

# Excel 2016

## Charts and Graphs



# Excel 2016: Charts and Graphs

2.0 hours

This workshop assumes prior experience with Excel, Basics I recommended. Topics include data groupings; creating and modifying charts; chart types; source data; chart options; chart locations; formatting; adding trend lines and error bars.

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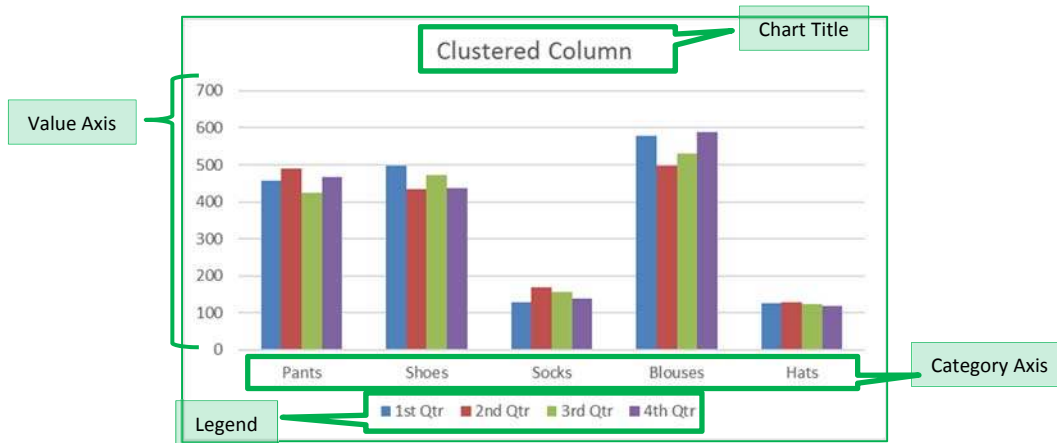
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## Charts

A chart helps you display your data into a graphical representation. There are many types of charts, but in this class we'll focus on simple column, line, and pie charts. There are examples of other charts near the end of this handouts.

The first thing to know is the data has to be organized so Excel can understand what you are trying to chart. Excel will chart your data selection or your connected data range. As long as there are no blank columns and no blank rows within your dataset, you can skip selecting the cells.



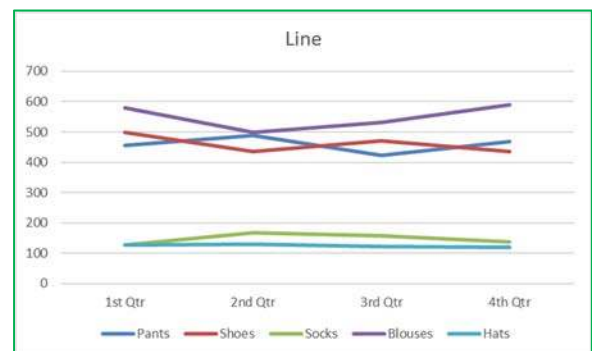
Here is a dataset we will use in class:

Item	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Pants	456	489	423	468
Shoes	498	435	472	436
Socks	128	168	157	138
Blouses	579	498	531	589
Hats	126	129	123	119

This is a structured collection of related data set in a table format. When plotted onto a clustered column chart, like the one shown above, the titles in the first column of the dataset appear along our category axis. The titles in the first row appear within the legend. The values are represented by the height of each column.

Line charts are usually set up to go across a period of time, think *Time Line*. For this chart I've used the **Switch Row Column** tool so we can see the trend of the sales through the year. In this case our first column titles appear in the legend, and the first row of titles appears in our category axis.

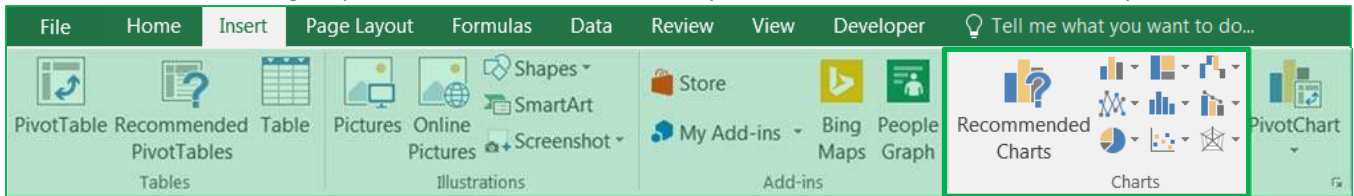
Pie charts are usually created to display the breakdown of the total values within the whole. Pie charts can only be based on one set of data. When you try to create one with the above dataset, you will only see the first value set appear within the chart. If you want to go to an extreme and have all four quarters show, try using a *Doughnut* chart.



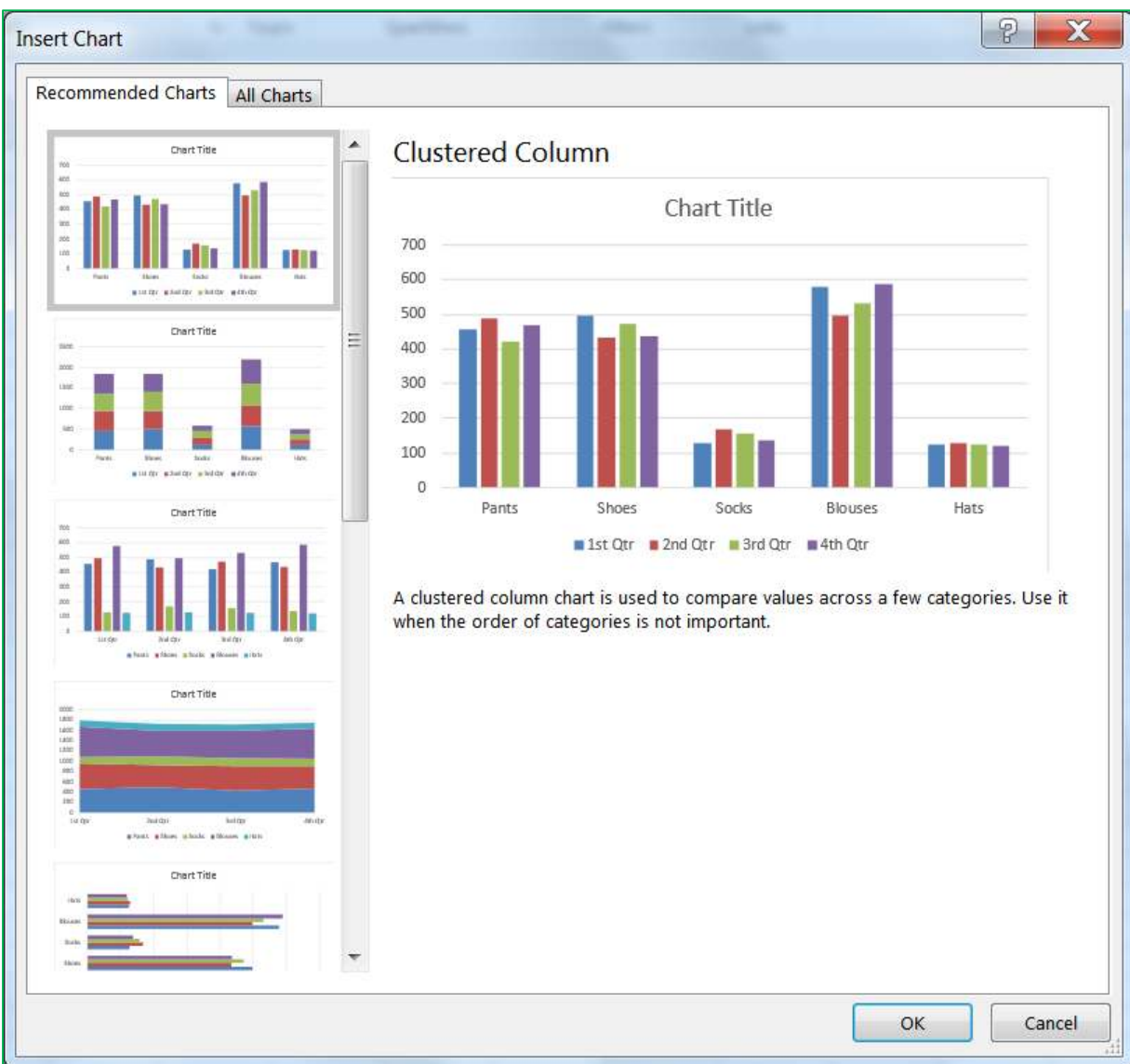
## Creating a Chart

To create a chart make sure your cursor is in the dataset you would like to plot. If you want a subset of the dataset, select that portion. You can use your Ctrl key to add to a current selection.

You will find the **Charts** group on the **Insert** tab. Click on any small chart button to see a list of possible charts.

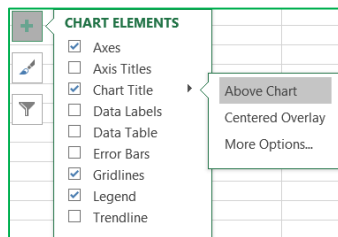
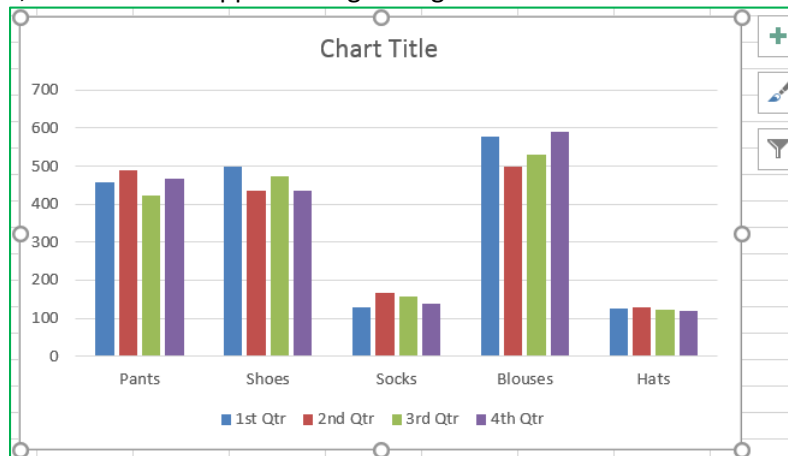


If you are unsure of the best chart option for your data use the **Recommend Charts** button. It will open the Insert Chart window shown here.

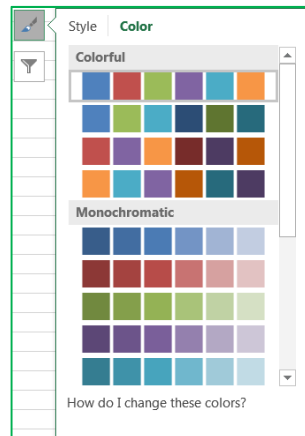


## Chart Tools

When you select a chart, three buttons appear along the right side of the selection.



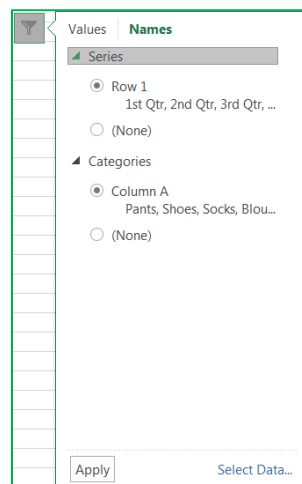
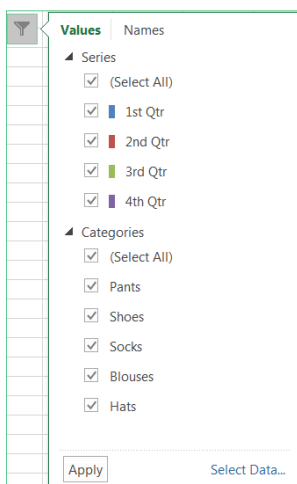
The plus sign is the **Add Chart Element** button. This option is used to add and remove different pieces of your chart. The list of options will vary depending on the type of chart. For example, a pie chart will not have a set of category axis titles. As you hover your mouse over each option, you will see a small arrow head pointing to the right. This will open another menu with more detailed choices. Each menu also has a "More Options..." button which will open a Format Pane on to customize each chart element.



There is a *Chart Style Gallery* and a *Colors* menu on the *Design* tab, but the **Chart Styles** button, the paint brush next to the chart, offers the same options.

If you are patient while you hover over each option, Excel will provide you with a Live Preview of the result.

The **Color** options are available at the top of the menu.



The third button is a funnel. This is a **Chart Filters** button.

The **Values** group allows you to add and remove data points from the chart.

The **Names** page allows you to change the labels that appear in the legend (series) and axis titles (category).

The **Select Data...** option at the bottom of the window opens the same window as the *Select Data* button on the *Design* tab. From there you can change or adjust the range of cells used to create this chart.

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