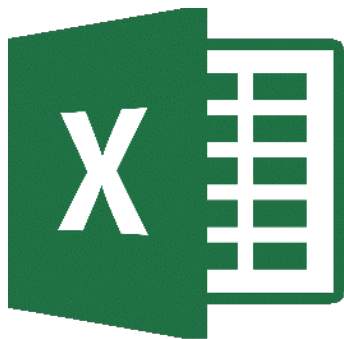


Microsoft Excel Dashboards: Conditional Formatting and Charts



Excel Dashboards: Conditional Formatting and Charts

1.0-hour Zoom Session - 1.5-hour Classroom

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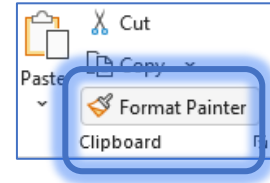
Dashboard 1: FY-Sales

Open file *Dashboard-FY-Sales.xlsx*

Clipboard – Format Painter

Because all our data is in the same location, we can copy the format from one worksheet to the next.

- 1) Turn to sheet FY 19-20
- 2) Select the entire the worksheet
- 3) Click on the **Format Painter** in the **Clipboard** group on the **Home** tab
 - Or from the right-click menu
- 4) Turn to sheet FY 20-21
- 5) Click in Cell **A1** to paste the formatting
- 6) Again, select the entire the worksheet
- 7) Click on the **Format Painter** in the **Clipboard** group on the **Home** tab
- 8) Turn to sheet FY 21-22
- 9) Click in Cell **A1** to paste the formatting



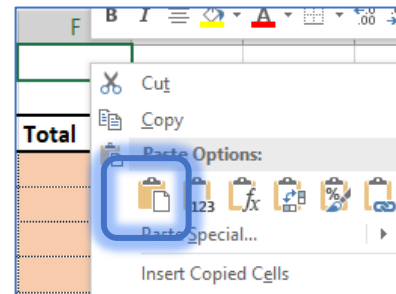
	A	B	C	D	E	F	G	H	I
1	Fiscal Year	FY 19-20							
2									
3	Quarter	County	Pants	Shirts	Socks	Total		County Total	
4	1st Qtr	Alachua	1,474	1,174	1,008	3,656		Alachua	14,760
5		Bradford	234	329	307				
6		Clay	500	396	375				
7		Duval	1,061	792	347				
8									
9									
10	Quarter	County	Pants	Shirts	Socks				
11	2nd Qtr	Alachua	1,650	1,210	890				
12		Bradford	345	369	158				

	A	B	C	D	E	F
1	Fiscal Year	FY 20-21				
2						
3	Quarter	County	Pants	Shirts	Socks	Total
4	1st Qtr	Alachua	1736	1298	1146	
5		Bradford	234	404	254	
6		Clay	668	388	428	
7		Duval	1153	975	575	
8						
9						
10	Quarter	County	Pants	Shirts	Socks	Total
11	2nd Qtr	Alachua	1733	1290	1065	
12		Bradford	328	247	224	

Clipboard – Copying Equations

Again, because all of our data is in the same location, our formulas can be copied into the new sheets.

- 1) Turn to sheet FY 19-20
- 2) Select Columns **F** through **I**
- 3) Copy the columns
- 4) Turn to sheet FY 20-21
- 5) Click in Cell **F1** to paste the formulas and **County** table



Linking Cells - Totals by Quarter

The values for this table are at the bottom of each quarter on their respective sheets.

FY 19-20	FY 20-21
=FY 19-20!F8	=FY 20-21!F8
=FY 19-20!F15	=FY 20-21!F15
=FY 19-20!F22	=FY 20-21!F22
=FY 19-20!F29	=FY 20-21!F29

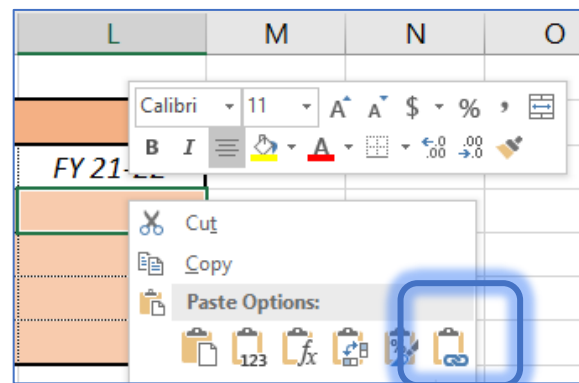
- 1) Turn to the sheet Totals
- 2) In cell **E4**, press the equal sign key (=)
- 3) Using your Mouse, click on sheet FY 21-22
 - You should now be in "point" mode
- 4) Click in cell **F8**
 - Look at the formula bar, your equation should be =FY 21-22!F8
 - **DO NOT MOVE BACK TO THE TOTALS SHEET**
- 5) Press the **Enter** key on the keyboard
- 6) Repeat for the other three quarters
 - You cannot use the fill handle here, link each of the four values

Totals by Quarter			
Quarter	FY 19-20	FY 20-21	FY 21-22
1st Qtr	7,997	8,098	=FY 21-22!F8
2nd Qtr	8,578	7,650	9,586
3rd Qtr	8,433	7,045	9,108
4th Qtr	8,492	7,767	9,570

Linking Multiple Cells - Totals by County

The values for this table can all be linked at once by using the clipboard.

- 1) Turn to sheet FY 21-22
- 2) Select **I4:I7**
- 3) Copy the cells
- 4) Return to sheet Totals
- 5) Right-click in cell **L4**
- 6) Choose the **Paste Link** icon



Totals by County			
Quarter	FY 19-20	FY 20-21	FY 21-22
Alachua	14,760	13,254	=FY 21-22!I4
Bradford	3,223	2,573	3,028
Clay	7,050	5,674	7,451
Duval	8,467	9,059	10,477

Summing Cells – Fiscal Year End Total

This table sums the values listed in the Totals by Quarter table.

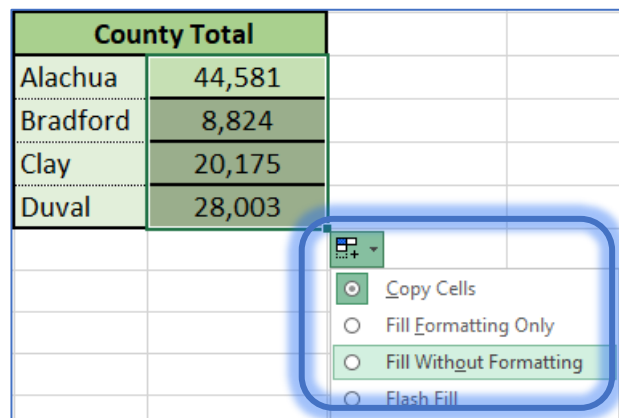
- 1) On sheet Totals
- 2) In cell **C24**, Sum the FY 21-22 values in the Totals by Quarter table
 - =SUM(E4:E7)

Fiscal Year End Total	
FY 19-20	33,500
FY 20-21	30,560
FY 21-22	=SUM(E4:E7)

Summing Cells Across Multiple Sheets – County Total

Again, because all of our data is in the same location, on the FY sheets, we can sum the same cell address across multiple sheets.

- 1) On sheet Totals
- 2) In cell **I22**, press the equal sign
- 3) Turn to sheet FY 19-20 and click on cell **I4**
- 4) Press and hold the **Shift** key on the keyboard
- 5) Click on Sheet FY 21-22
- 6) Look at the formula bar, your equation should be =SUM('FY 19-20:FY 21-22'!I4)
- 7) Enter to accept the equation
- 8) Because these are in sequence, in order, you can use the Fill handle for the other equations
 - Once you use the fill handle, you can change the fill options to **Fill Without Formatting** to get rid of the odd lines that appear





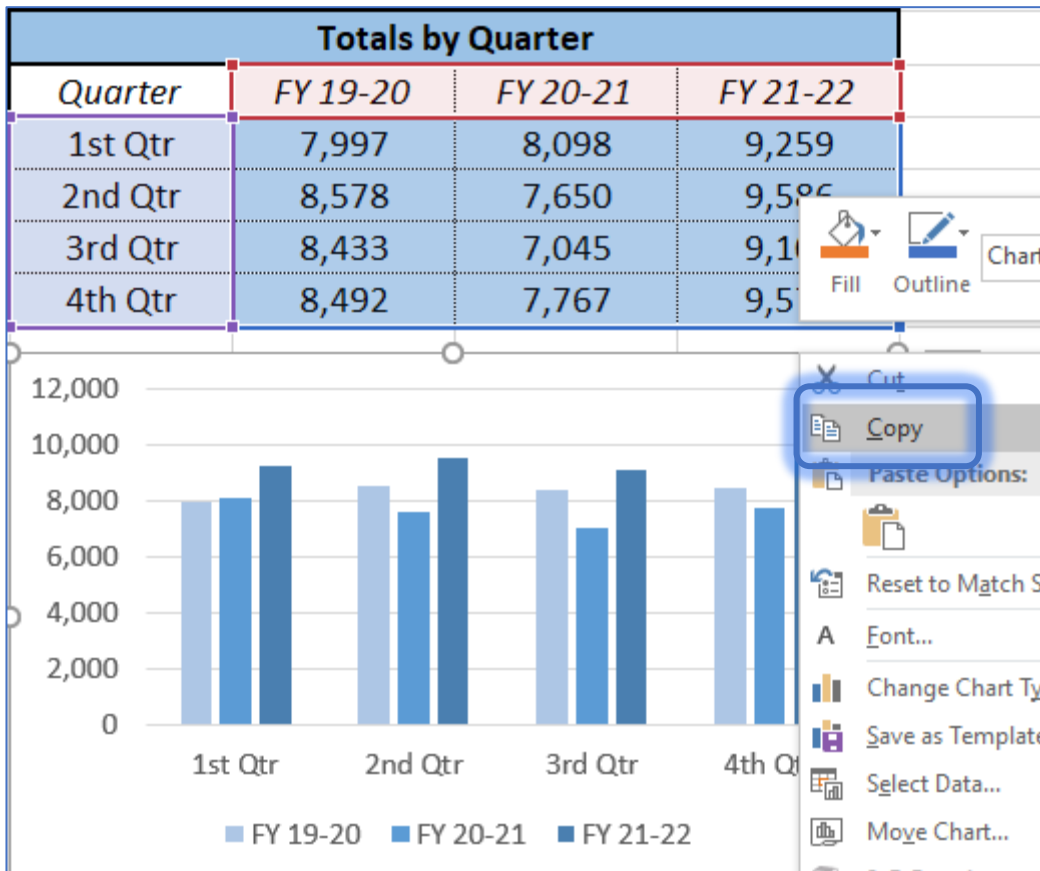
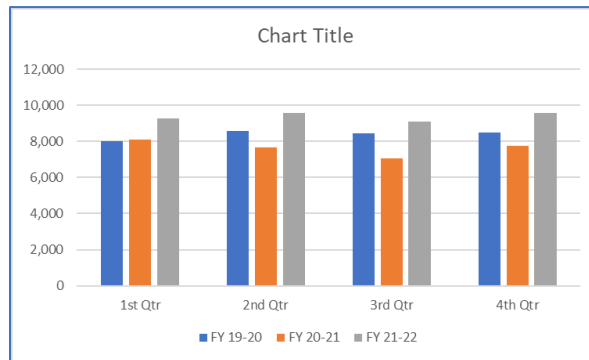
County Total	
Alachua	=SUM('FY 19-20:FY 21-22'!I4)
Bradford	8,824
Clay	20,175
Duval	28,003

Create Column Charts




Because there is a Merged title above each of the datasets, you need to make the selection before you create the charts.

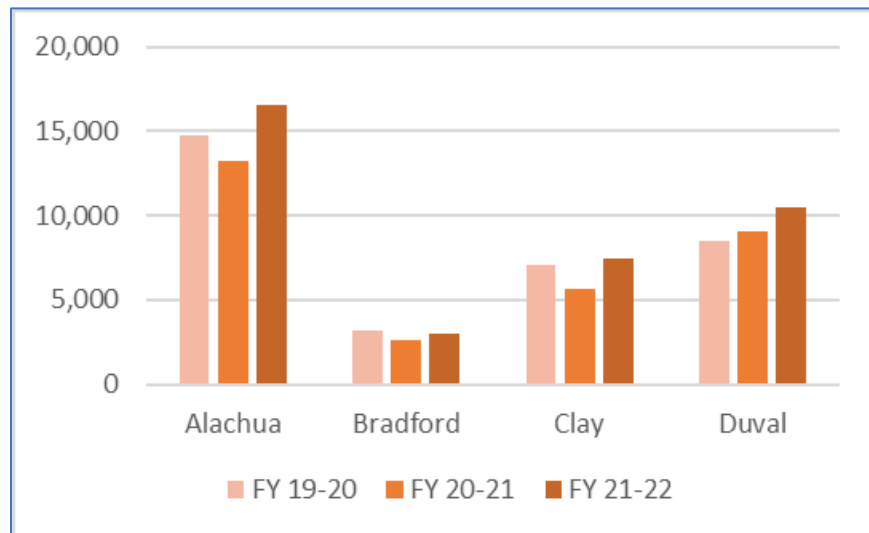
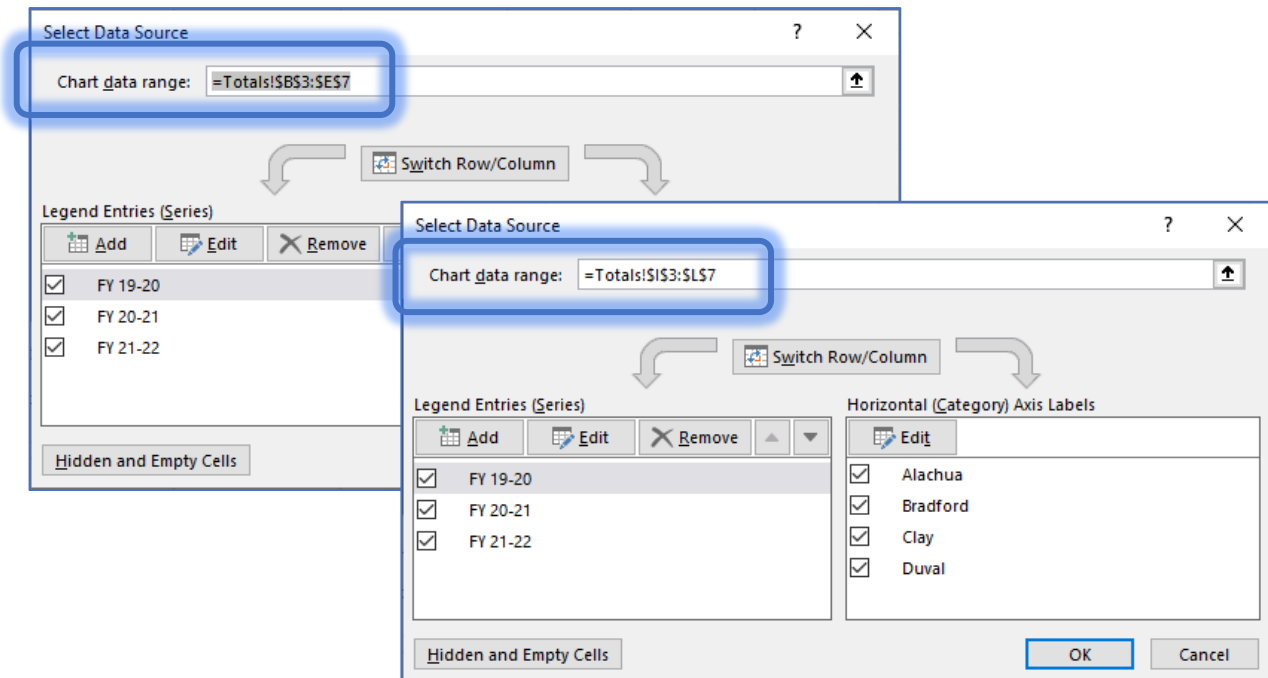
Totals by Quarter

- 1) On sheet Totals
- 2) Select B3:E7
- 3) On the **Insert** tab, choose a column chart
- 4) Modify the chart
 - a. Remove the Title – Delete, or uncheck from Chart Elements Helper 
 - b. Change the Colors to match the table – from the Design tab, or the Style Helper 
 - c. Resize and fit it under the Totals by Quarter data



Totals by County


- 1) Click on the edge of the *Totals by Quarter* chart and choose **Copy**
- 2) Click in an empty cell under the Totals by County table (orange)
- 3) Paste
 - If you right-click use the first choice, "Paste Destination Theme" 
- 4) Change the Colors to match the table – from the Design tab, or the Style Helper 
- 5) Open the **Select Data** window
 - From the Design tab, or the Filter Data helper 
- 6) Change the **Chart Data Range** to be the orange numbers
 - Delete the **Chart Data Range**
 - Use the mouse to select **I3:L7**

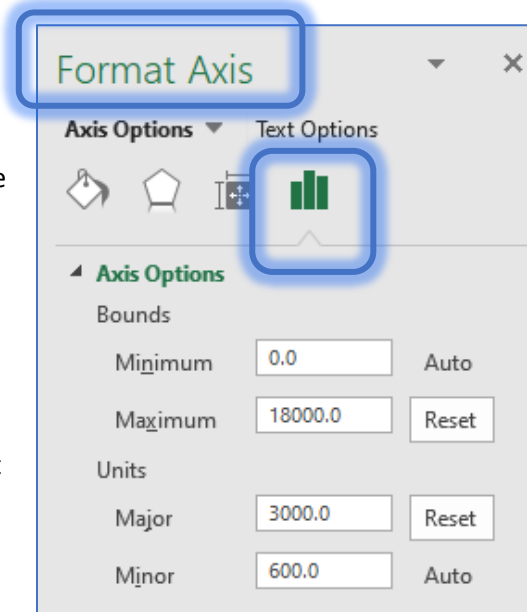


Modify the Charts to Match

Same Scale

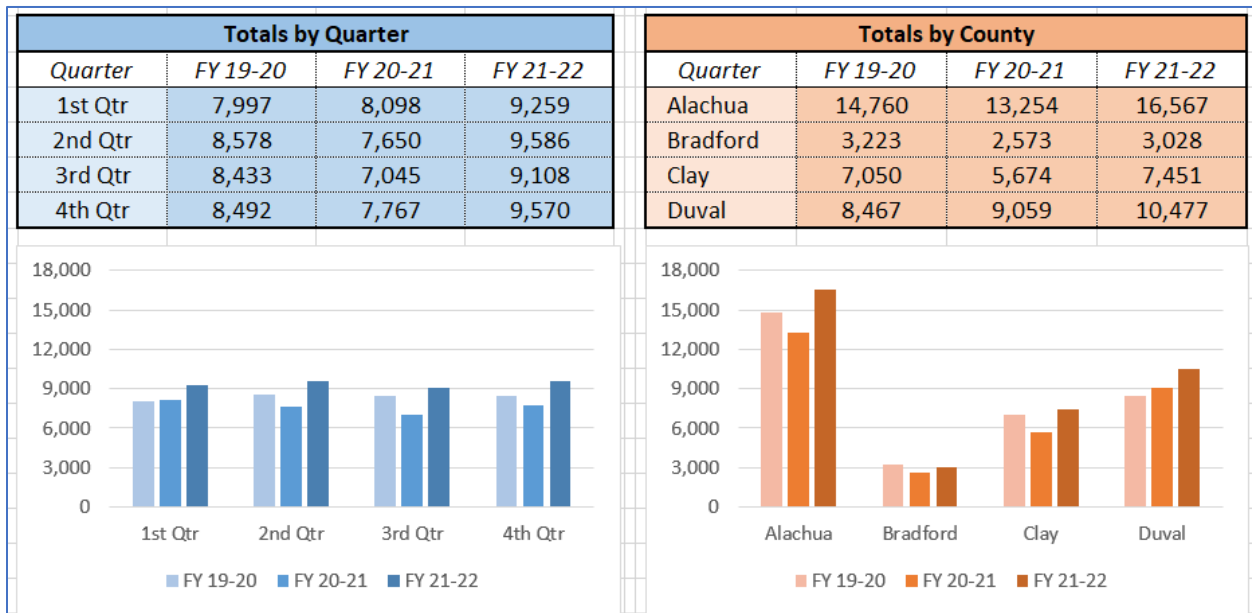
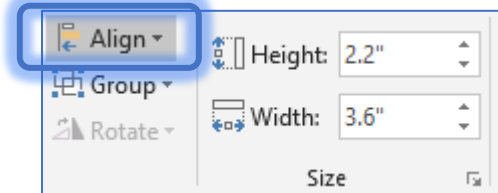
If the data is related in two charts like this, it usually helps to have the same scale. Our Totals by Quarter chart (blue) goes from zero to 12,000. The Quarters by County (orange) goes from zero to 20,000.

- 1) Click on a chart
- 2) Double-click on the value axis, the numbers on the side of the chart
 - If it is not open already, this should open the properties pane, for the Format Axis
- 3) If needed, turn to the Chart Options 
- 4) Change to the values shown here
 - Watch the Minimum, sometimes it jumps below zero
- 5) Click on the numbers in the second chart and repeat





Align the Charts

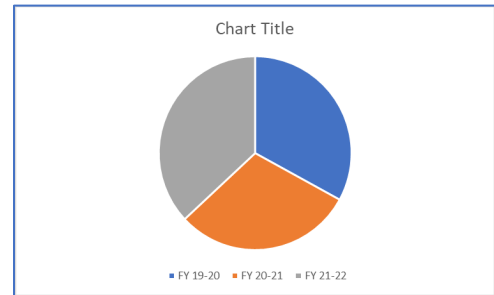
- 1) Click on a chart to select it
- 2) Press and hold the shift key on the keyboard and click on the second chart
- 3) Turn to the Format tab in the ribbon
 - Confirm they are the same **Height** and **Width**
 - Select the **Align** option and choose **Top**



Create Pie Charts

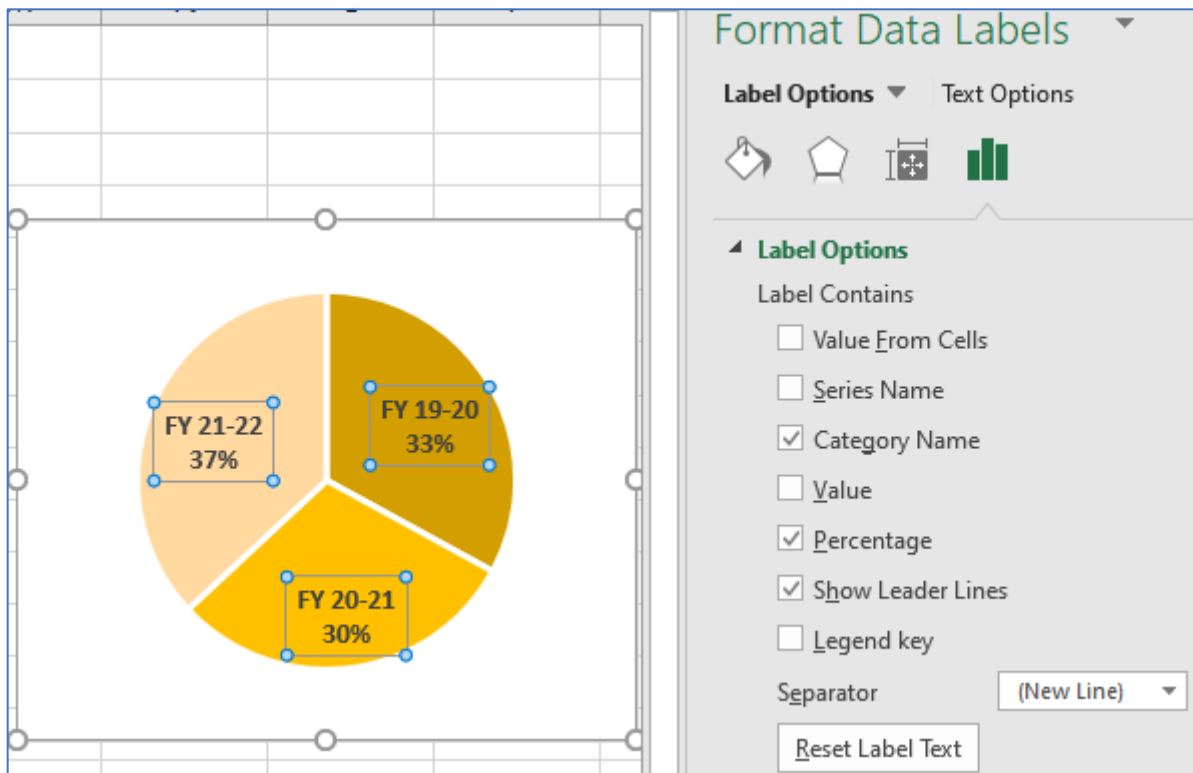
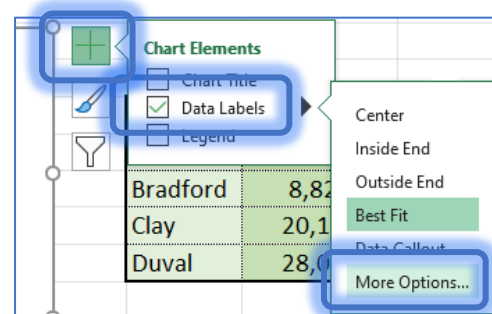
Fiscal Year End Total

- 1) Select **B22:C24**
- 2) From the **Insert** tab, create a pie chart
- 3) Modify the chart
 - Remove the Title and Legend – Delete, or uncheck from Chart Elements Helper 
 - Change the Colors to match the table – from the Design tab, or the Style Helper 
 - Resize and fit it next to the Totals by Quarter data





Modify the Data Labels

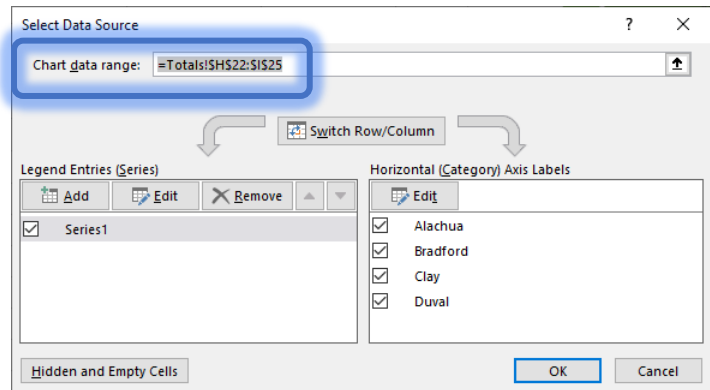
- 4) From the Chart Element menu, **Data Labels**, choose **More Options...**
- 5) In the Format Data Labels Properties
 - Check the box for **Category Name**
 - Check the box for **Percentage**
 - Uncheck the **Value**
 - If needed, set the **Separator** to (New Line)
- 6) If desired, reformat the text using the font options on the **Home** tab



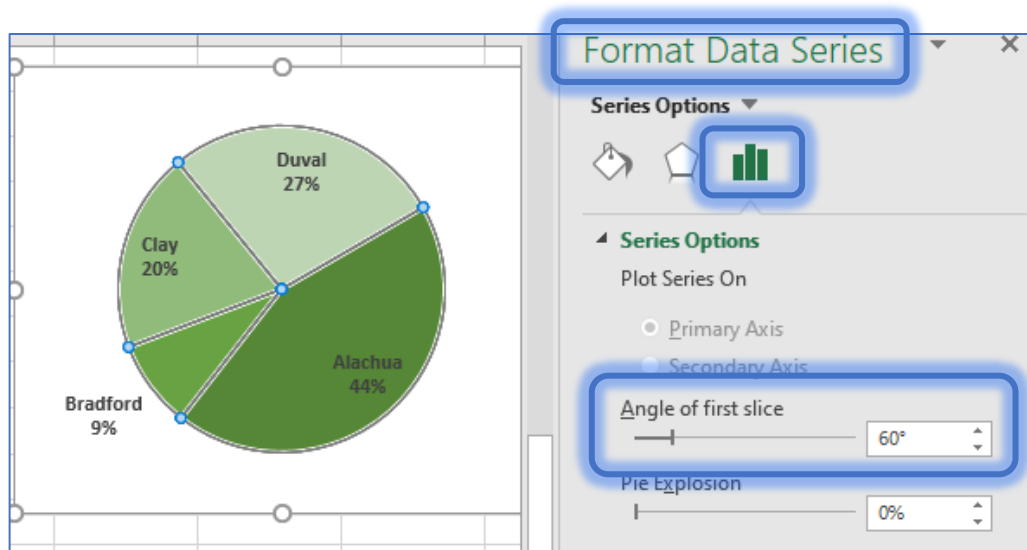
Totals by County

- 1) Click on the edge of the Fiscal Year End Total pie chart and choose **Copy**
- 2) Click in an empty cell next to the County Total table (green) and **Paste**
 - If you right-click use the first choice, "Paste Destination Theme" 
- 3) Change the color of the chart to match the data
- 4) Open the **Select Data** window
 - From the Design tab, or the Filter Data helper 
- 5) Change the **Chart Data Range** to be the green values =Totals!\$H\$22:\$I\$25

- 6) Fix the chart labels
 - Check **Category Name**
 - Check **Percentage**
 - Uncheck the **Value**
 - If needed, set the **Separator** to (New Line)
 - If desired, reformat the text using the font options on the **Home** tab



- 7) Click on a pie wedge and look at the Format Data Series (or data point)
 - Change the **Angle of the first slice** to rotate the pie chart so the labels fit

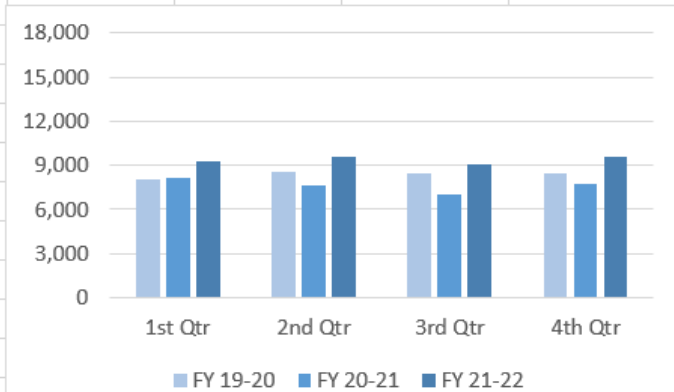


Align the charts

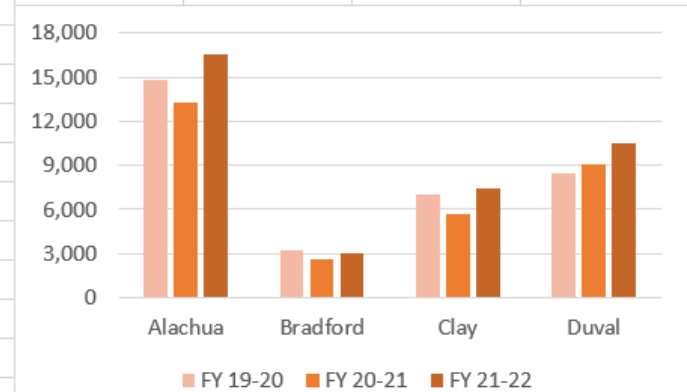
- 1) Click on a chart to select it
- 2) Press and hold the shift key on the keyboard and click on the second chart
- 3) Turn to the Format tab in the ribbon
 - Select the **Align** option and choose **Top**

FY-Sales Dashboard

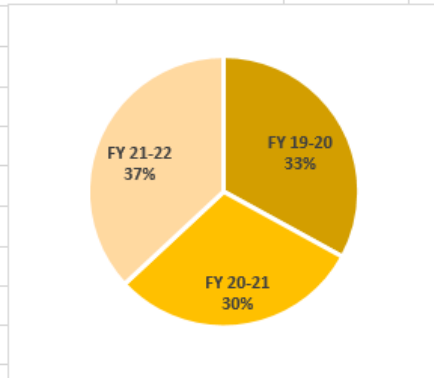
Totals by Quarter			
Quarter	FY 19-20	FY 20-21	FY 21-22
1st Qtr	7,997	8,098	9,259
2nd Qtr	8,578	7,650	9,586
3rd Qtr	8,433	7,045	9,108
4th Qtr	8,492	7,767	9,570



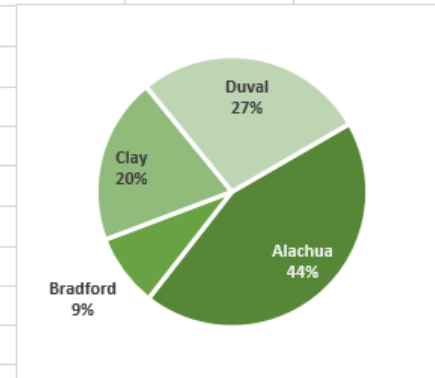
Totals by County			
Quarter	FY 19-20	FY 20-21	FY 21-22
Alachua	14,760	13,254	16,567
Bradford	3,223	2,573	3,028
Clay	7,050	5,674	7,451
Duval	8,467	9,059	10,477



Fiscal Year End Total	
FY 19-20	33,500
FY 20-21	30,560
FY 21-22	37,523



County Total	
Alachua	44,581
Bradford	8,824
Clay	20,175
Duval	28,003

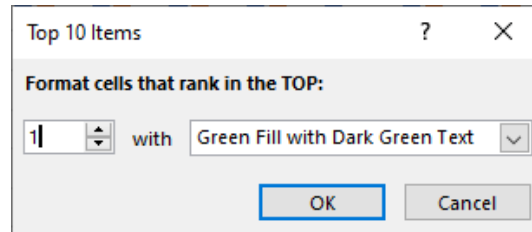


Dashboard 2: Monthly Data

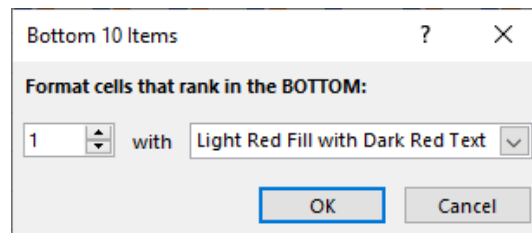
Open file *Dashboard-MonthlyData.xlsx*

Conditional Formatting – Top/Bottom by Individual datasets

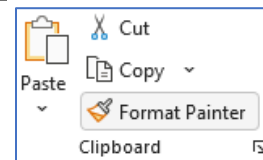
1. Select the FY 20-21 numbers (B2:B13)
2. Conditional Format - Choose Top/Bottom Rules
 - a. Choose **Top 10 Items...**
 - b. Change to 1, with a Green Fill



3. Within the same selection set a Conditional Format - Choose Top/Bottom Rules
 - a. Choose **Bottom 10 Items...**
 - b. Change to 1, with a Red Fill



4. Within the same selection, click the **Format Painter**, from the **Clipboard** on the **Home** tab
5. Click on cell C2 to paste the same formatting rules on FY 21-22



Months	FY 20-21	FY 21-22	Net/Loss
January	5,746	6,724	978
February	6,123	9,387	3,264
March	9,552	6,841	-2,711
April	8,472	6,574	-1,898
May	5,796	9,763	3,967
June	5,479	9,324	3,845
July	10,356	6,797	-3,559
August	6,363	7,172	809
September	5,808	7,024	1,216
October	6,807	2,425	-4,382
November	6,646	8,651	2,005
December	7,909	9,876	1,967

Months	FY 20-21	FY 21-22	Net/Loss
January	5,746	6,724	978
February	6,123	9,387	3,264
March	9,552	6,841	-2,711
April	8,472	6,574	-1,898
May	5,796	9,763	3,967
June	6,479	9,324	2,845
July	8,356	6,797	-1,559
August	6,363	7,172	809
September	5,808	7,024	1,216
October	6,807	4,125	-2,682
November	6,646	8,651	2,005
December	7,909	9,876	1,967

Conditional Formatting – Top/Bottom Full data set

1. Select the Data (B17:N24)
2. Conditional Format - Choose Top/Bottom Rules
 - a. Choose **Top 10...**
 - b. Change to 3, with a Green Fill
3. Conditional Format - Choose Top/Bottom Rules
 - a. Choose **Bottom 10...**
 - b. Change to 3, with a Red Fill

County	Fiscal Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alachua	FY 20-21	2,660	3,350	3,318	2,859	798	2,378	935	2,940	638	2,586	813	1,980
Bradford	FY 20-21	456	1,282	2,192	1,028	133	1,075	1,786	578	156	697	1,378	1,380
Clay	FY 20-21	2,361	366	462	1,052	2,316	1,487	3,703	1,978	2,941	1,680	1,431	3,302
Duval	FY 20-21	269	1,125	3,580	3,533	2,549	1,539	1,932	867	2,073	1,844	3,024	1,247
Alachua	FY 21-22	3,099	3,312	3,109	524	2,815	3,068	1,702	2,623	3,026	1,198	2,911	3,381
Bradford	FY 21-22	184	1,798	641	2,358	1,322	2,291	1,920	117	2,153	1,569	1,490	1,538
Clay	FY 21-22	777	2,489	2,558	1,330	1,766	849	1,394	2,148	937	889	1,404	2,502
Duval	FY 21-22	2,664	1,788	533	2,362	3,860	3,116	1,781	2,284	908	469	2,846	2,455

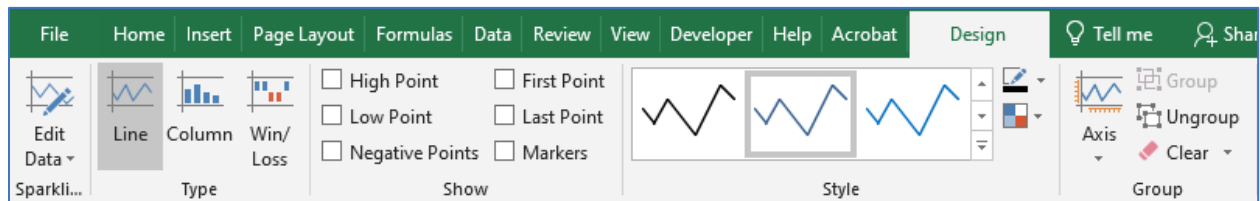
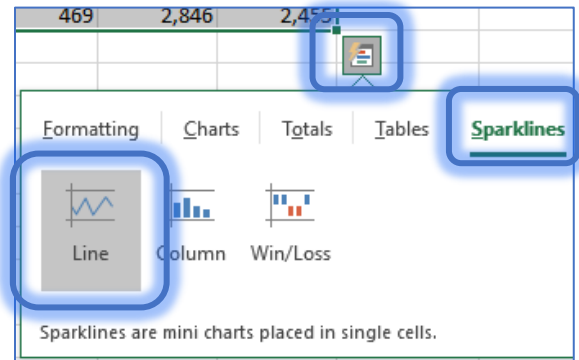
Conditional Formatting – Net/Loss Icons

1. Select the Net/Loss numbers (D2:D13)
2. Conditional Format – Choose Icons
 - a. Use a Directional Arrows
3. Open the Conditional Formatting menu again and choose **Manage the Rules**
 - a. Click **Edit Rule...**
 - b. Check the **Show Icon Only** option


The image shows a sequence of screenshots from the Microsoft Excel interface. The top right shows the 'Conditional Formatting' menu with 'Manage Rules...' highlighted. Below it is the 'Conditional Formatting Rules Manager' dialog box, also with 'Manage Rules...' highlighted. The bottom part shows the 'Edit Formatting Rule' dialog box. In this dialog, the 'Format Style' is set to 'Icon Sets', and the 'Show Icon Only' checkbox is checked. The 'Icon Style' is set to 'Directional' with a blue highlight around the 'Show Icon Only' checkbox. The 'Edit the Rule Description' section shows three rules: 'Format all cells based on their values', 'Format only cells that contain', and 'Format only top or bottom ranked values'. The 'Format all cells based on their values' rule is selected, and its 'Icon' is set to a green arrow pointing up. The 'Value' is set to '67' and the 'Type' is 'Percent'. The 'Format only cells that contain' rule is set to 'when < 67 and' with a yellow arrow pointing right. The 'Format only values that are above or below average' rule is set to 'when < 33' with a red arrow pointing down. A small inset shows a 'Net/Loss' column with values and corresponding directional arrows.

Line Chart to Sparklines

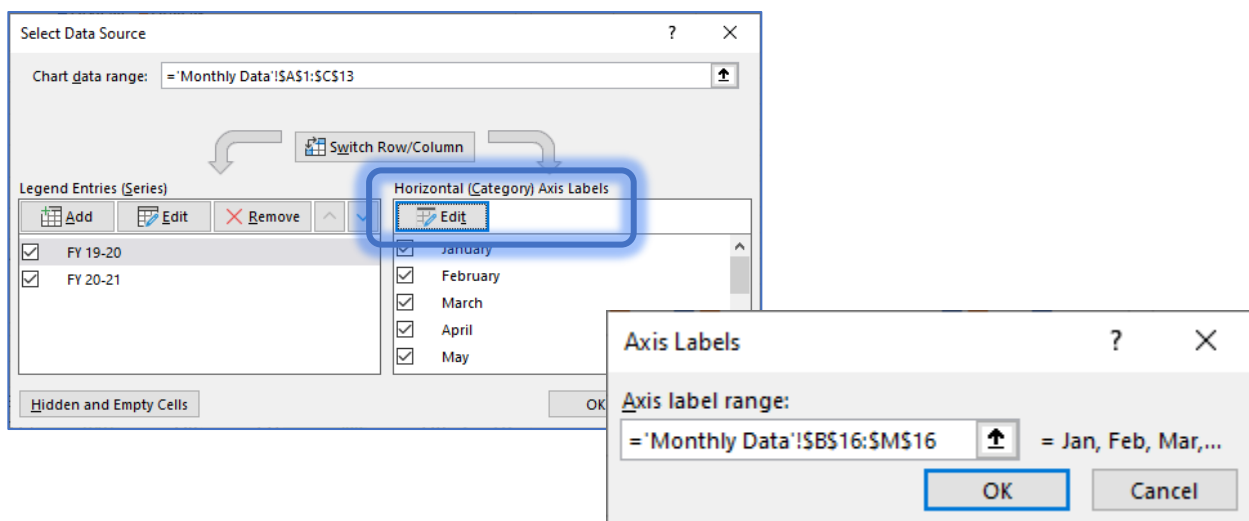
1. Delete the horrible charts
2. Select the Data (C17:N24)
3. Click on the lightning bolt icon that appears in the bottom right of the selection.
4. **Quick Analysis**
 - a. Choose **Sparklines**
 - b. Use the **Line** option
 - c. Use the **Sparkline** tab to format the line



Modify Chart Axis Labels

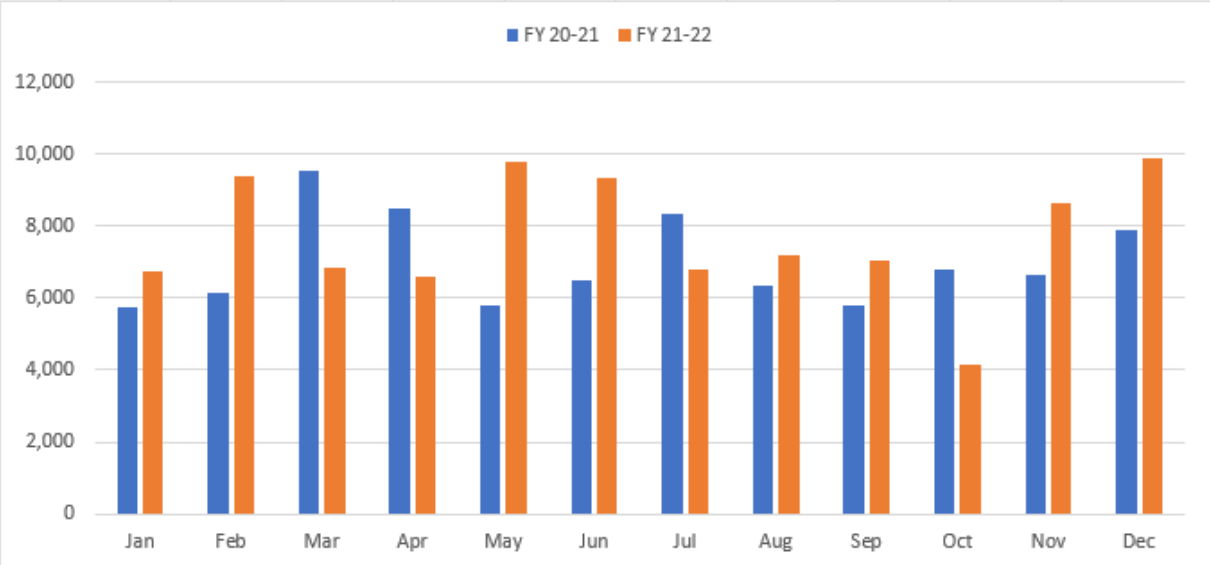
1. Select the top chart
2. Open the **Select Data** window
 - a. From the Design tab, or the Filter Data helper 
3. Click the **Edit** button for the **Horizontal (Category) Axis Labels**
4. Select the titles from the bottom table, B16 through M16 (Jan-Dec)

Note: You could also type in the values you want. Jan, Feb, Mar,...



Monthly Data Dashboard

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Months	FY 20-21	FY 21-22	Net/Loss											
2	January	5,746	6,724	➔											
3	February	6,123	9,387	⬆️											
4	March	9,552	6,841	⬇️											
5	April	8,472	6,574	⬇️											
6	May	5,796	9,763	⬆️											
7	June	6,479	9,324	⬆️											
8	July	8,356	6,797	⬇️											
9	August	6,363	7,172	➔											
10	September	5,808	7,024	➔											
11	October	6,807	4,125	⬇️											
12	November	6,646	8,651	⬆️											
13	December	7,909	9,876	⬆️											
14															
15															
16	County	Fiscal Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
17	Alachua	FY 20-21	2,660	3,350	3,318	2,859	798	2,378	935	2,940	638	2,586	813	1,980	
18	Bradford	FY 20-21	456	1,282	2,192	1,028	133	1,075	1,786	578	156	697	1,378	1,380	
19	Clay	FY 20-21	2,361	366	462	1,052	2,316	1,487	3,703	1,978	2,941	1,680	1,431	3,302	
20	Duval	FY 20-21	269	1,125	3,580	3,533	2,549	1,539	1,932	867	2,073	1,844	3,024	1,247	
21	Alachua	FY 21-22	3,099	3,312	3,109	524	2,815	3,068	1,702	2,623	3,026	1,198	2,911	3,381	
22	Bradford	FY 21-22	184	1,798	641	2,358	1,322	2,291	1,920	117	2,153	1,569	1,490	1,538	
23	Clay	FY 21-22	777	2,489	2,558	1,330	1,766	849	1,394	2,148	937	889	1,404	2,502	
24	Duval	FY 21-22	2,664	1,788	533	2,362	3,860	3,116	1,781	2,284	908	469	2,846	2,455	



Dashboard 3: Sales by Region

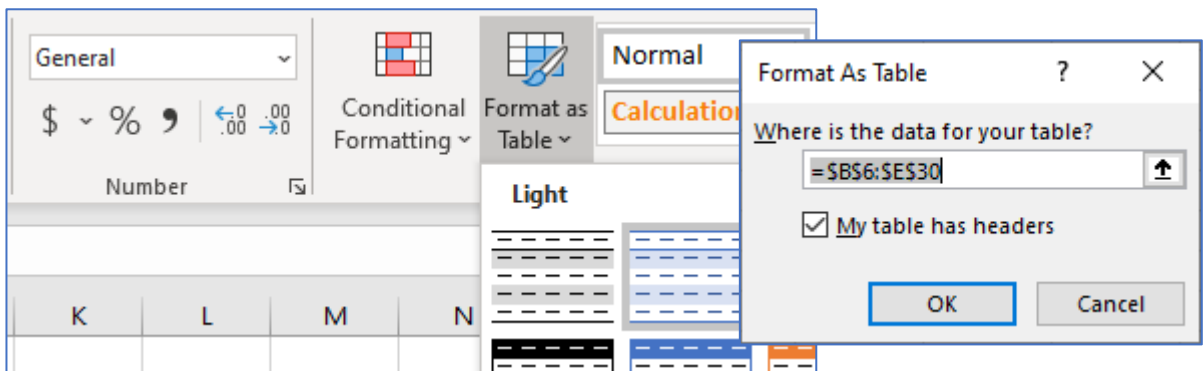
Open file *Dashboard-SalesByRegion.xlsx*

Move data away from the corner

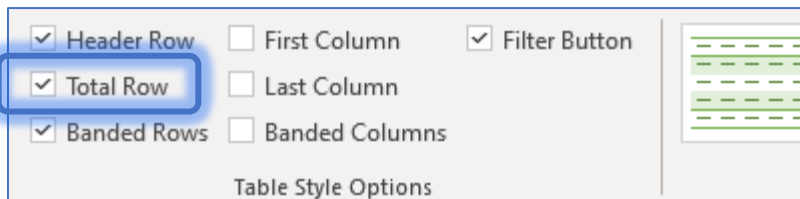
- 1) Right-click on Row 1 and choose Insert
 - Entire Row
- 2) Right-click on Column A and choose Insert
 - Entire Column

Use "Format as a Table" for colors

- 1) Click inside the dataset
- 2) From the *Home* tab choose **Format as Table** and choose a style and click **OK**

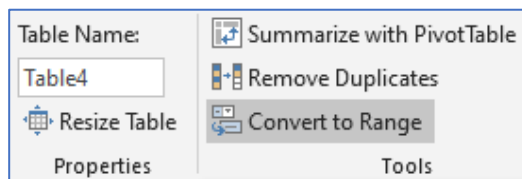


- 3) From the **Table Design** tab, turn on the **Total Row**

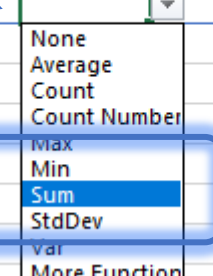


- 4) Change each total to be a SUM
- 5) In the Table Tools Design tab, choose **Convert to Range** to remove the table structure

a. This will keep the colors

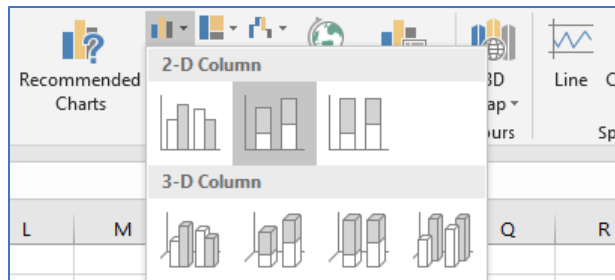


May 2022	53	96	63
Jun 2022	98	84	24
Total			1235

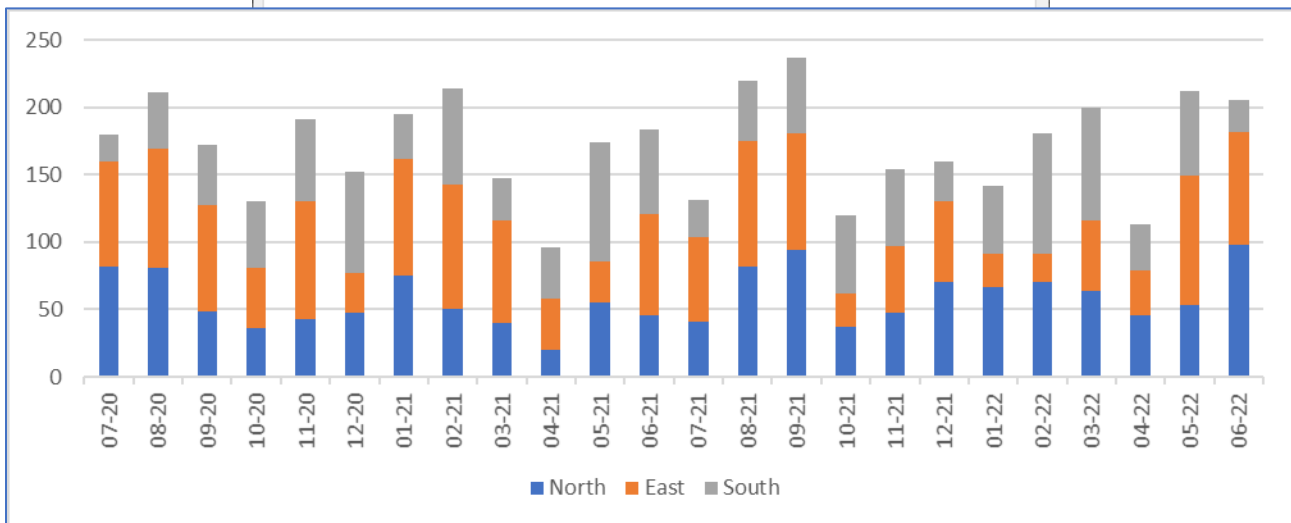
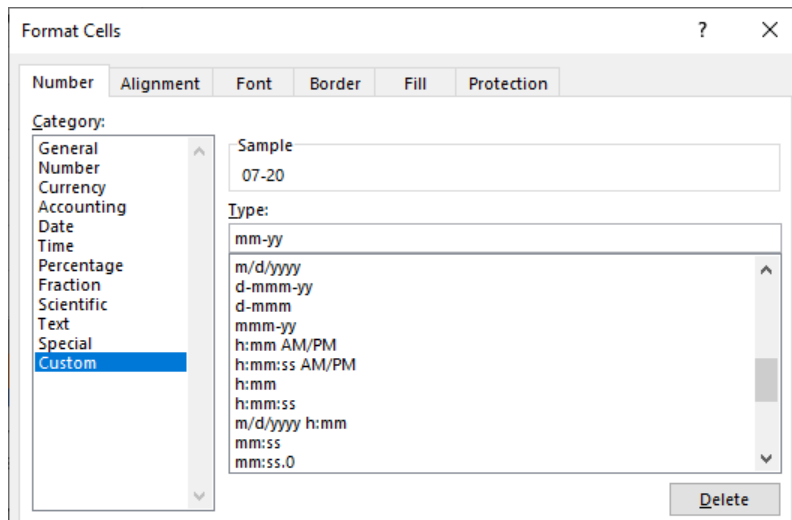


Stacked Chart

- 1) Select B2:B26 (not the totals)
- 2) From the Insert tab, choose the small column chart, the second option **Stacked**



- 3) Resize and place chart from **G2:GP14**
- 4) Remove the chart title
- 5) Reformat the dates in **B3:B26**
 - a. Select the cells
 - b. Open the Format Cells Window
 - c. From the custom formats, type MM/DD



Create Totals by Fiscal Year

- 1) Select **C2:E2 (Titles)**, Copy
- 2) Right-click in cell **H16**
- 3) Choose **Paste**
- 4) Create Titles in **G16:G18**
- 5) In H17, create the total for FY 20-21 North
 - a. June 2020-July 2021 - **=SUM(C3:C14)**
- 6) In H18, create the total for FY 21-22 North
 - a. June 2020-July 2021 - **=SUM(C15:C26)**
- 7) Fill or copy **H17:H18** for East and South

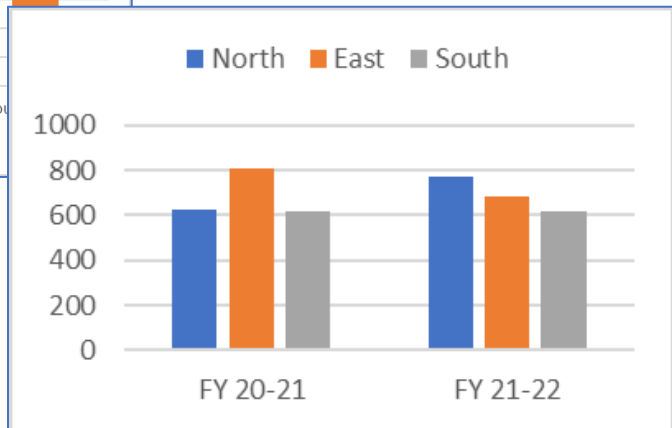
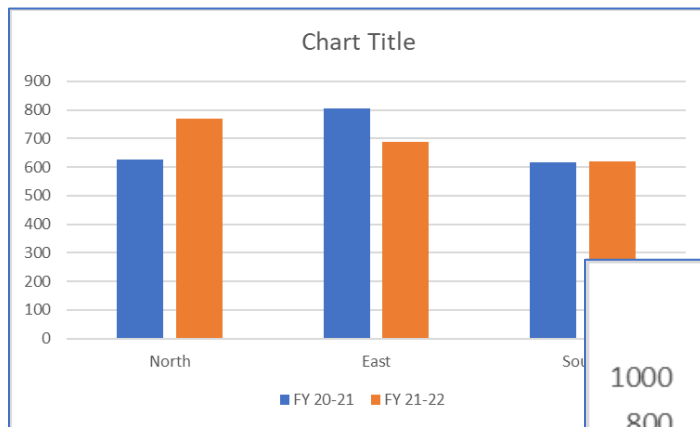
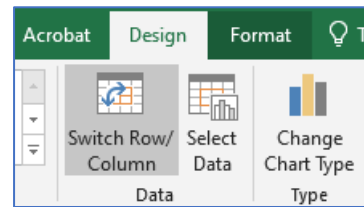
Show Formulas is on the Formula tab in the Formula Auditing group

Fiscal Yr	North	East	South
FY 20-21	625	806	616
FY 21-22	770	687	619

Fiscal Yr	North	East	South
FY 20-21	=SUM(C3:C14)	=SUM(D3:D14)	=SUM(E3:E14)
FY 21-22	=SUM(C15:C26)	=SUM(D15:D26)	=SUM(E15:E26)

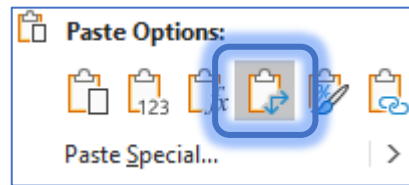
Create Fiscal Year Charts

- 1) Create a column chart for the Summary by Fiscal Year
 - a. Remove the Chart Title
 - b. Move Legend to the top
 - c. Resize to fit in **G19:J27**
 - d. Switch Row/Columns



Create Summary by Region

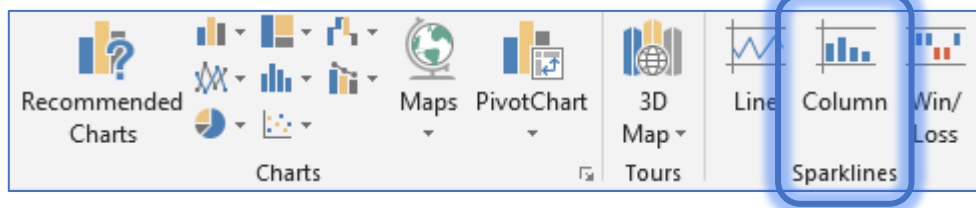
- 1) Select **C2:E2 (Titles)**, Copy
- 2) Right-click in cell **L16**
- 3) Choose **Paste Transpose**
- 4) Link North to the corresponding Sum
 - Click in cell **M16**
 - Type the equal sign =
 - Click on North's total **=C27**
 - Press Enter to accept
- 5) Repeat for the other Regions



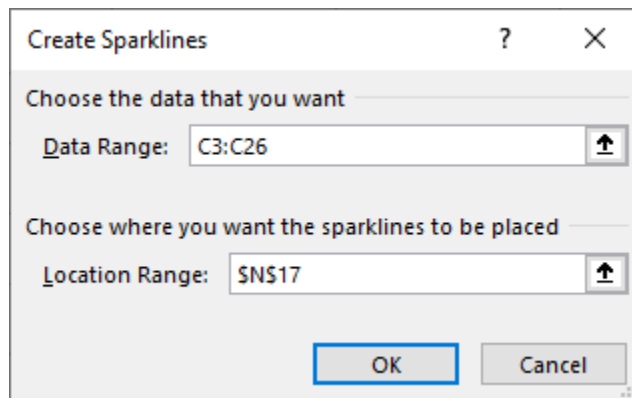
North	=C27
East	=D27
South	=E27

Create Summary Sparklines

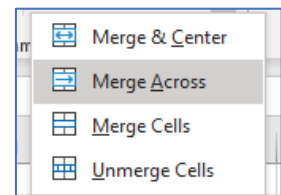
- 1) Click in the cell **N17**, next to North's Total
- 2) From the *Insert* tab, choose **Column** from the **Sparkline** group



- 3) Select all of North's numbers and click **OK**



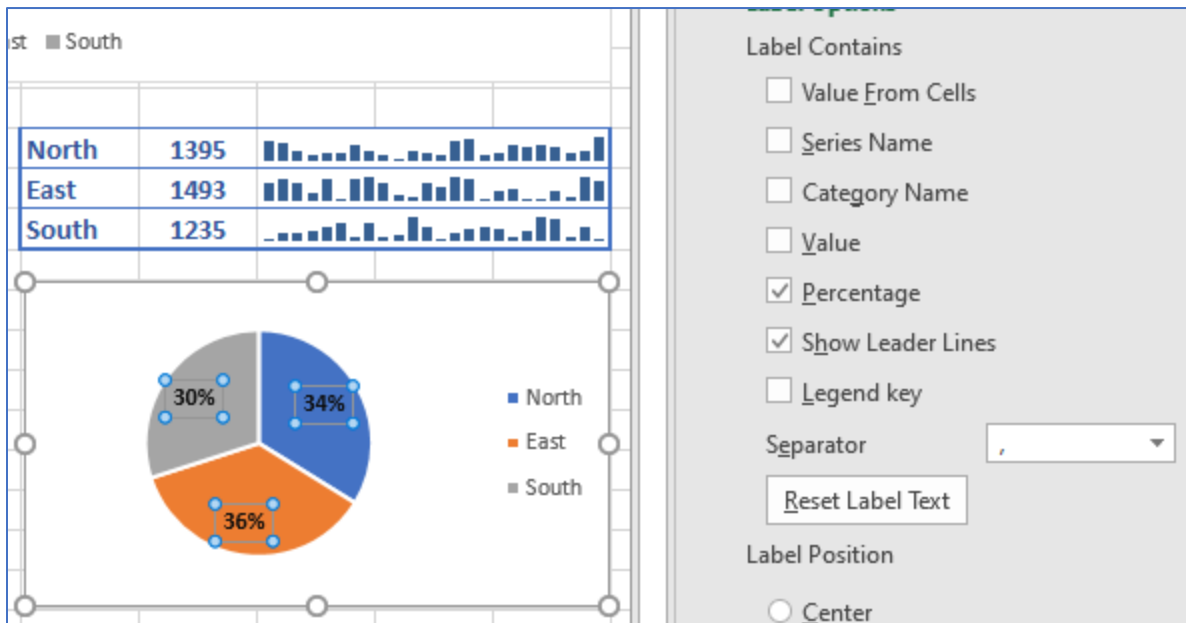
- 4) Repeat for the other three regions
- 5) Select **N16:P19**
- 6) From the **Home** tab, open the **Merge and Center** menu and choose **Merge Across**



North	1395	
East	1493	
South	1235	

Create a Pie Chart

- 1) Select **L17:M19** (North:South)
- 2) From the Create tab, choose a Pie chart
- 3) Format:
 - a. Remove the Title
 - b. Move the legend to the side
 - c. Turn on the Data Labels
 - Percentage
 - d. Resize the chart so it fits



Matching Colors

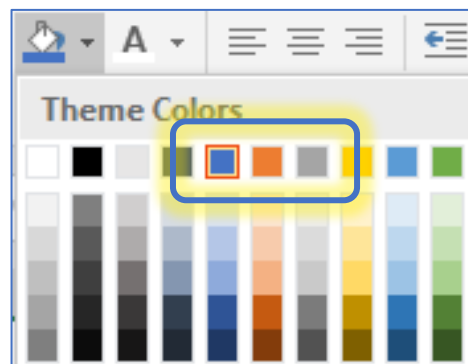
Since all of the charts have Blue North, Orange East, Gray South, we can make this flashier by color coding the titles in our tables as well.

Change text color to be white or light gray

- 1) Fill Blue: C2, H16, L16
- 2) Fill Orange: D2, I16, L17
- 3) Fill Gray: E2, J16, L18

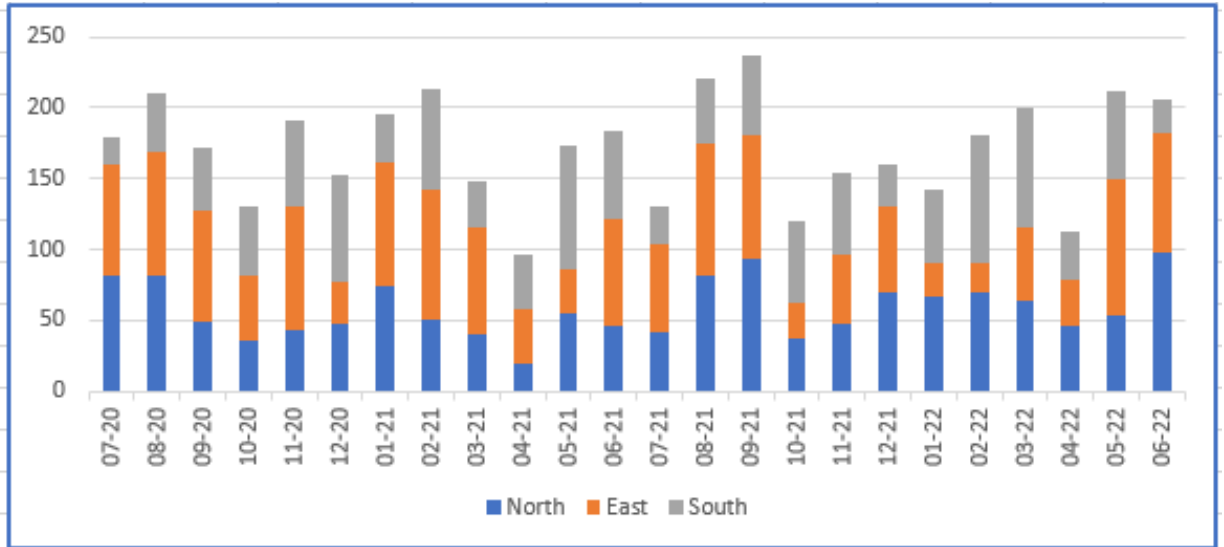
Tip: Use the Ctrl key to pick them up individually and change the format for all three at once.

Make sure you use the same colors show here, so if you change **Colors** on the **Page Layout** tab they stay consistent.



Sales by Region Dashboard

Month	North	East	South
07-20	82	78	20
08-20	81	88	42
09-20	49	79	44
10-20	36	45	49
11-20	43	87	61
12-20	48	29	75
01-21	75	87	33
02-21	50	93	71
03-21	40	76	32
04-21	20	38	38
05-21	55	31	88
06-21	46	75	63
07-21	41	63	27
08-21	82	93	45
09-21	94	87	56
10-21	37	25	58
11-21	48	49	57
12-21	70	60	30
01-22	67	24	51
02-22	70	21	90
03-22	64	52	84
04-22	46	33	34
05-22	53	96	63
06-22	98	84	24
Total	1395	1493	1235



Fiscal Yr	North	East	South
FY 20-21	625	806	616
FY 21-22	770	687	619

North	1395	
East	1493	
South	1235	

