Table 1

<table>
<thead>
<tr>
<th>Fruit</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>82</td>
<td>70</td>
<td>20</td>
<td>172</td>
</tr>
<tr>
<td>Pear</td>
<td>73</td>
<td>50</td>
<td>33</td>
<td>156</td>
</tr>
<tr>
<td>Peach</td>
<td>67</td>
<td>45</td>
<td>28</td>
<td>140</td>
</tr>
<tr>
<td>Orange</td>
<td>85</td>
<td>65</td>
<td>17</td>
<td>167</td>
</tr>
<tr>
<td>Kiwi</td>
<td>54</td>
<td>42</td>
<td>24</td>
<td>120</td>
</tr>
<tr>
<td>Melon</td>
<td>33</td>
<td>58</td>
<td>20</td>
<td>111</td>
</tr>
</tbody>
</table>
Procedure Options (Line Charts and Two-Factor Line Charts)

This section describes the options available in the two line chart procedures.

**Variables Tab – Line Charts**

Specify the variables (columns) used to make a simple line chart.

**Variables**

**Data Variables**

These are columns of data with numeric values. The location of the symbol is given by these numeric values.

**Label Variable**

Specify an optional variable containing the labels for each symbol.

**Data Orientation**

The orientation controls whether values for the symbols go down a column (Vertical) or across a row (Horizontal).

**Variable Names**

**Variable Names**

This option specifies whether the column names or column labels are used on the chart.

**Variables Tab – Two-Factor Line Charts**

Specify the variables (columns) used to make a two-factor line chart.

**Variables**

**Data Variables**

These are columns of data with numeric values. The location of the symbols is given by these numeric values. If the Data Orientation is Vertical, each column specified here will produce a sub-grouping of symbols on the chart. If the Data Orientation is Horizontal, each row specified here will produce a sub-grouping of symbols on the chart.

**Label Variable**

Specify an optional variable containing the legend labels for each symbol.

**Data Orientation**

The orientation controls whether sub-groupings for the symbols go down a column (Vertical) or across a row (Horizontal).

**Variable Names**

**Variable Names**

This option specifies whether the column names or column labels are used on the chart.
Line Chart Format

Format
Click the format button to change the plot settings (see Line Chart Window Options below).

Edit During Run
Checking this option will cause the line chart format window to appear when the procedure is run. This allows you to modify the format of the graph with the actual data.

Line Chart Window Options
This section describes the specific options available on the Line Chart window, which is displayed when the Line Chart button is clicked. Common options, such as axes, labels, legends, and titles are documented in the Graphics Components chapter.

Line Chart Tab

Plot Type Section
You can create a chart that displays either bars (bar chart) or symbols (line chart) using the options in this section.

One Factor

Two Factors
Symbols Section
You can specify the format of the symbols using the options in this section.

One Factor

Two Factors

Connecting Lines Section
You can add connecting lines either between or within groups using the options in this section.

One Factor
Two Factors

Reference Line Section
The Reference Line is a horizontal line from which bars (if selected) are drawn. You can specify the value from which the bars originate using the options in this section.

Data Values Section
You can add data values above the bars using the options in this section.
Layout Tab

Orientation Section
You can orient the chart vertically or horizontally.

Object Spacing and Size Section
You can change the size of the gap between subgroups.

Titles, Legend, Numeric Axis, Group Axis, Grid Lines, and Background Tabs
Details on setting the options in these tabs are given in the Graphics Components chapter.

Example 1 – Creating a Simple Line Chart
This section presents an example of how to create a line chart of the data stored in the Fruit dataset.

You may follow along here by making the appropriate entries or load the completed template Example 1 by clicking on Open Example Template from the File menu of the Line Charts window.

1 Open the Fruit dataset.
   • From the File menu of the NCSS Data window, select Open Example Data.
   • Click on the file Fruit.NCSS.
   • Click Open.

2 Open the Line Charts window.
   • Using the Graphics menu or the Procedure Navigator, find and select the Line Charts procedure.
   • On the menus, select File, then New Template. This will fill the procedure with the default template.

3 Specify the variables.
   • On the Line Charts window, select the Variables tab.
   • Double-click in the Data Variables text box. This will bring up the variable selection window.
   • Select Total from the list of variables and then click Ok. “Total” will appear in the Data Variables box.
   • Double-click in the Label Variable text box. This will bring up the variable selection window.
   • Select Fruit from the list of variables and then click Ok. “Fruit” will appear in the Label Variable box.
   • Set Variable Names to Labels.

4 Run the procedure.
   • From the Run menu, select Run Procedure. Alternatively, just click the green Run button.
Example 2 – Creating a Two-Factor Line Chart

This section presents an example of how to create a two-factor line chart of the data stored in the Fruit dataset. You may follow along here by making the appropriate entries or load the completed template Example 2 by clicking on Open Example Template from the File menu of the Line Charts (2 Factors) window.

1. Open the Fruit dataset.
   - From the File menu of the NCSS Data window, select Open Example Data.
   - Click on the file Fruit.NCSS.
   - Click Open.

2. Open the Line Charts (2 Factors) window.
   - Using the Graphics menu or the Procedure Navigator, find and select the Line Charts (2 Factors) procedure.
   - On the menus, select File, then New Template. This will fill the procedure with the default template.

3. Specify the variables.
   - On the Line Charts window, select the Variables tab.
   - Double-click in the Data Variables text box. This will bring up the variable selection window.
   - Select April, May, and June from the list of variables and then click Ok. “April-June” will appear in the Data Variables box.
   - Double-click in the Label Variable text box. This will bring up the variable selection window.
   - Select Fruit from the list of variables and then click Ok. “Fruit” will appear in the Label Variable box.

4. Specify the Axis Labels.
   - On the Line Charts window, click on the Line Chart Format button.
   - On the Numeric Axis tab, change the Lower Axis Label to Number Sold.
On the **Group Axis** tab, change the Lower Axis Label to **Month**.
Click **OK**.

### 5 Run the procedure.
- From the Run menu, select **Run Procedure**. Alternatively, just click the green Run button.

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**Line Chart Output**

You can switch the factors by changing the Data Orientation to Vertical, changing the Group Axis Label to **Fruit**, and changing the Legend Title to **Month**. The result is shown below.