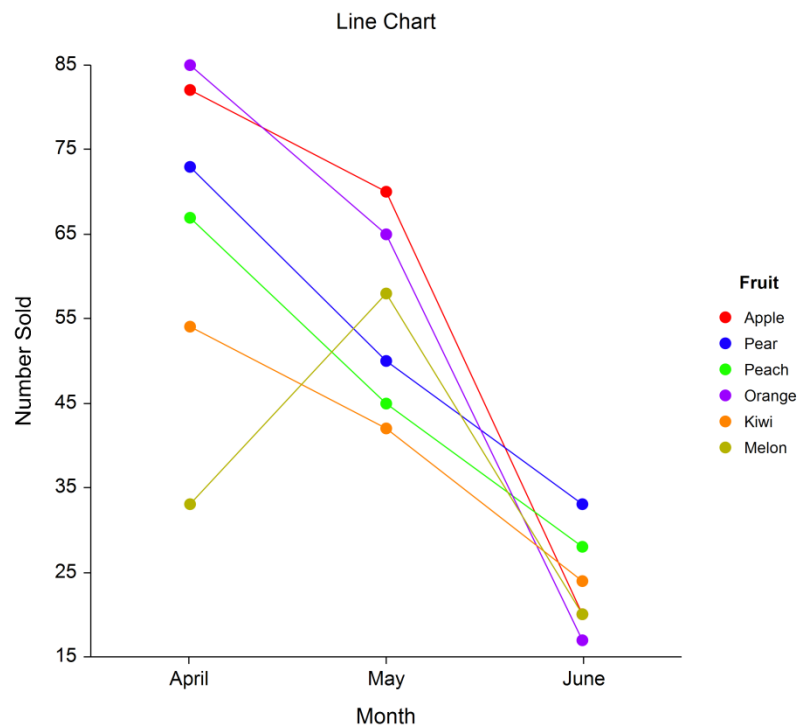


## Chapter 146

# Line Charts

## Introduction

Line charts are used to visually compare values to each other. This chapter gives a brief overview and examples of simple line charts and two-factor line charts. The orientation of a line chart may be vertical or horizontal. Below is an example of a vertical line chart with two factors (fruit and month).



## Data Structure

Data for a line chart are entered in columns. Each numeric data value becomes a dot. The simple line chart procedure gives a line chart for each column of data. The two-factor line chart combines columns of data into a single chart. Below is an example of data ready to be charted. These data are stored in the Fruit dataset.

### Fruit Dataset

Fruit	April	May	June	Total
Apple	82	70	20	172
Pear	73	50	33	156
Peach	67	45	28	140
Orange	85	65	17	167
Kiwi	54	42	24	120
Melon	33	58	20	111

## Line Chart Window Options

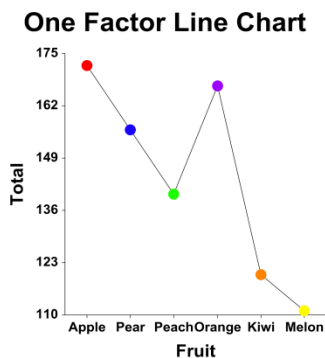
This section describes the specific options available on the Line Chart window, which is displayed when the Line Chart button is clicked. Common options, such as axes, labels, legends, and titles are documented in the Graphics Components chapter.

### Line Chart Tab

#### Plot Type Section

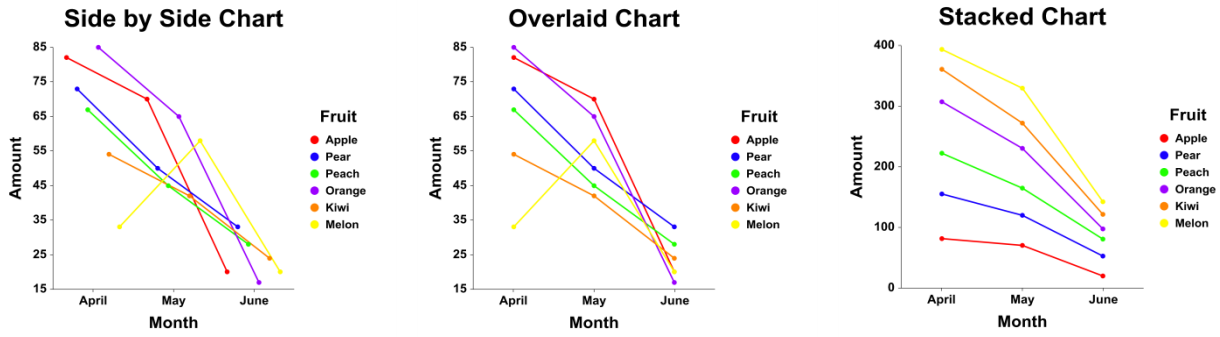
You can create a chart that displays either bars (bar chart) or symbols (line chart) using the options in this section.

#### One Factor



Line Charts

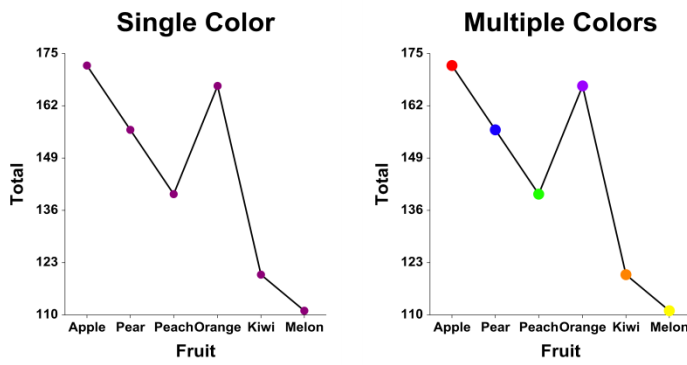
Two Factors



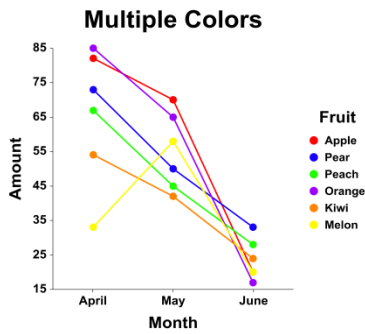
Symbols Section

You can specify the format of the symbols using the options in this section.

One Factor



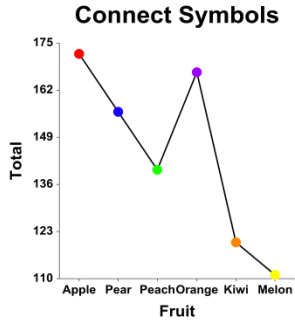
Two Factors



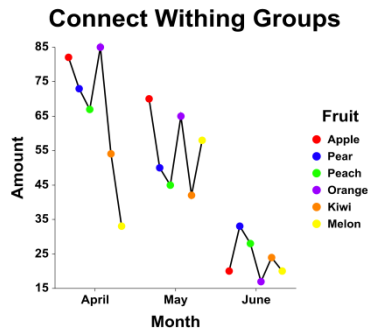
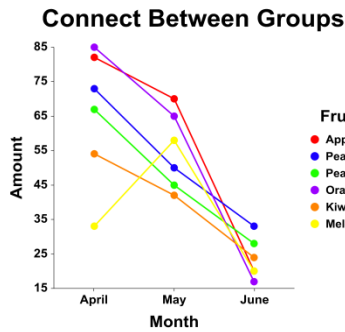
## Connecting Lines Section

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

### One Factor

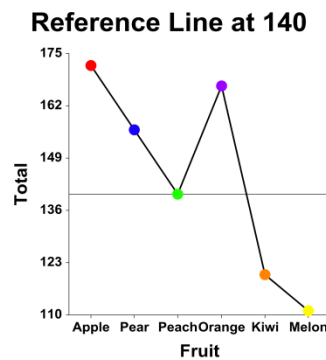
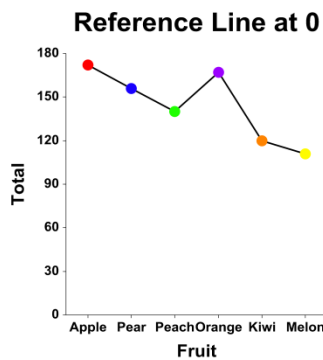


### Two Factors



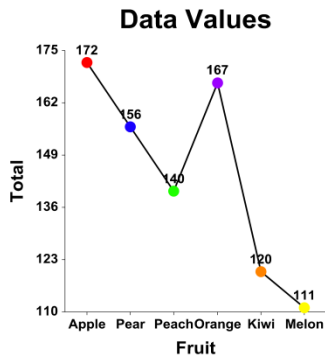
## Reference Line Section

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.

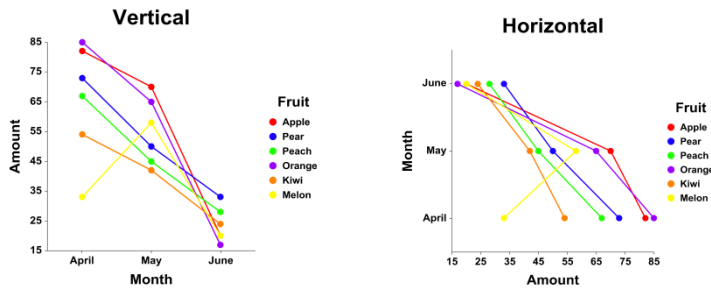



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## Layout Tab

### 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.

### Setup

To run this example, complete the following steps:

**1 Open the Fruit example dataset**

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fruit** and click **OK**.

**2 Specify the Line Charts procedure options**

- Find and open the **Line Charts** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 1** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

Variables Tab

---

Data Variables ..... **Total**  
 Label Variable ..... **Fruit**

Report Options (*in the Toolbar*)

---

Variable Labels ..... **Column Labels**

**3 Run the procedure**

- Click the **Run** button to perform the calculations and generate the output.

## Line Chart Output

### Line Chart Report



## 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.

### Setup

To run this example, complete the following steps:

#### 1 Open the Fruit example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fruit** and click **OK**.

#### 2 Specify the Line Charts (2 Factors) procedure options

- Find and open the **Line Charts (2 Factors)** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 2** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

Variables Tab

---

Data Variables ..... **April-June**  
 Label Variable ..... **Fruit**  
 Data Orientation ..... **Horizontal: Columns as Groups (Axis), Rows as Subgroups (Legend)**

Line Chart Format (*Click the Button*)

---

*Numeric Axis Tab*  
 Lower Axis Label ..... **Number Sold**

*Group Axis Tab*  
 Lower Axis Label ..... **Month**

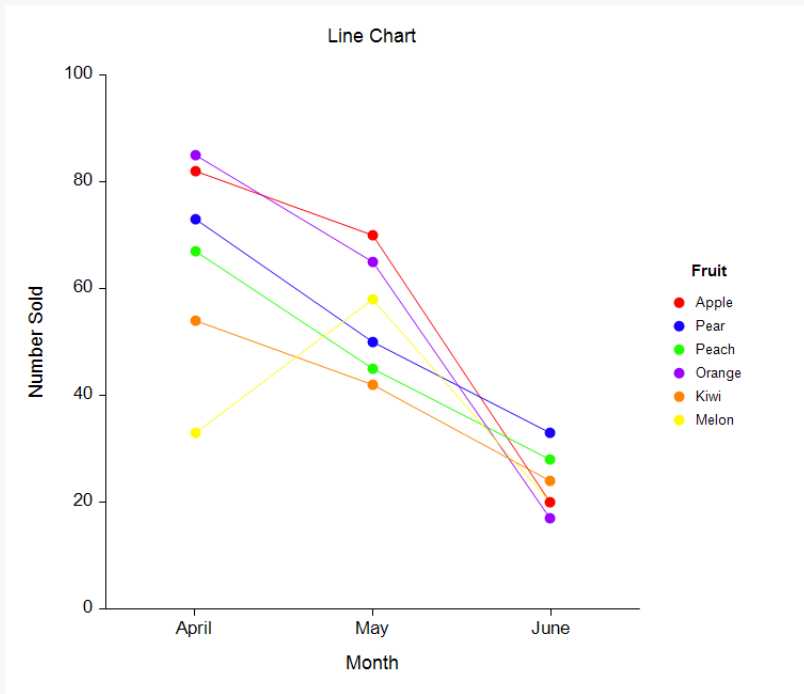
#### 3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.



# Line Chart Output

## Line Chart Report



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** (Example 2b settings file). The result is shown below.

## Line Chart Report

