

Comparing Contributions

1.

Open workbook 1_1_comparing_contribution.xlsx and go to Regional contribution of Profit sheet.

The pre-aggregated data is already present.

Hint

To open a workbook, click on *File > Open...* in the upper menu and open 1_1_comparing_contribution.xlsx.

2.

The table presents Sales and Profit per Region.

- Prepare two doughnut charts: one to present regional contribution by Sales, and another one by Profit.
- Place the charts next to each other.

Hint

- To create a doughnut chart, click anywhere in the table, go to *Insert > Charts* menu and click on *Insert Pie or Doughnut Chart* button and select *Doughnut* variant.
- At first, the chart will combine both measures, Sales and Profit into one chart. To change this, narrow down the blue highlighted area to Sales. Then, make another chart the same way but this time, narrow down the blue highlighted area to Profit.

3.

Let's add *Data Labels* to both charts. Did you know that you can easily convert them from absolute to percentage values?

- Once you add the *Data Labels*, right-click on them and access *Format Data Labels* menu.
- On the right, you will be able to select what type of data label you want to display.
- Experiment with different options but finally choose *Percentage*.

If data labels are hard to read off the chart, drag them outside of the chart to make them more visible.

Hint

- To add *Data Labels*, click on the chart and then on the "+" sign on its top-right corner, to access *Chart Elements* menu and tick *Data Labels*.
- To access the *Format Data Labels* menu, right-click on the data labels on the chart. In this menu, deselect *Value* and select *Percentage*.
- Alternatively, by clicking on a small arrow next to *Data Labels* you can change it to *Data Callout*. This option will automatically display a percentage.

4.

Which region contributes a much higher percentage of sales than it contributes to profit?

Central

Hint

In the final solution, you should have:

- A *Doughnut Chart* with Sales, with percentual *Data Labels*.
- A *Doughnut Chart* with Profit, with percentual *Data Labels*.

Visualizing Contribution Differently

1.

Navigate to the worksheet *Regional contribution of Profit*.

Since you're looking for another suitable way to visualize contributions, let's try to insert a new chart based on the same data. Explore various chart options Excel recommends and move on to the next step.

Hint

- To go to a specific worksheet, click on it at the bottom of the screen.
- Click anywhere on the table and go to *Insert > Charts* and click on *Recommended Charts* button.

2.

Hmm.. some options seem to make very little sense!

Go to the *All Charts* tab and study all the options available here. Since you want to visualize contribution, all sorts of 100% stacked charts should be good candidates. Try them out!

Hint

You will find the *All Charts* tab in the same *Insert Chart* menu next to *Recommended Charts*.

3.

Settle on the chart that displays a vertical comparison of Profit and Sales, with each Region presented as a horizontal block, ensuring that the sum of all blocks is 100%.

Can you find this chart? Select it and add it to the sheet, calling it "Another Contribution Chart".

Hint

- To explore various charts, click on chart names on the left (e.g., Bar, Pie, Column) and then on chart variants on the top.
- Ideal chart is in *Bar* chart category.

4.

Finally, let's try adding data labels to the new chart!

Oh oh.. they don't display as percentage but as an actual value from the data table!

Create another table below the current one and perform a calculation to represent the Sales and Profit per Region as percentage of total Sales and total Profit and recreate this visualization, including the percentual data labels.

Hint

- To add *Data labels*, click on a small "+" sign next to the chart.
- Select the cells B4 to D8 and copy and paste them below the table, e.g., to cells B10 to D14.
- Overwrite the numerical values in the new table under Sales and Profit by a calculation, e.g. to calculate the percentage of Sales in Central as percent of total Sales, add a formula to cell C11 equalling $C5/SUM(C\$5:C\$8)$.
- The sum of all percentages in each new Sales and new Profit columns should equal 100%.
- Finally, click anywhere within the new table and add a *100% Stacked Bar Chart* with Profit, Sales split per Region.
- Add data labels one more time.

5.

The ideal chart for this is a 100% Stacked ... Chart.

- Column
- **Bar**
- Area

Hint

- In the final solution, you should have a *100% Stacked Bar Chart* with Profit, Sales split per Region based on a table with percentage of total. The chart should display data labels in percent.

How are we doing on Sales?

1.

Navigate to the worksheet Sales per Segment. The manager would like to see a simple visualization presenting the total sales per Sub-Category, across all segments. But you don't have the Total Sales in your table!

- Name F column Total Sales and add a calculation to sum the data in the preceding columns to every row in the table.

Hint

- To go to a specific worksheet, click on it at the bottom of the screen.
- To calculate the total sales per Sub-Category, go to cell F and apply the SUM(____) formula on adjacent cells. Copy this formula down the table.
- To add a name to the column, click on cell F4 and type in Total Sales.

2.

Add a *Bar Chart* to the sheet, presenting only the Total Sales per Sub-Category.

Hint

- To create a bar chart, click anywhere in the cells with data, go to *Insert > Charts* menu and click on *Insert Column or Bar Chart* button.
- To display only Total Sales in the chart, click anywhere on the chart and then, in the table, narrow down the blue highlighted area to Total Sales.

3.

- Present the data in your chart from highest to lowest by sorting the data in the cells.
- Add *Data Labels* to the "Total Sales" chart.

Hint

- To sort the chart, you must sort the cells with data. To do that, select the data in the cells (from cell B3 to cell F21), then go to *Data > Sort & Filter* menu and click on *Sort*.
- Next, sort by Total Sales from "Largest to Smallest". Then, double-click on the labels in your chart and in the *Format Axis* menu, tick *Categories in reverse order* option.
- To add *Data Labels*, click on the chart and then on the "+" sign on it's top-right corner, to access *Chart Elements* menu and tick *Data Labels*,

4.

Which sub-category appears as third from the top, based on total sales?

Storage

Hint

In the final solution, you should have:

- Total Sales calculation, summing columns C, D, and E, e.g., SUM(C5:E5), the formula should be applied down the table (from cell F5 to cell F21).
- The data in the cells B3 to F21 should be sorted on Total Sales, from "Smallest to Largest".
- "Total Sales" chart should be a *Bar Chart*, presenting Total Sales from largest to smallest, with "Phones" being at the top and "Fasteners" at the bottom of the chart.

Visualizing Sales per Segment

1.

In this exercise, you will continue working in the Sales per Segment sheet.

Hint

To go to a specific worksheet, click on it at the bottom of the screen.

2.

The manager would like to see the same chart which we have generated in the previous exercise, but this time, split into Segment.

- Create a *Stacked Bar Chart* visualization using the same table.
- This time, you should exclude Total Sales from your visualization.

Hint

- To create a *Stacked Bar Chart*, click anywhere in the cells with data, go to *Insert > Charts* menu and click on *Insert Column or Bar Chart* button and select the *Stacked Bar* variant.
- Narrow down the blue highlighted area in the table to exclude the Total Sales from the chart.

Did you find this feedback helpful?

3.

Place the second chart below the first one, entitle it "Sales per Segment" and resize it so that all the Sub-Categories are visible.

Hint

- To rename the chart, double-click on the title above the chart and type in a new name.
- To resize the chart, go to its edges and drag a little white dot while holding the right mouse button.

4.

Hovering over the chart and reading the value labels, can you find out what the value of Sales is for Chairs' smallest Segment?

56445

Hint

The final solution should be a *Stacked Bar Chart* entitled "Sales per Segment", and it should be sorted from highest to lowest, just as the chart present already in the same sheet (generated in the previous exercise).

Quarterly Sales per Region

1.

Navigate to the worksheet Quarterly Sales per Region. On the left, you have quarterly sales per region, but you are still missing the total sales per quarter.

- Add this calculation by adding a formula to every row in the table.
- Give this calculation the name Totals per Quarter (in cell G4).

Hint

- To go to a specific worksheet, click on it at the bottom of the screen.
- To calculate the Totals per Quarter, go to cell G5 and apply SUM(____) formula on adjacent cells. Copy this formula down the table.

2.

- First, create a chart presenting the overall evolution of Totals per Quarter per Quarter, excluding the details per Region.
- Can you guess which visualization works best in such a case? Choose the most suitable one!

Hint

- A line chart is ideal in this situation, as we try to visualize the evolution of a measure over time. To create it, click anywhere in the table, go to *Insert > Charts* menu, and click on *Insert Line or Area Chart* button.
- To display only Totals per Quarter in the chart, click anywhere on the chart and then, in the table, narrow down the blue highlighted area to Totals per Quarter.

3.

- Next, prepare a visualization that will allow us to see the contribution of each Region to the Totals per Quarter by Quarter
- Name this chart "Regional Contribution to Quarterly Sales".

Hint

- A 100% stacked area chart is ideal in this situation, as we try to visualize the evolution of a measure over time and then split it per category. To create it, click anywhere in the table, go to *Insert > Charts* menu and click on the *Insert Line or Area Chart* button and select *100% Stacked Area Chart* variant.
- You will need to exclude the Totals per Quarter from the chart by narrowing the blue highlighted area in the table.

4.

In which quarter did the Central region contribute the least to the total sales?

- 2014-Q4
- 2019-Q3
- 2014-Q2

Hint

In the final solution, you should have:

- Totals per Quarter calculation, summing columns C, D, E, and F, e.g., SUM(C5:F5), the formula should be applied down the table (up to row 27).
- "Totals per Quarter" chart should be a *Line Chart*.
- "The Regional Contribution To Quarterly Sales" chart should be a *100% Stacked Area Chart*.