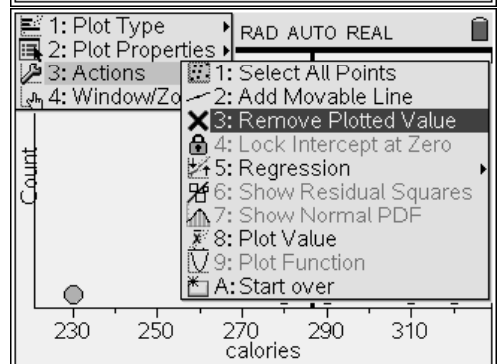



Remove the plotted value.

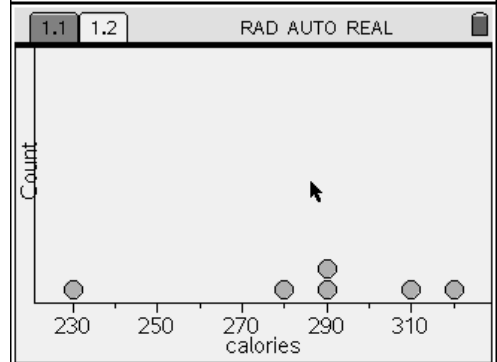
Press .

Choose 3: Actions


Choose 3: Remove Plotted Value



Press .




Create a histogram of the calorie data.

Press .

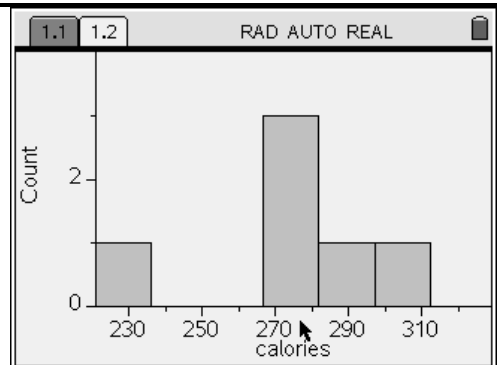
Choose 1: Plot Type

Choose 3: Histogram




Press .

When would a histogram be a useful display of data?

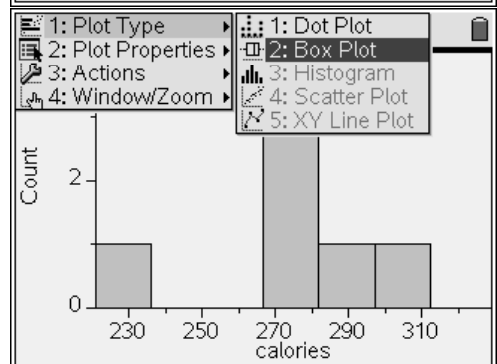



Create a box plot of the calorie data.

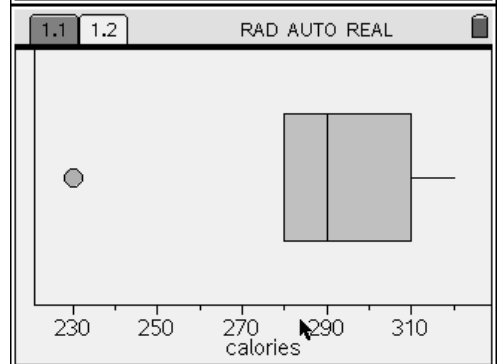
Press .

Choose 1: Plot Type

Choose 2: Box Plot



Press .




Display both calorie and sodium data together.

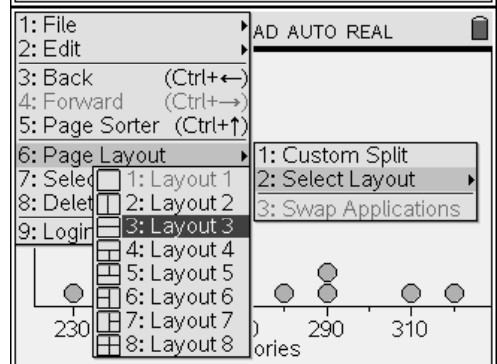
Press  .

Choose 6: Page Layout


Choose 2: Select Layout


Choose 3: Layout 3

Press .




Use the NavPad to move the cursor to bottom window.


Press .

Press .


Choose 5: Add Data & Statistics

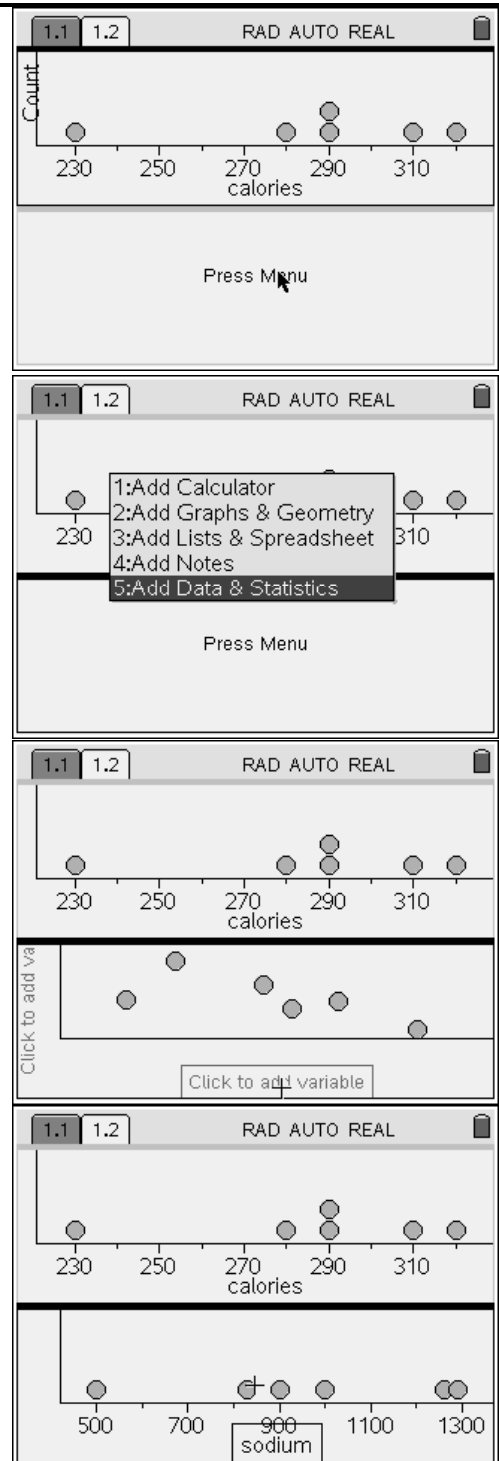
Press .

Use the NavPad to cursor to the horizontal “Click to add variable”.

Press .

Choose **sodium**

Press .

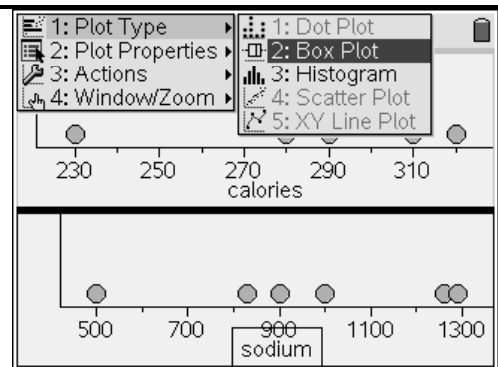


Display both sets of data as box plots.

Press **menu**.

Choose 1: Plot Type

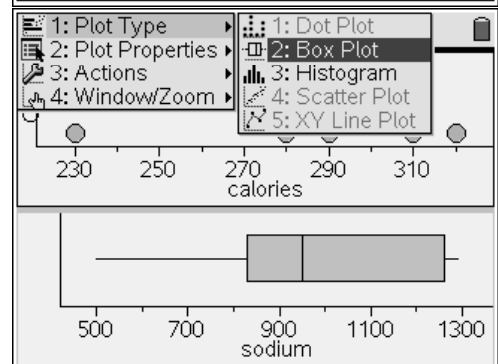
Choose 2: Box Plot



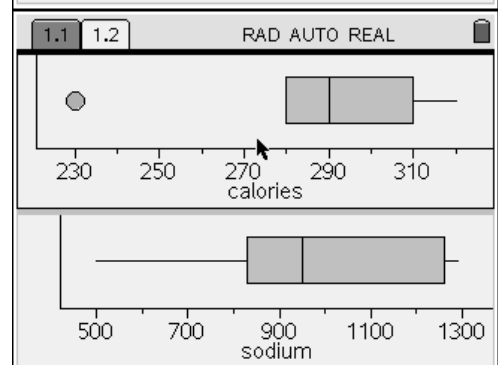
Press **menu**.

Choose 1: Plot Type

Choose 2: Box Plot



Press **enter**.

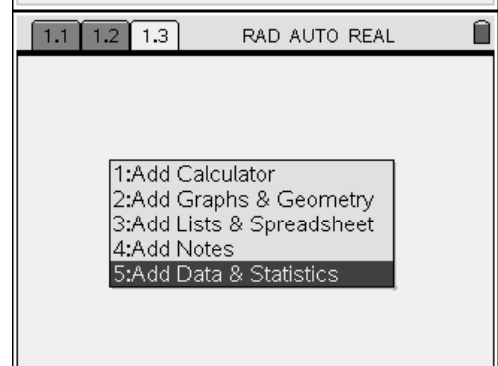


Insert a new page.

Press **ctrl** **i**.

Choose 5: Add Data & Statistics

Press **enter**.



Analyze Data

by: Winnie Miller

Grade level: secondary

Subject: Statistics

Time required: 45 to 90 minutes

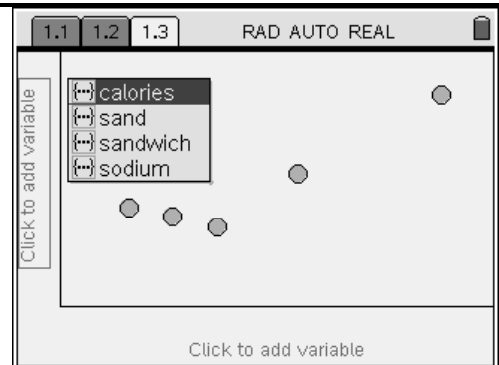
Materials: TI-Nspire

Using the NavPad, move the cursor to the vertical “click to add variable”

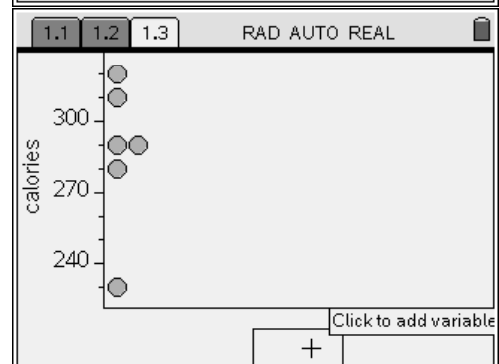
Press $\text{2nd} + \text{V}$.

Choose **calories**

Press $\text{2nd} + \text{V}$.

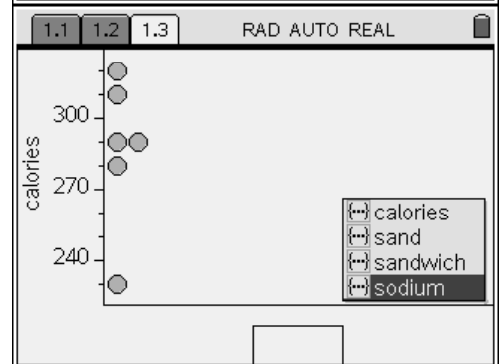


Using the NavPad, move the cursor to the horizontal “click to add variable”.

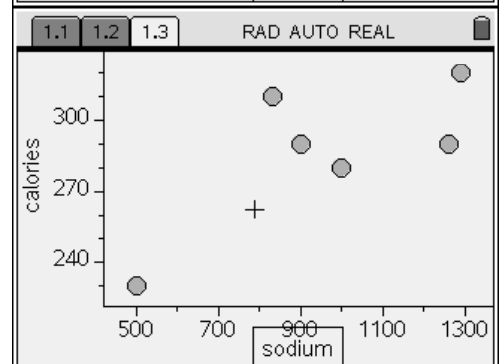


Press $\text{2nd} + \text{V}$.


Choose **sodium**



What do you notice?

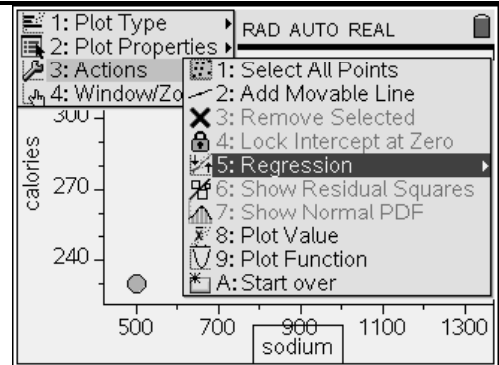


Show Regression Line

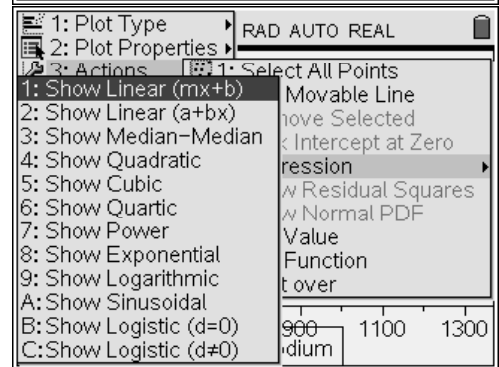
Press .


Choose 3: Actions

Choose 5: Regression



Choose 1: Show Linear (mx + b)



Press .

