# Excel Charts 2: Customize

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**How do I …?**

*Change Axis Numbers*
Select the Axis by clicking on a number in the area. Open the Format pane, be sure the title says **Format Axis**.
Click on the Options button.

You can:

- Change the **Minimum** and **Maximum** numbers shown. These can be greater than the minimum and less than the maximum if you want.

- Change the **Major** unit, this is how the displayed number is chosen. If the major unit is 100 the chart axis will read 100, 200, 300. If it's 25 the chart will show 25, 50, 75.

- Change the **Display Units** to Thousands, Millions, Billions. This will change the unit shown in the labels and data tables as well.

- Change the **Format** of the numbers; number of decimals, include a dollar sign, etc.

*Change Distance between Columns*
Select any column. Open the Format pane; be sure the title says **Format Data Series**.
Click on the Options button.

You can:

- Change the selected series to be on a **secondary axis**

- Change the distance the series **overlap**

- Change the **width between** the each category grouping

*Explode a Pie Chart*
**In the chart:** Hover over a pie wedge. Click and drag the piece away from the center. To move one piece at a time, select the single pie wedge first, and then move it from the middle.

**In the properties:** Select a pie wedge. Open the Format pane, be sure the title says **Format Data Series**.
Click on the Options button.

From here you can:

- Change the rotation without changing the order of the data

- Change the explosion, how close the wedges are to each other

*Add Trendlines and Error Bars*
Select the chart. Click on the Add Chart Element button in the Design tab, or on the ⊞ button next to the chart.

You can add your own custom error bars, if needed, from the error bar options. You do have to format one series of error bars at a time.

*Make Charts the Same Size*
Use the Height and Width properties found on the Format tab in the ribbon or on the Format Pane for the Chart Area's Size & Options. You can use the alignment options on the format tab to make the charts line up.
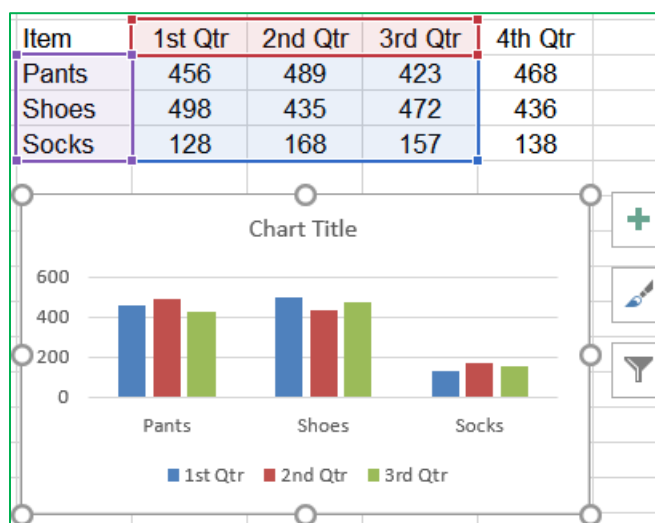
## Changing the Data Source

### *From the Worksheet*

When you select a chart, you will see the Chart Tool tabs in the ribbon, and the three options buttons along the right side of the chart. If you can see the cells in the worksheet used for the chart, you will also be able to see the selected dataset and each section is shaded.

If you hover your mouse over the bottom, right-hand corner of the data grouping you will get the two-way sizing arrow. If you click and drag the selection, you can manually change the chart data source.

If you plan to add categories and series values, you can grow the data area beyond what is currently plotted and Excel will assign new colors and make room in the chart for the new values.

| Item | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
|------|---------|---------|---------|---------|
| Pants | 456 | 489 | 423 | 468 |
| Shoes | 498 | 435 | 472 | 436 |
| Socks | 128 | 168 | 157 | 138 |

### *From the Select Data Source Window*

From the Chart Tools *Design* tab, choose **Select Data**.

The **Chart data range** option can be a bit finicky so I recommend deleting the current range and selecting the new set from the worksheet.

The chart is initially arranged to follow the order of the data, but if you would like the legend in a different order, you can rearrange the Legend Entries using the up and down arrows.
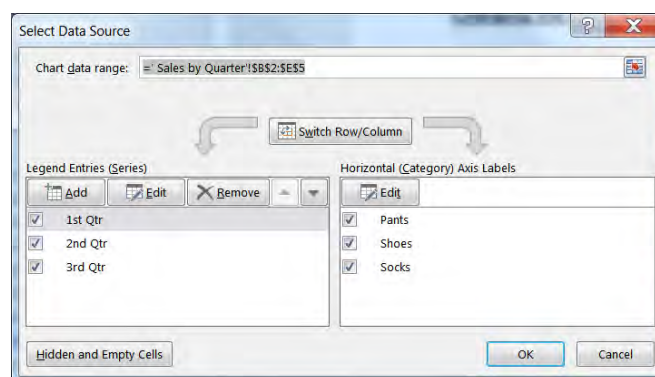
### *Removing data*

Both of the above options will help you add and remove data. You can manually adjust the range in the worksheet or you can select a different range from the Select Data Source window. Both are great as long as you are using a consecutive range of data.

The Select Data Source window also had a **Remove** button to delete a series from the chart. Notice there is not one for the Category/Axis labels. To be able to remove one you will need to first **Switch Row/Column**. Once you have removed the categories, **Switch Row/Column** again.

From the chart itself, you can click on the series you want to remove and press **Delete** on the keyboard. You can only delete the series, so the same actions apply in order to remove a category you will need to switch the row/columns first.

To temporarily remove data, use the Filters check boxes in the Select Data Source window or from the funnel on the side of the selected chart. From here, we can uncheck any of the values we do not want on the chart. If you use the filter menu, remember to click the **Apply** button at the bottom of the menu.
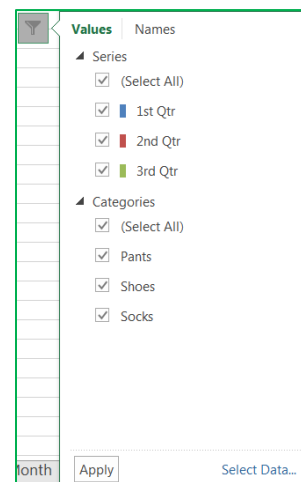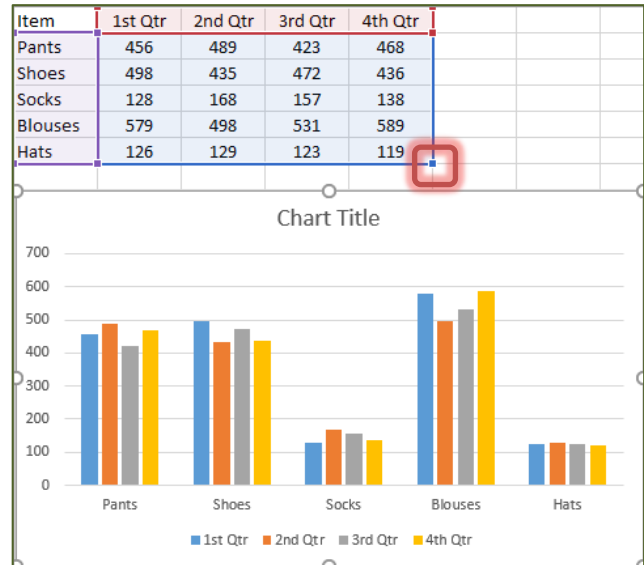
**Class Exercise**
- Open ChartData.xlsx

*Changing Data Source*
- Insert a column chart on the second worksheet 'Sales by Quarter'
- Notice color Coding around original data
- Use blue square in the bottom right hand corner to change the selection to exclude 119
    - If the colors around the dataset go away, click inside the chart again.
    - The chart should lose Hats and 4$^{th}$ Qtr
- Hover over the blue border so it turns bold and drag the selection to include 119
    - The Chart should lose pants and first quarter, but Hats and 4$^{th}$ Qtr will return
- Resize, and if necessary move the blue selection to include all the data.

| 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 |

*Filter Data*
- Use the Filter button 🔽 on the side of the chart to temporarily remove second and fourth quarter, and remove your shoes
- Click the *Apply* button at the bottom of the menu
- Change the filter to return the values and click *Apply* before you close the menu

*Remove Data*
- Click on a column for 4$^{th}$ Quarter
    - Press Delete on the keyboard
- Click on a column for 2$^{th}$ Quarter
    - Press Delete on the keyboard
- Notice the color grouping around our dataset is gone

- **Switch Row/Column** to remove Socks and Hats
- **Switch Row/Column** back
- Open the filters button 🔽
    - The values have been removed from this dataset
- **Delete Chart**
    - We could use the Select Data option from the **Design** tab in the ribbon or from the Filter menu to adjust the charted dataset, but since this is such a simple chart, it's easier to start over.
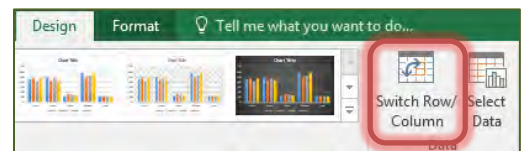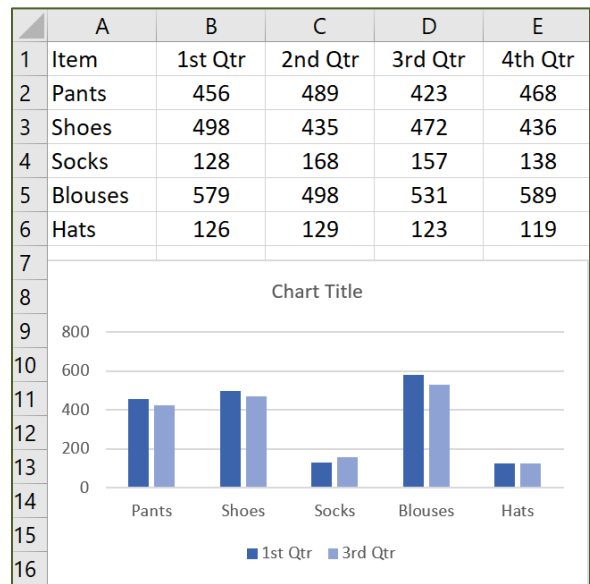
### Chart Specific Data
I want a column chart of only 1st Qtr and 3rd Qtr

#### Create and Remove

- Select Cells A1:D6
    - o  Items through 3rd Qtr data
- Insert a column chart
- Delete 2th Quarter
    - o  Select and press Delete on the keyboard
    - o  Or right-click, choose Delete from the menu
- **Delete Chart**

#### Custom Selection

- Select Cells A1:B6
    - o  Items through 1st Qtr Data
- Use **Ctrl** key to select D1:D6, 3rd Qtr Data
- Insert a Column chart
- **Delete Chart**

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Item | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
| 2 | Pants | 456 | 489 | 423 | 468 |
| 3 | Shoes | 498 | 435 | 472 | 436 |
| 4 | Socks | 128 | 168 | 157 | 138 |
| 5 | Blouses | 579 | 498 | 531 | 589 |
| 6 | Hats | 126 | 129 | 123 | 119 |



### Pie Chart

#### Pie Chart Elements

- Insert a Pie chart on the first worksheet 'Sales by Year'
- Insert Tab, Chart Group, Pie, First chart
- Open the Chart Elements ✚ menu on the side of the chart
    - o  Remove Title
    - o  Remove Legend
    - o  Add Data Labels
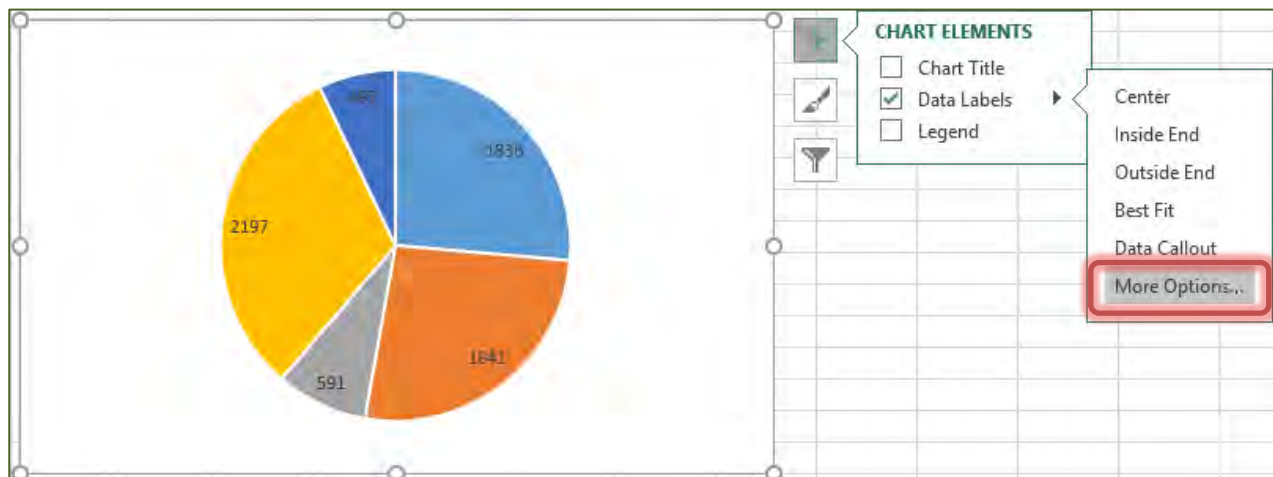
Lables

- Open the **More Options…** from the Data Labels menu
    - o Uncheck the Value
    - o Check the Category Name
    - o Check the Percentage
    - o Change Separator to **New Line**
- Click on the label *Hats*
    - o If needed, click on it again so it uses just that one label
    - o From the Home tab, change the font to a lighter color so you can read it.
- Delete the labels
    - o If you are still on *Hats* it will only delete Hats
    - o Click outside of the chart, click on any label to select them all
        - ▪ Press delete on the keyboard
        - ▪ Or uncheck them from the Chart Element menu
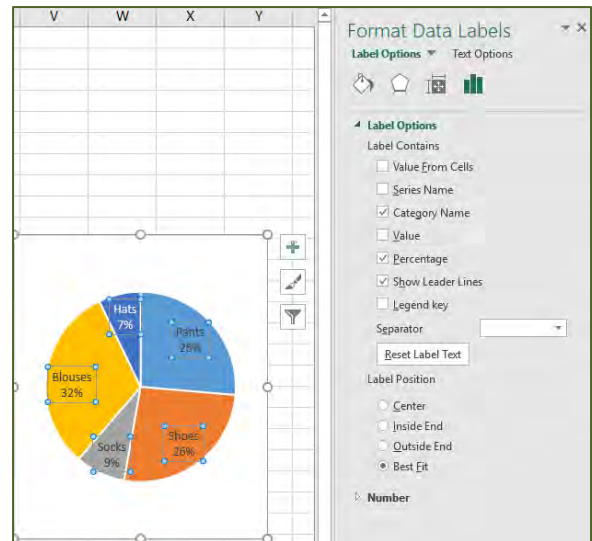
Exploding Pies

- Hover over a single wedge until the tool tip pops up to show you what that wedge represents
- Drag the slice away from the middle of the chart to Explode the Pie
    - o To bring all the slices back, click outside of the chart so nothing is selected. Hover over any piece and drag it back to the middle
- Click outside the chart
- Click on a Pie wedge so it selects every pie wedge (the whole series)
- Click on the same wedge again to select one wedge (the data point)
- Drag the selected wedge from the center and only it should move
- In the Format Data pane, watch for the Pie/Point Explosion
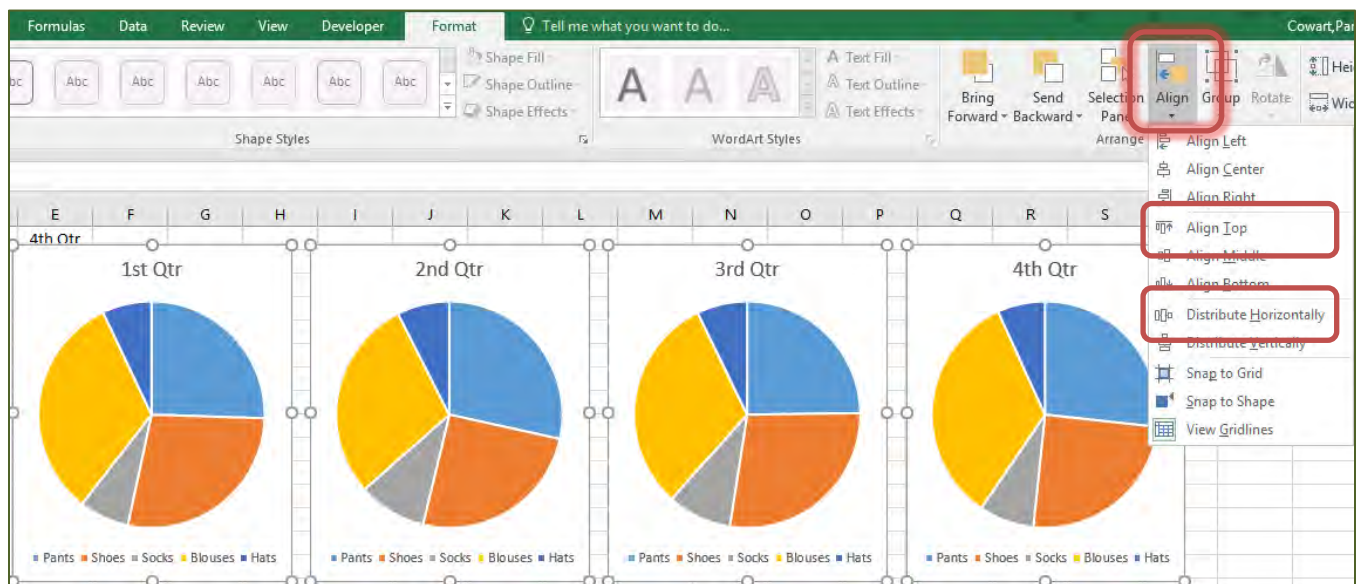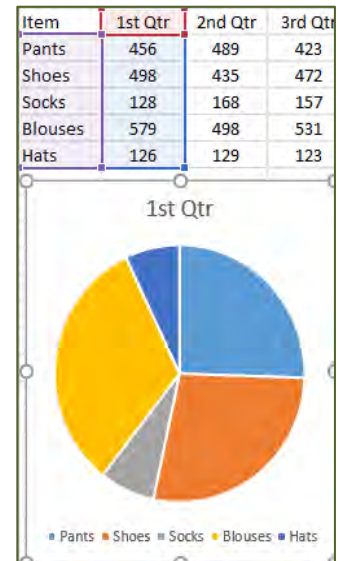
- **Delete Chart**
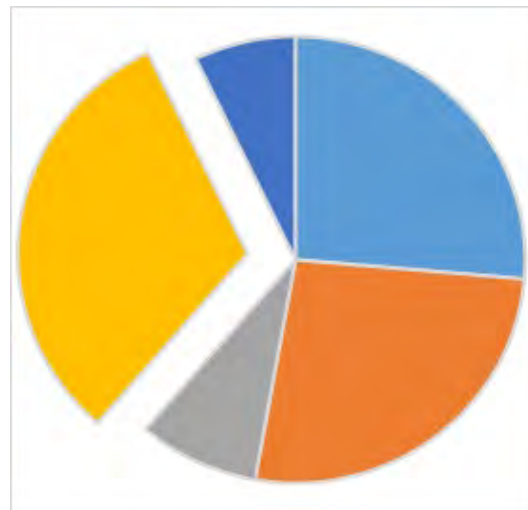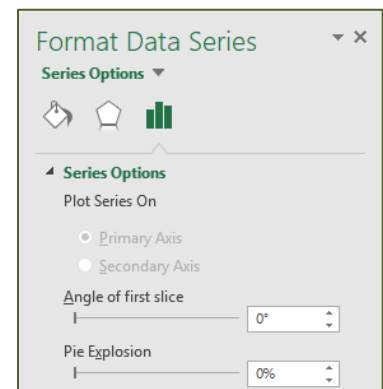
## Multiple Pie Charts

- Insert a **Pie** chart on the second worksheet 'Sales by Quarter'
- Use the series color lines in the data to change the range so it's only charting first quarter
    - o The chart should not change
- Resize the chart so it's only half as wide
- Right-click on the edge of the chart and choose Copy
- Right-click in an empty cell and choose Paste
- Change the data range to be 2nd Qtr
    - o If you have a hard time, make sure you are on the EDGE of the chart (chart area) not on the pie itself.
- Paste in an empty cell and set the range to be 3rd Qtr
- Paste in an empty cell and set the range to be 4th Qtr


- Select all the charts
    - o Click on the 1st Qtr pie chart
    - o Hold down the shift key
    - o click on the 2nd, 3rd, and 4th Qtr charts


- Use the Alignment tools on the Format tab
    - o Align Top
    - o Distribute horizontally



- **Delete Charts**

### 3-D Column Chart

- Insert a **3-D Column** chart on the second worksheet 'Sales by Quarter'

- Remove Legend

- Remove Chart Title

- Open the Select Data option in on the Design Tab

    o Switch Row Columns

    o Use Up/Dow arrows to bring the smaller values to the top/front
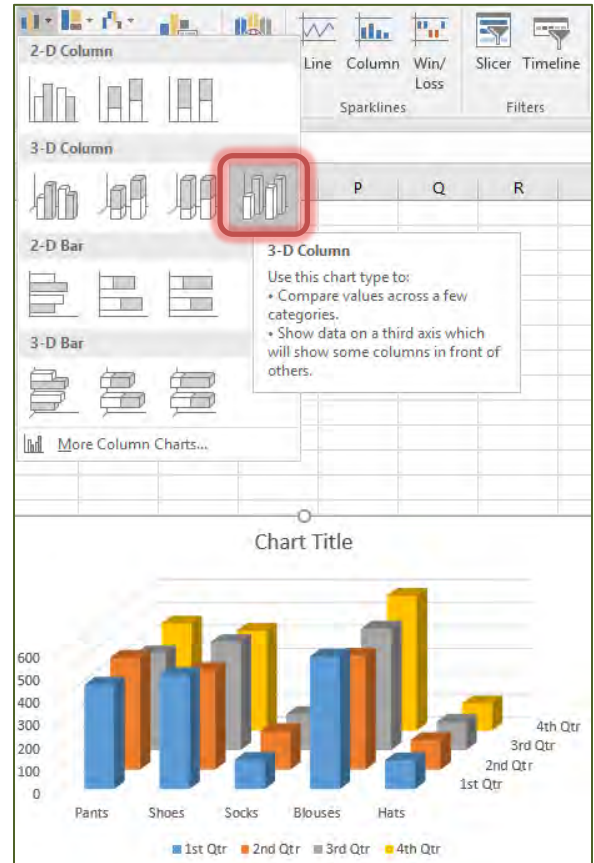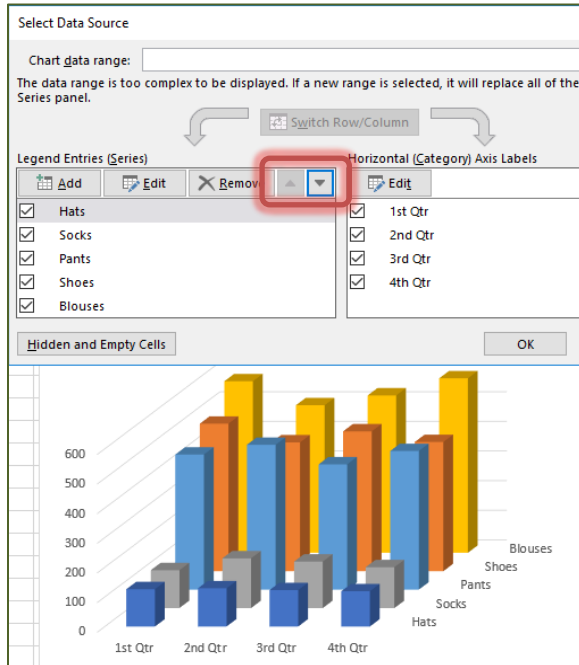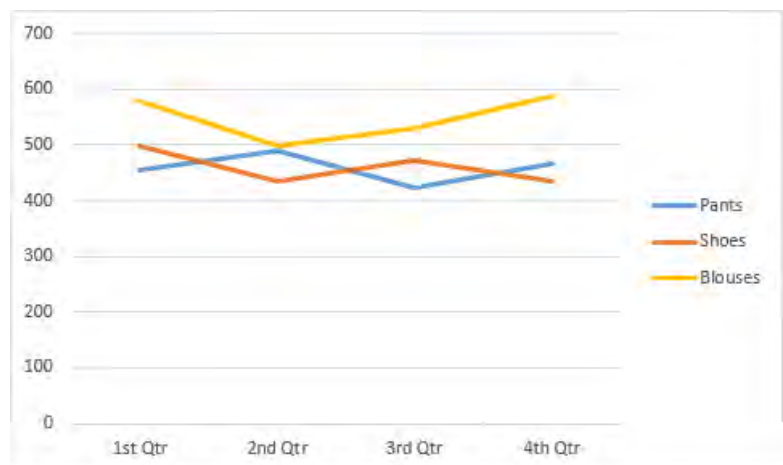


- **Delete Chart**

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### Line Chart

I want a line chart to talk about my loss in 1st Qtr Blouses

- Insert a **Line** chart

- Switch Row/Columns

    o The Chart looks funny because it's plotting by Item not quarter

    o Line charts are meant to go across <u>Time</u> (Time *LINE*)

- Set it to the first Quick Layout

- Remove Socks

- Remove Hats

- Move chart to a new sheet

"Zoom in" - Change Value Axis

- Double-click on the numbers in the value Axis
  - o This should open the Format Pane for the Axis options.
  - o If needed, switch to the Chart Options ▥
  - o If needed, open the Axis Options menu
- Change Axis Options
  - o Minimum 400
  - o Maximum 600

Highlight Portion of the Chart

- Click on the Blouses line
  - o Click on the portion from 1st Qtr to 2nd Qtr
  - o Set the special Effect from the Format tab or pane to Glow that portion of the line.

- From the Chart Element menu add a Trend Line for blouses



- From the Filter menu ▽ "temporarily" remove 4th Qtr



- **Delete Chart**
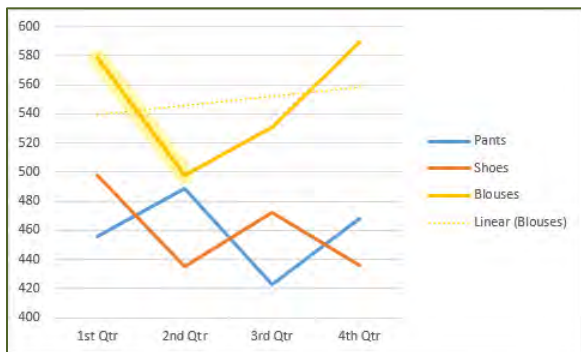


Format Axis ▾ ✕

Axis Options ▾    Text Options

◢ Axis Options

Bounds

| Minimum | 0.0 | Auto |
| Maximum | 700.0 | Auto |

Units

| Major | 100.0 | Auto |
| Minor | 20.0 | Auto |

Horizontal axis crosses

- ⦿ Automatic
- ○ Axis value          0.0
- ○ Maximum axis value

Display units          None ▾

☐ Show display units label on chart

☐ Logarithmic scale    Base    10

☐ Values in reverse order

▷ Tick Marks

▷ Labels

▷ Number

## Large Line Chart

- Insert a **Line** chart on the third worksheet 'Sales by Month'

- Remove Total from the chart

- Stretch the chart out so it falls under the data

- Change June's Pants (cell G2) to 700 to see it change in the chart

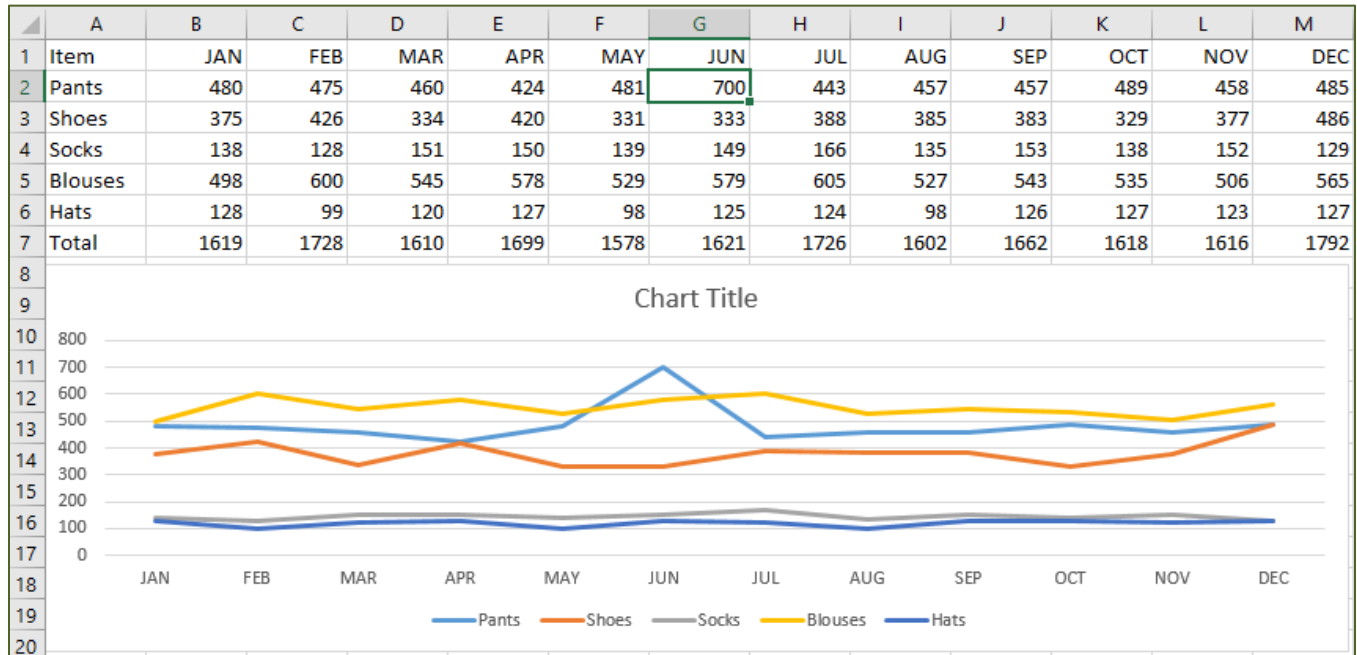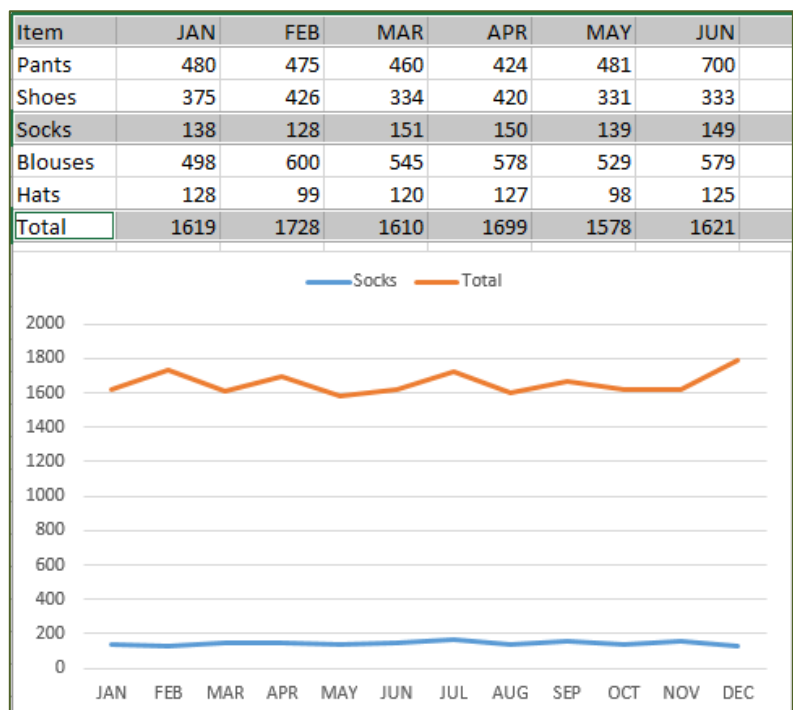| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Item | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
| 2 | Pants | 480 | 475 | 460 | 424 | 481 | 700 | 443 | 457 | 457 | 489 | 458 | 485 |
| 3 | Shoes | 375 | 426 | 334 | 420 | 331 | 333 | 388 | 385 | 383 | 329 | 377 | 486 |
| 4 | Socks | 138 | 128 | 151 | 150 | 139 | 149 | 166 | 135 | 153 | 138 | 152 | 129 |
| 5 | Blouses | 498 | 600 | 545 | 578 | 529 | 579 | 605 | 527 | 543 | 535 | 506 | 565 |
| 6 | Hats | 128 | 99 | 120 | 127 | 98 | 125 | 124 | 98 | 126 | 127 | 123 | 127 |
| 7 | Total | 1619 | 1728 | 1610 | 1699 | 1578 | 1621 | 1726 | 1602 | 1662 | 1618 | 1616 | 1792 |



- **Delete Chart**

## Big vs Small, Secondary Axis

I want a chart to compare the sales of socks and the total sales.

- Select Row 1, Row 4, and Row 7
  - o Remember to select the first row and then hold down the CTRL key for the next two
  - o It will be easier to choose the Row Number instead of the cells
- Insert a **Line** chart
- Remove Chart Title
- Move Legend to the top
- Change Chart font size to 14
- Move to a New Sheet

| Item | JAN | FEB | MAR | APR | MAY | JUN |
|---|---|---|---|---|---|---|
| Pants | 480 | 475 | 460 | 424 | 481 | 700 |
| Shoes | 375 | 426 | 334 | 420 | 331 | 333 |
| Socks | 138 | 128 | 151 | 150 | 139 | 149 |
| Blouses | 498 | 600 | 545 | 578 | 529 | 579 |
| Hats | 128 | 99 | 120 | 127 | 98 | 125 |
| Total | 1619 | 1728 | 1610 | 1699 | 1578 | 1621 |

- Click on the Change Chart Type button on the Design Tab
- Go to the Combo chart
    o Make both Series Line charts
    o Click the Check box for Socks to be the secondary Axis
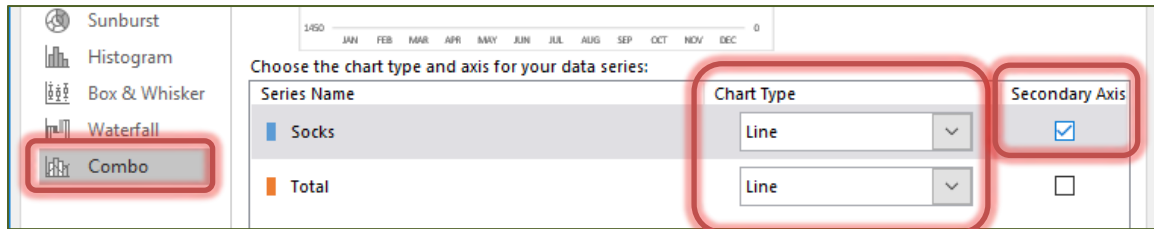


- Format the axis numbers to match their lines



- Open Change Chart Type again, in the Combo change TOTAL to a column chart
- Add Labels to the Socks line