

# Worksheet Protection

The screenshot shows the Microsoft Excel interface with the 'Review' tab selected. The 'Protect Sheet' dialog box is open, displaying the following options:

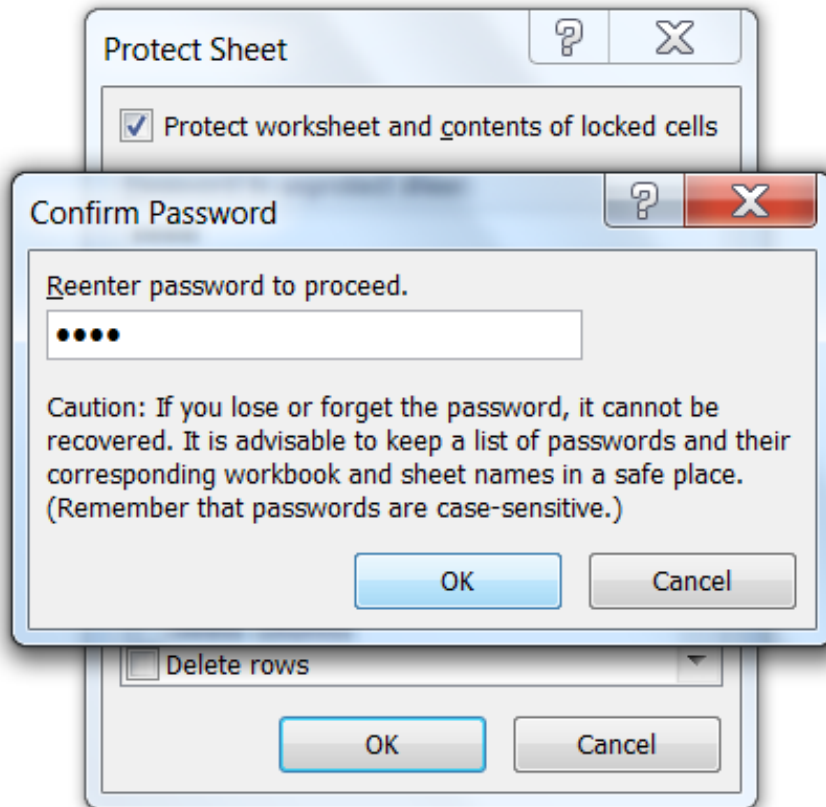
- ☒ Protect worksheet and contents of locked cells
- Password to unprotect sheet:
- Allow all users of this worksheet to:
  - ☒ Select locked cells
  - ☒ Select unlocked cells
  - ☐ Format cells
  - ☐ Format columns
  - ☐ Format rows
  - ☐ Insert columns
  - ☐ Insert rows
  - ☐ Insert hyperlinks
  - ☐ Delete columns
  - ☐ Delete rows

The background spreadsheet shows a table with the following data:

|    |                        | Currency | Value | Currency | Full name          |
|----|------------------------|----------|-------|----------|--------------------|
| 2  | Vehicle Operating Cost |          |       | AFA      | Aghanistan Afghani |
| 4  | Activities Cost        |          |       | CNY      | Chinese Renminbi   |
| 6  | Total                  |          |       | KGS      | Kyrgyzstan Sum     |
| 7  |                        |          |       | KZT      | Kazakhstan Tenge   |
| 8  |                        |          |       | MAT      | Azerbaijan Manat   |
| 9  |                        |          |       | MGT      | Mongolia Tugrids   |
| 10 |                        |          |       | PKR      | Pakistan Rupee     |
| 11 |                        |          |       | TKS      | Tajikistan Soumoni |
| 12 |                        |          |       | TMT      | Turkmenistan Manat |
| 13 |                        |          |       | USD      | US Dollar          |
| 14 |                        |          |       | UZS      | Uzbekistan Som     |

- Go to Main Tool Bar and select 'Review'.
- Click on 'Protect Sheet'.
- Enter 'cpmm' as password in the Data Window. (no need capitalize password)

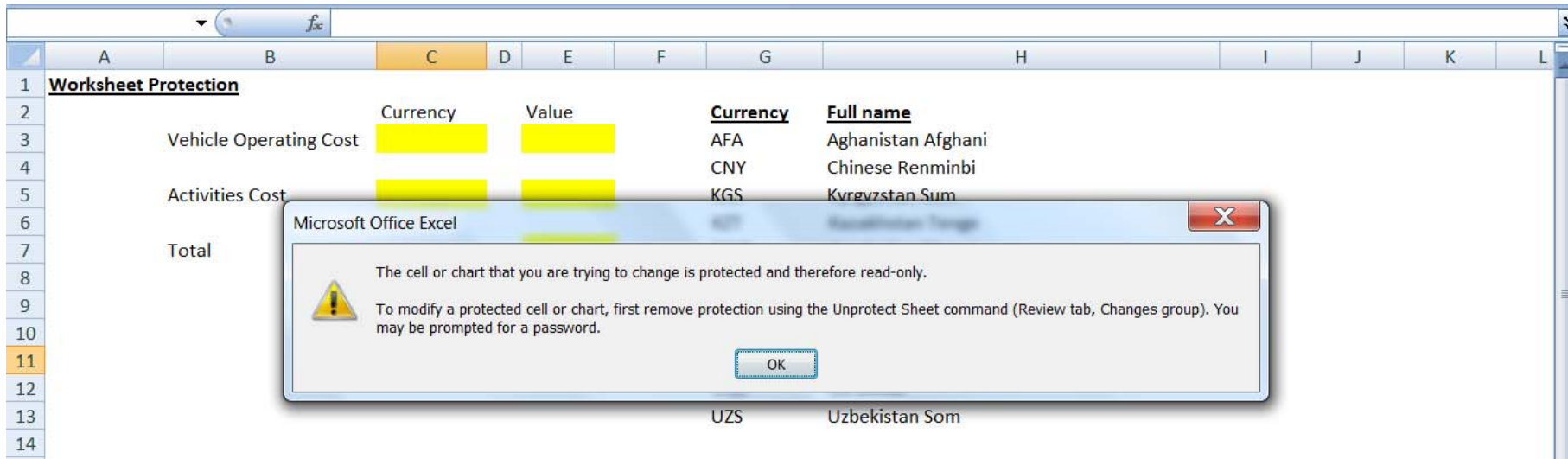
# Worksheet Protection



9. In another Data Window, re-enter the same password.
10. Press OK.
11. You will return to the worksheet.

*Note : You must remember your password, and enter the same password twice.*

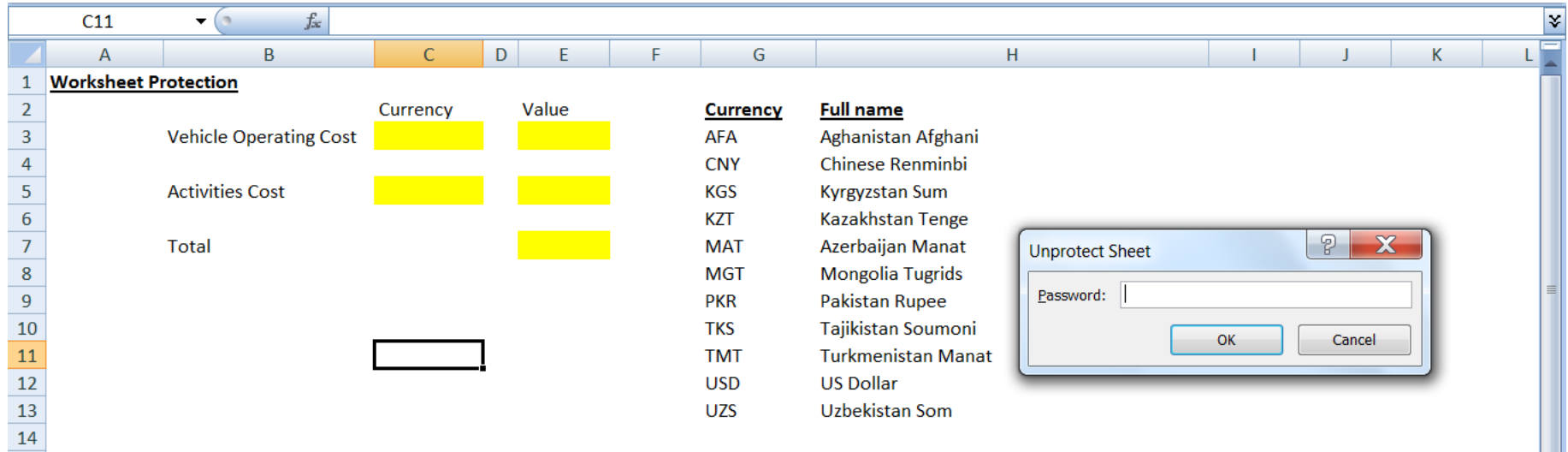
# Error Message



Excel will disallow any user to enter values into protected cells.

An error message will appear as above.

# Unprotect Worksheets



To unprotect a worksheet, simply go to 'Data' on Main Tool Bar, and select 'Unprotect Worksheet'.

You need to enter the correct password. Once done, you can edit the entire worksheet.

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# Creating Charts

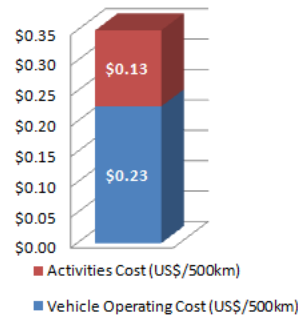
Chart 1 : SWOD



Chart 2 : SWD



Cost Analysis



Perishables

|     |    |
|-----|----|
| Yes | 16 |
| No  | 14 |

Perishables



TIR

|     |    |
|-----|----|
| Yes | 19 |
| No  | 11 |

TIR



New Excel Template displays vital information by aggregating the separate TCDs worksheets. Known as a dashboard, it uses Excel Charts to show the results.

# Types of Charts

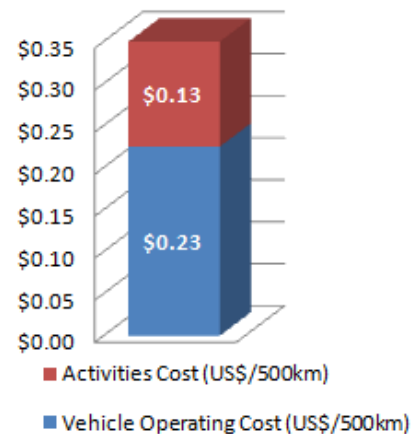
MS Office Excel 2007 offers many types of charts. In our dashboard, the charts used are as follow :

Chart 1 : SWOD



A Gauge Chart

Cost Analysis



A Column Chart

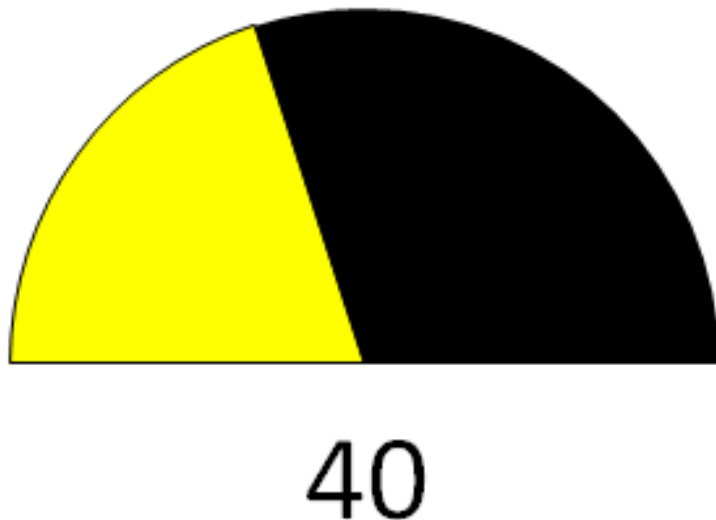
Perishables



A Pie Chart

# Creating a Gauge Chart

Speed (km/h)



A gauge chart is very useful in showing **changes of a reading.**

The chart on the left shows the speedometer on a vehicle.

Note : A gauge chart is not available on MS Excel 2007. You can create it from a **pie chart.**



# Gauge Chart

| K5 |  | f <sub>sc</sub> |  |   |   |   |   |   |
|----|--|-----------------|--|---|---|---|---|---|
|    | A  | B               | C  | D | E | F | G | H |
| 1  | <b><u>Creating a Speedometer Gauge</u></b> |                 |  |   |   |   |   |   |
| 2  |  |                 |  |   |   |   |   |   |
| 3  | <b>Speed (km/h)</b>                        | 40              | (Enter the speed here, the speed should be between 0 to 100) |   |   |   |   |   |
| 4  |  |                 |  |   |   |   |   |   |
| 5  | <b>Speed (km/h)</b>                        |                 |  |   |   |   |   |   |
| 6  |  | 20              |  |   |   |   |   |   |
| 7  |  | 30              |  |   |   |   |   |   |
| 8  |  | 50              |  |   |   |   |   |   |
| 9  |  |                 |  |   |   |   |   |   |

1. In Cell B3, enter a value for speed. (It must be between 0 to 100. Decimals are acceptable.)

# Gauge Chart

| Speed (km/h) |                |
|--------------|----------------|
| 20           | =min(b3,100)/2 |
| 30           | =B8-B6         |
| 50           |                |

2. For the Table (A6 to A8), follow the formula on the right and enter those formula into the respective cells on the left. For the last cell A8, simply enter '50'.

# Gauge Chart

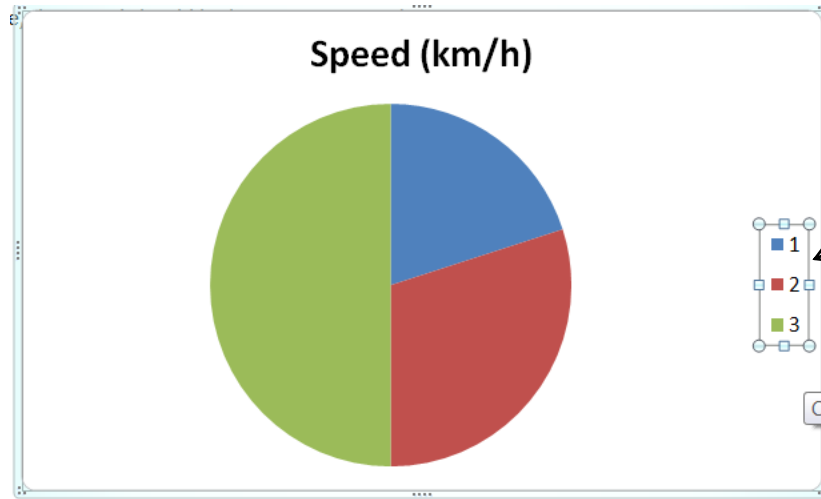
The screenshot shows the Microsoft Excel interface with the 'Insert' tab selected. The 'Pie' chart icon is highlighted in the 'Charts' group. A dropdown menu for '2-D Pie' is open, showing various pie chart styles. An arrow points from the '2-D Pie' menu to the 'Pie' icon in the 'Charts' group.

The data table in the spreadsheet is as follows:

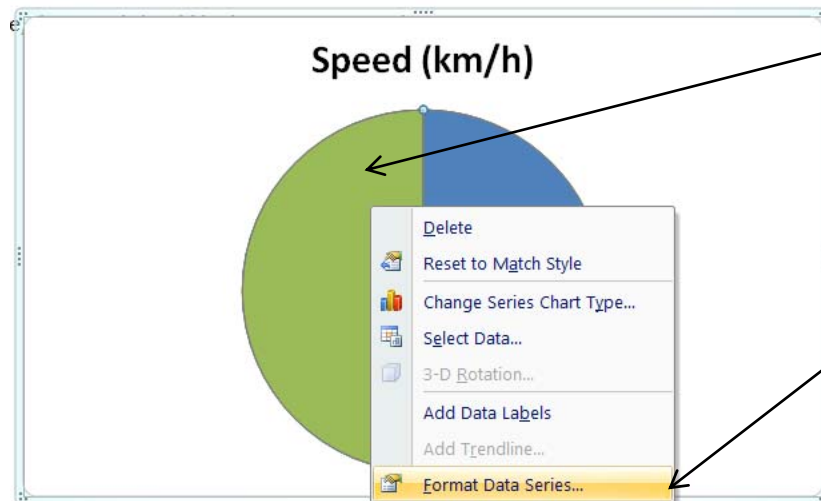
|   | A  | B  | C  | D | E | H | I |  |
|---|--|----|--|---|---|---|---|--|
| 1 | <b><u>Creating a Speedometer Gauge</u></b> |    |  |   |   |   |   |  |
| 2 |  |    |  |   |   |   |   |  |
| 3 | <b>Speed (km/h)</b>                        | 40 | (Enter the speed here, the speed limit is 100) |   |   |   |   |  |
| 4 |  |    |  |   |   |   |   |  |
| 5 | <b>Speed (km/h)</b>                        |    |  |   |   |   |   |  |
| 6 |  | 20 | =min(b3,100)/2                                 |   |   |   |   |  |
| 7 |  | 30 | =B8-B6   |   |   |   |   |  |
| 8 |  | 50 |  |   |   |   |   |  |
| 9 |  |    |  |   |   |   |   |  |

3. Highlight Cells A5 to A8.
4. Go to Main Tool Bar 'Insert', Select 'Pie' chart and select the standard '2D Pie Chart'.

# Gauge Chart



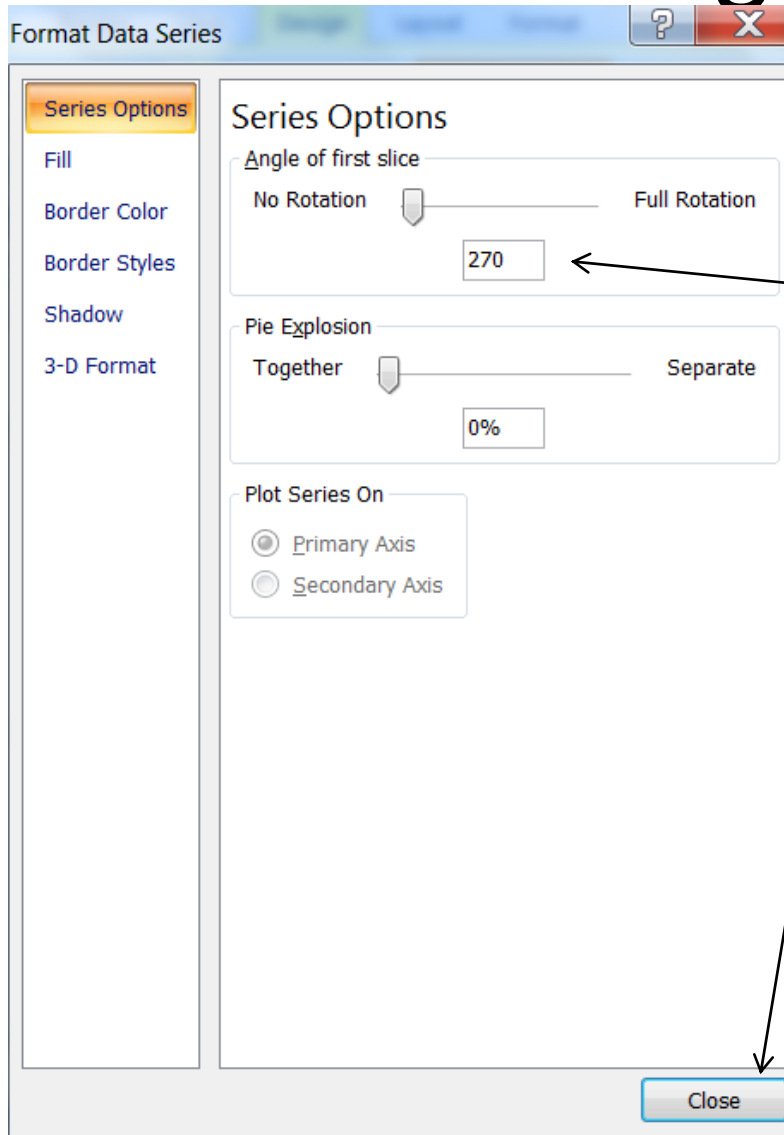
5. Click on the '**Legends Box**' on the right and delete it.



6. Click on the '**Green Slice**' of the pie chart.

7. Right click and select 'Format Data Series'.

# Gauge Chart

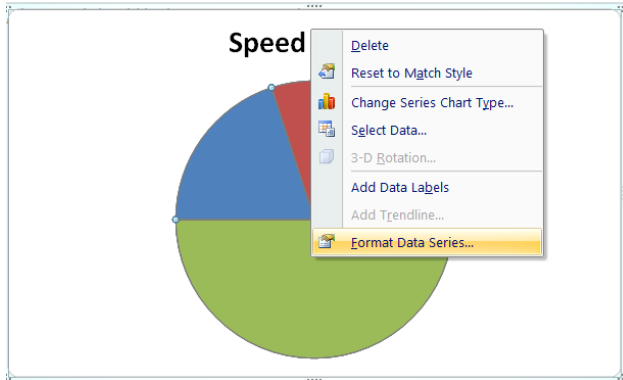
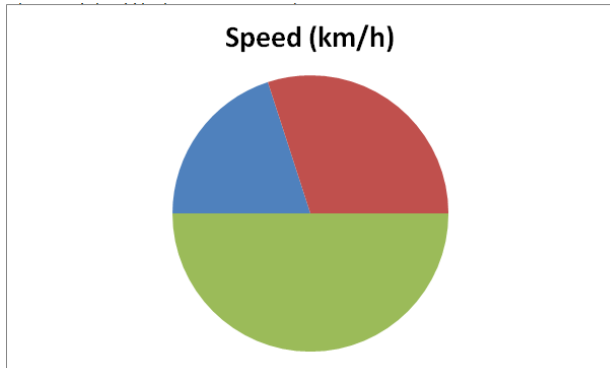


8. On 'Series Options', Enter '**270**' in the '**Angle of first slice**' option.

9. Press 'Close'.

*Note : We will only show the upper half of the pie chart, to display a gauge. This is to turn the pie chart into position.*

# Gauge Chart

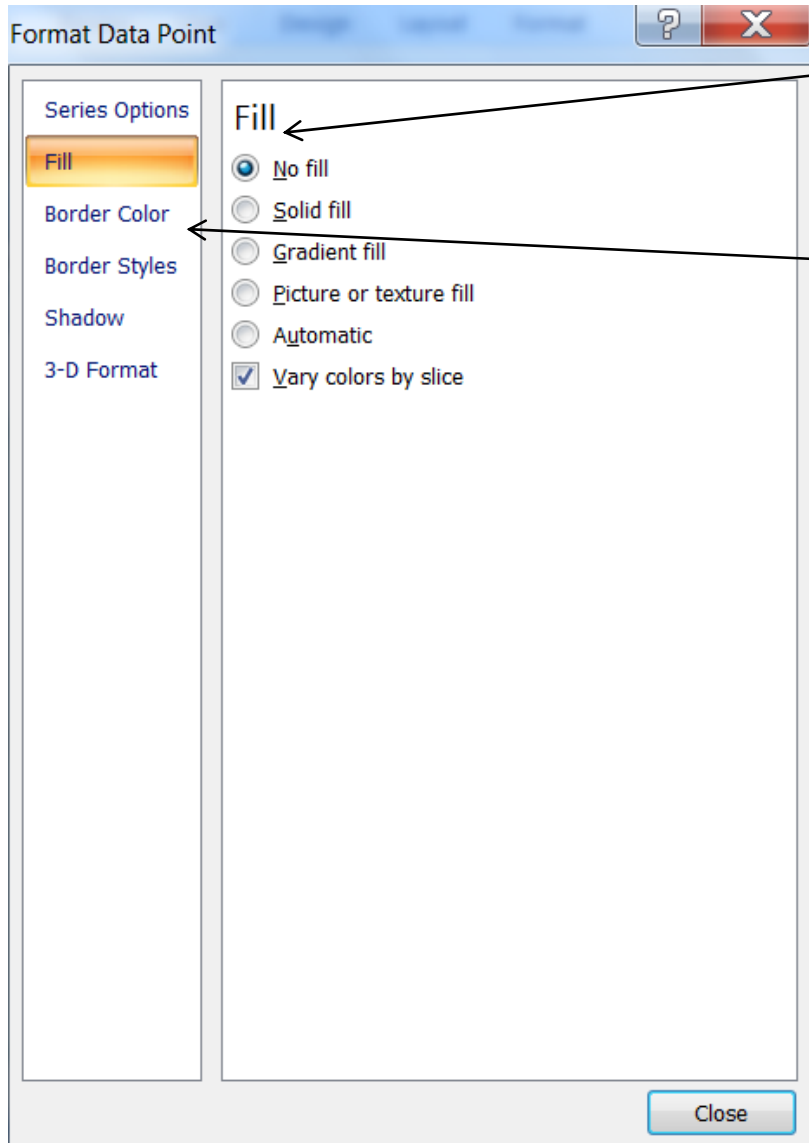


10. You should now see the chart on the left, where the green area is at the bottom half.

11. Click on the green slice.

12. Right click and select 'Format Data Series'.

# Gauge Chart



13. Click on 'Fill'.

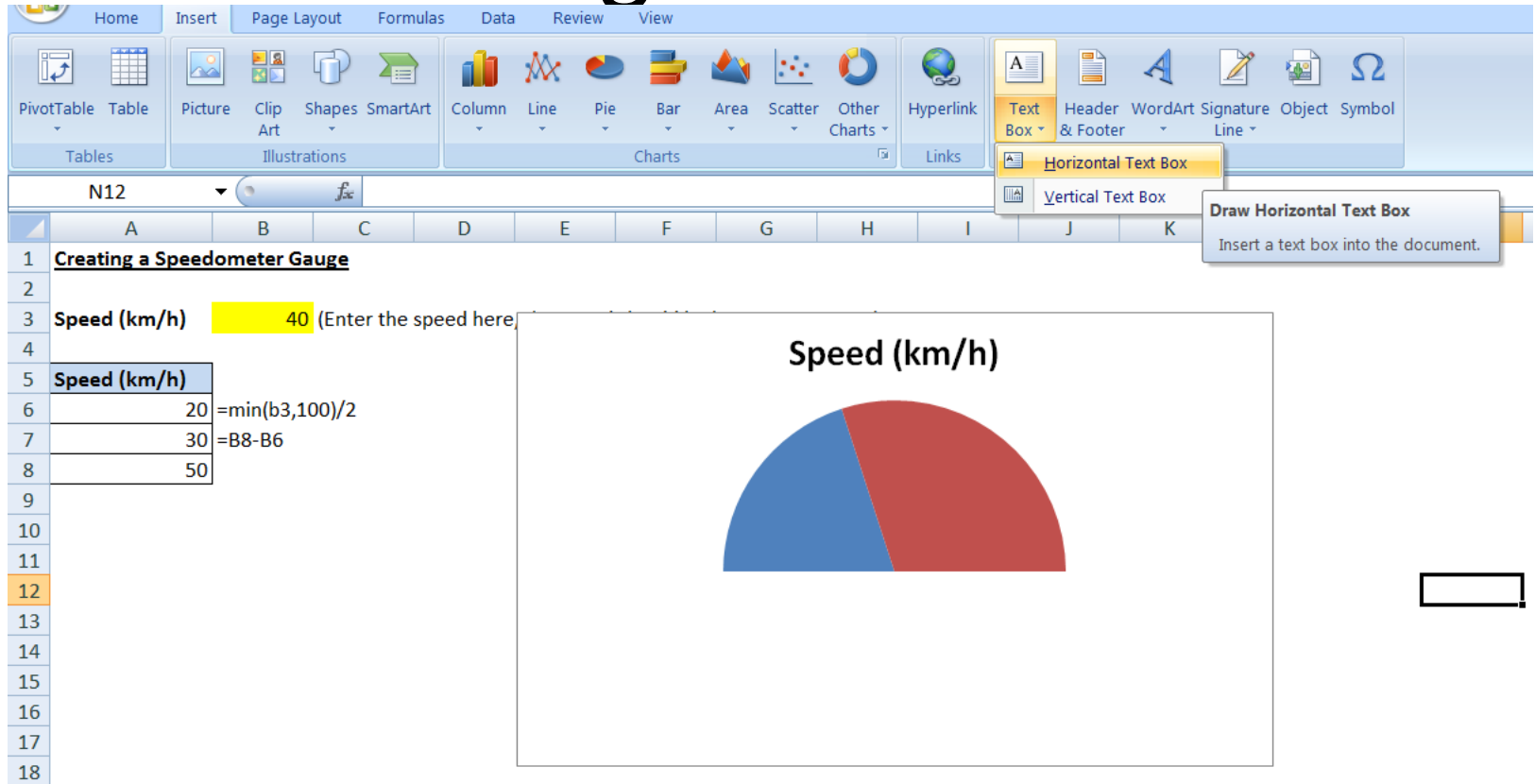
14. Select 'No Fill'.

15. Click on 'Border Colour'.

16. Select 'No Line'.

*These steps will cause the bottom half of the pie chart (green slide) to disappear.*

# Gauge Chart



The screenshot shows the Microsoft Excel interface. The 'Insert' tab is active, and the 'Text Box' group is expanded, showing 'Horizontal Text Box' and 'Vertical Text Box' options. A 'Draw Horizontal Text Box' tooltip is visible. The worksheet contains a table and a gauge chart.

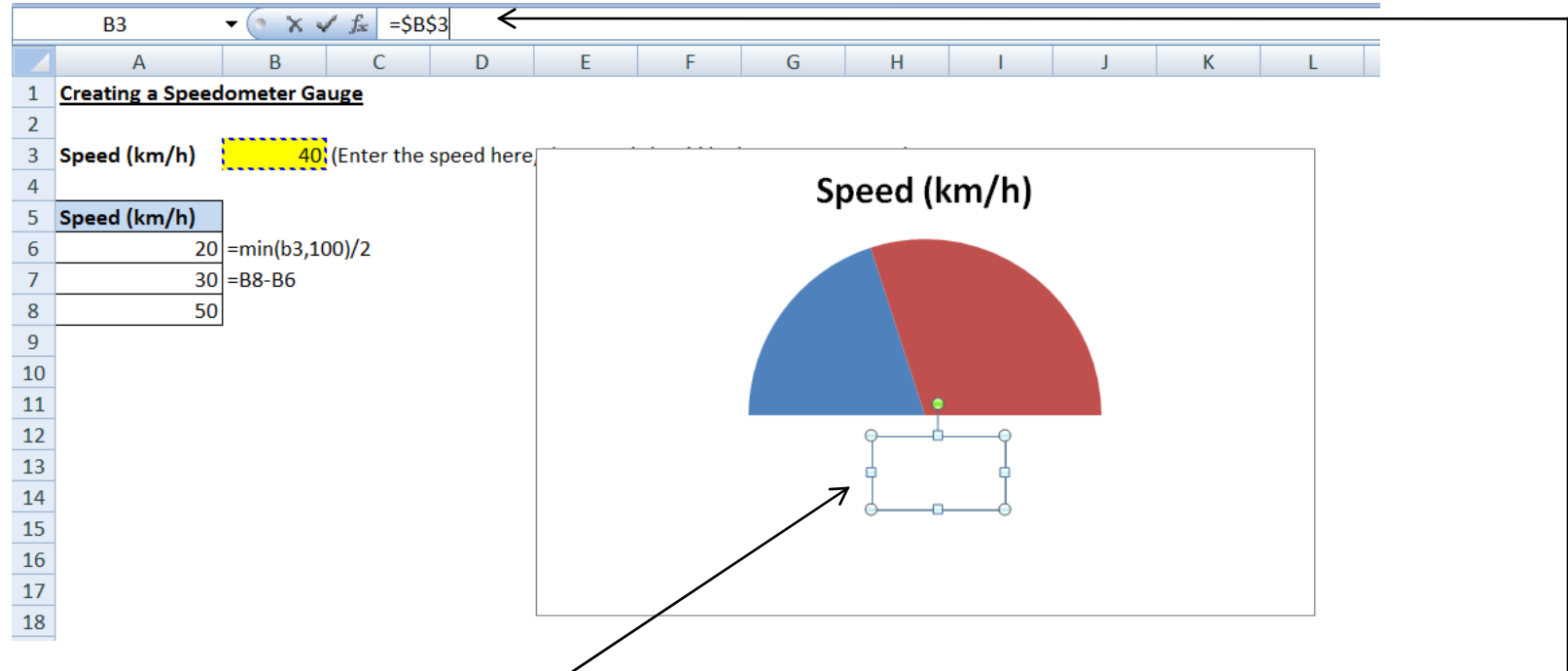
| Speed (km/h) |                |
|--------------|----------------|
| 20           | =min(b3,100)/2 |
| 30           | =B8-B6         |
| 50           |                |

The gauge chart, titled 'Speed (km/h)', is a semi-circle divided into two segments: a blue segment on the left and a red segment on the right. The red segment represents the current speed of 40 km/h.

17. Go to Main Tool Bar and select 'Insert'.
18. Select 'Text Box' and Choose 'Horizontal Text Box'.

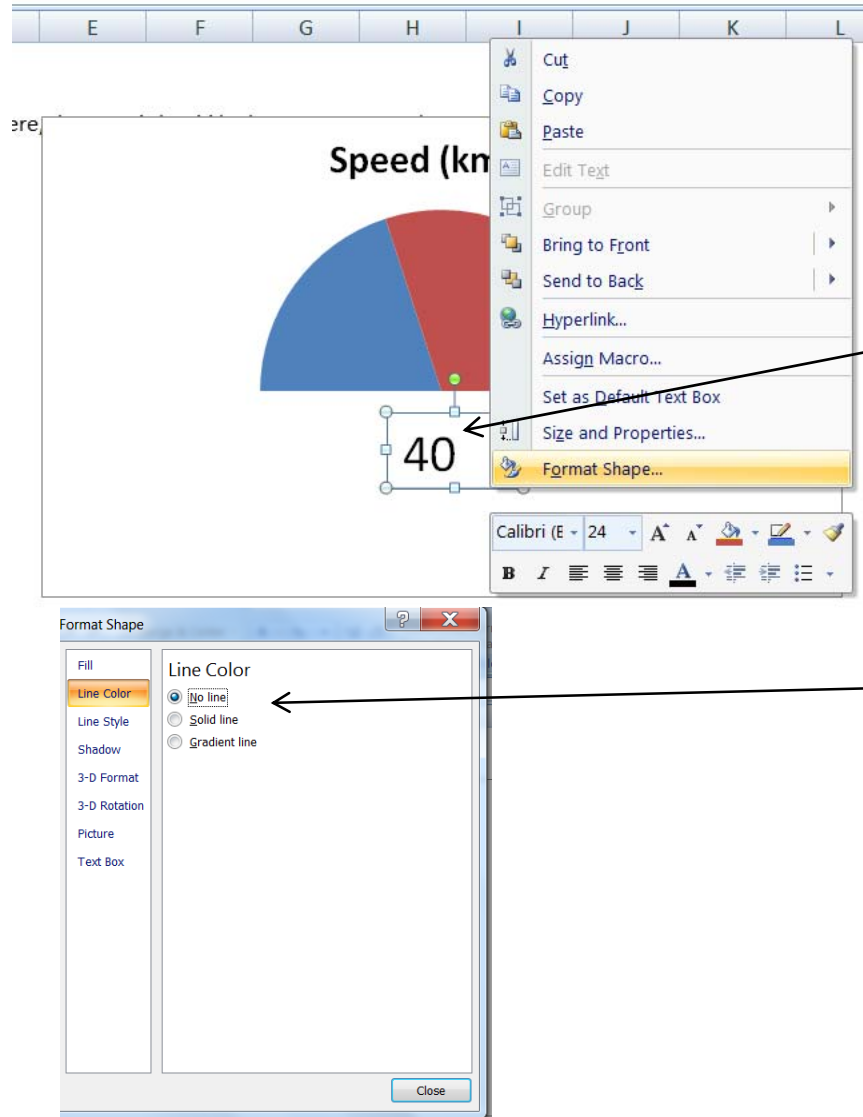


# Gauge Chart



19. Create a Text Box at the bottom of Gauge.
20. Go to the 'Formula Bar' and enter '='.
21. Click on Cell B3.
22. Press Enter.

# Gauge Chart



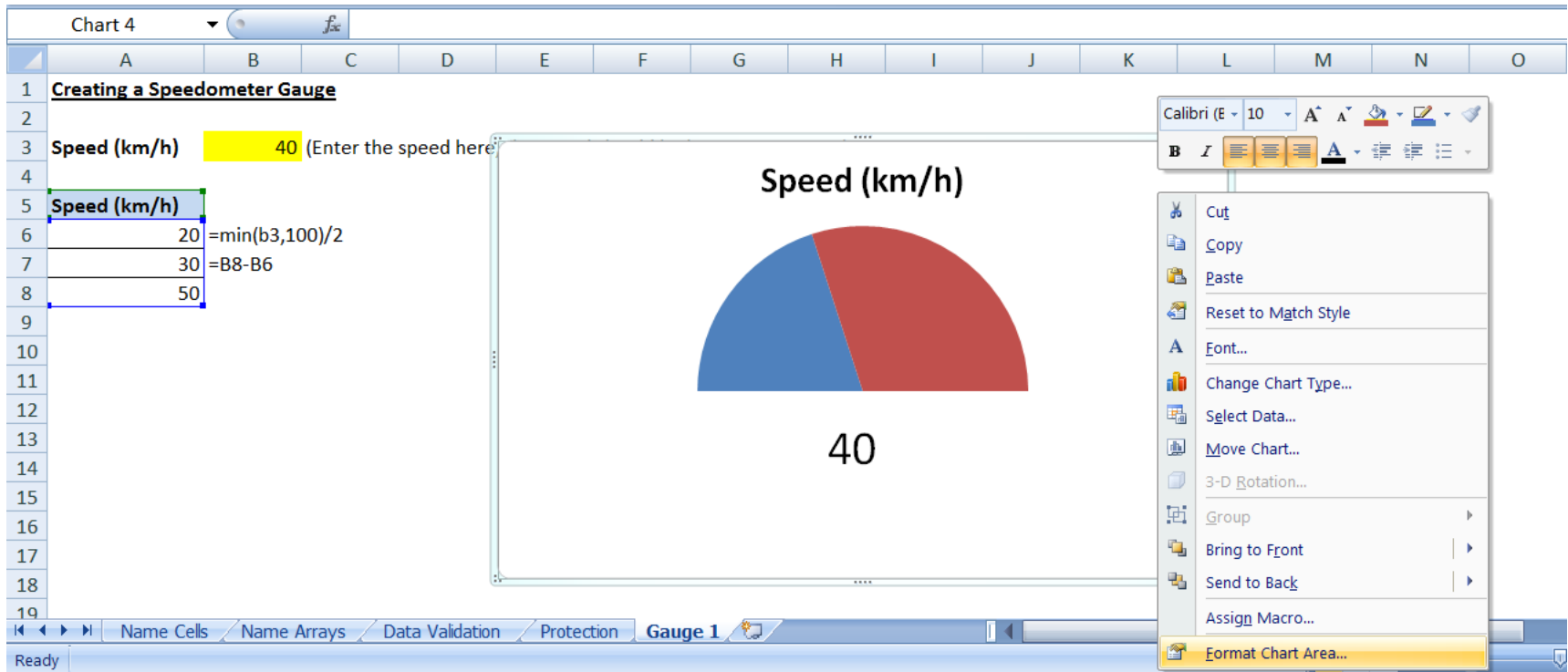
23. Resize the font to '24' or larger.

24. Right click on the Text Box and select 'Format Shape'.

25. Select 'Line Colour'.

26. Select 'No Line'.

# Gauge Chart



27. Click on the Chart Area.
28. Select 'Format Chart Area'.

# Gauge Chart



29. Select 'Fill'.

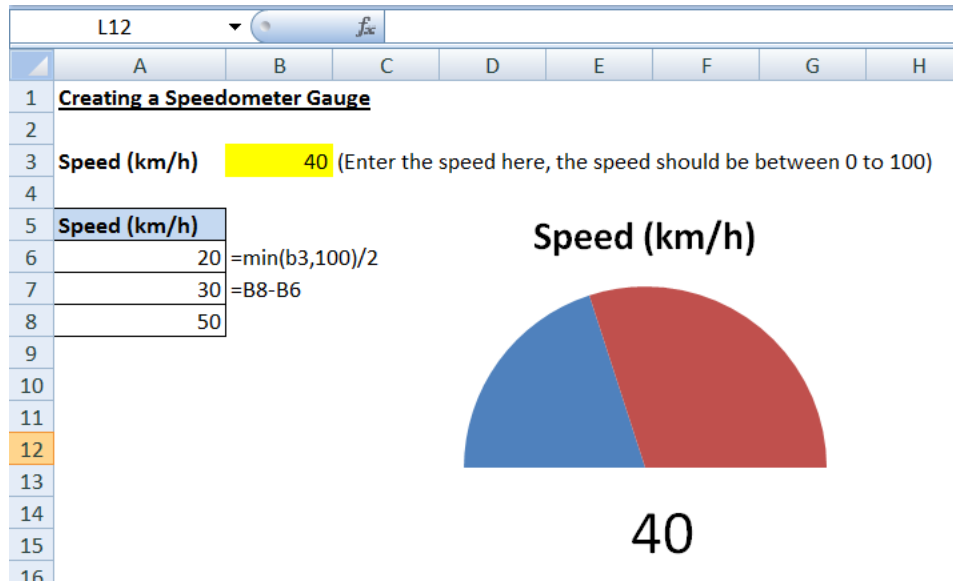
30. Click on 'No Fill'.

31. Select 'Border Colour'

32. Click on 'No Line'.

33. Press 'Close'.

# Gauge Chart – Completed!



Congratulations! You have created your first gauge chart!

Reposition the chart in the worksheet as you like.

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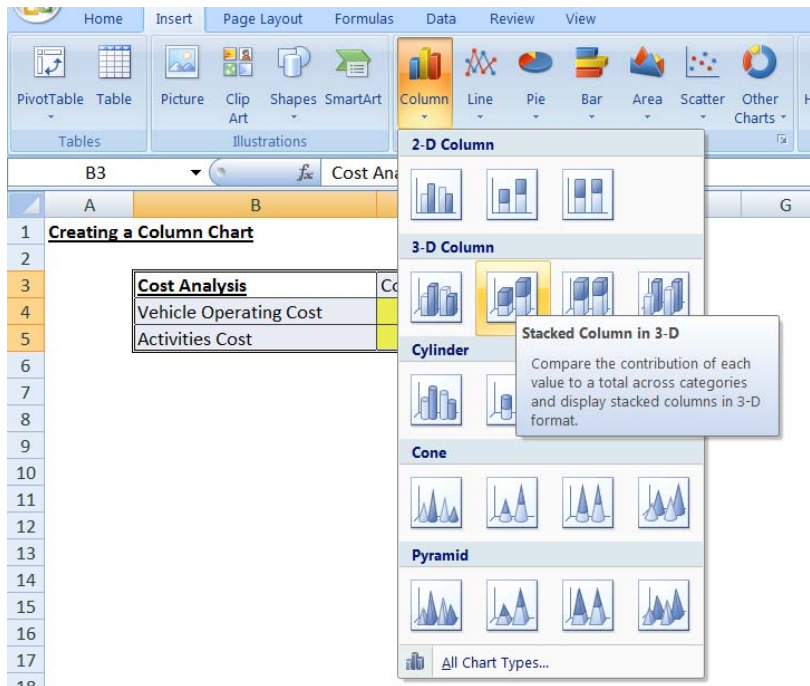
5 Creating a Column Chart

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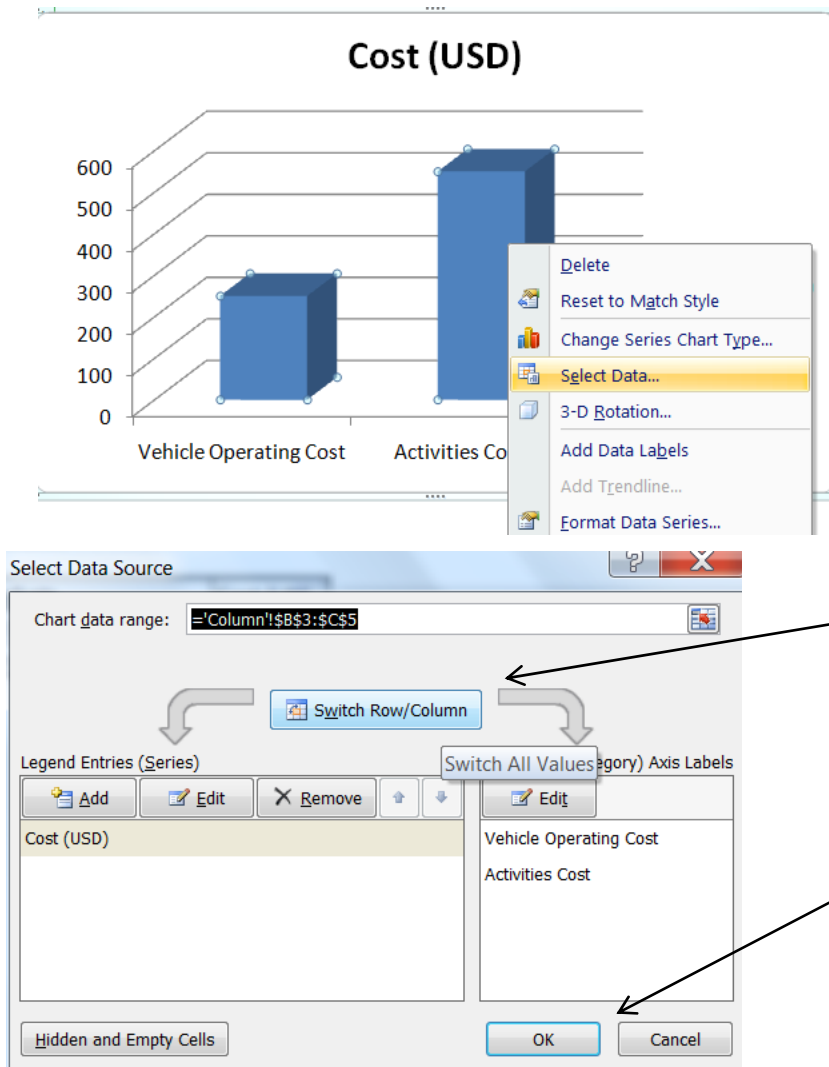
# Column Charts

|   |                                |                        |            |   |
|---|--------------------------------|------------------------|------------|---|
|   | 18                             |                        |            |   |
|   | A                              | B                      | C          | D |
| 1 | <b>Creating a Column Chart</b> |                        |            |   |
| 2 |                                |                        |            |   |
| 3 |                                | <b>Cost Analysis</b>   | Cost (USD) |   |
| 4 |                                | Vehicle Operating Cost | 250        |   |
| 5 |                                | Activities Cost        | 550        |   |
| 6 |                                |                        |            |   |



1. Enter the costs in Cells C4 and C5.
2. Highlight the entire table.(Cell B3 to Cell C5).
3. Go to Main Tool Bar.
4. Select 'Insert'.
5. Select 'Column'.
6. Choose '**Stacked Column in 3D**'.

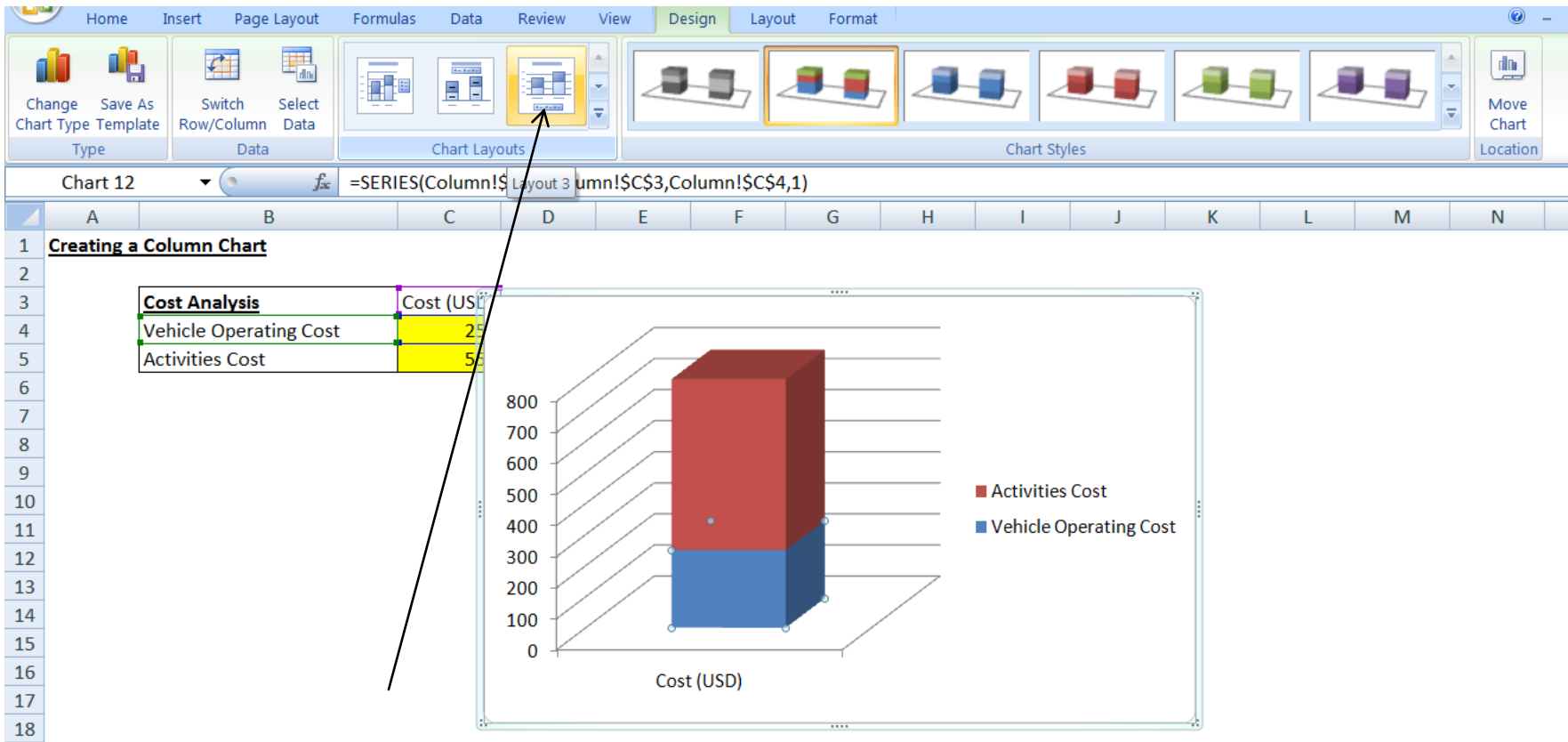
# Column Charts



7. Click on any column.
8. Right click 'Select Data'.
9. In the New Data Window, select 'Switch Row/Column'.
10. Press OK.



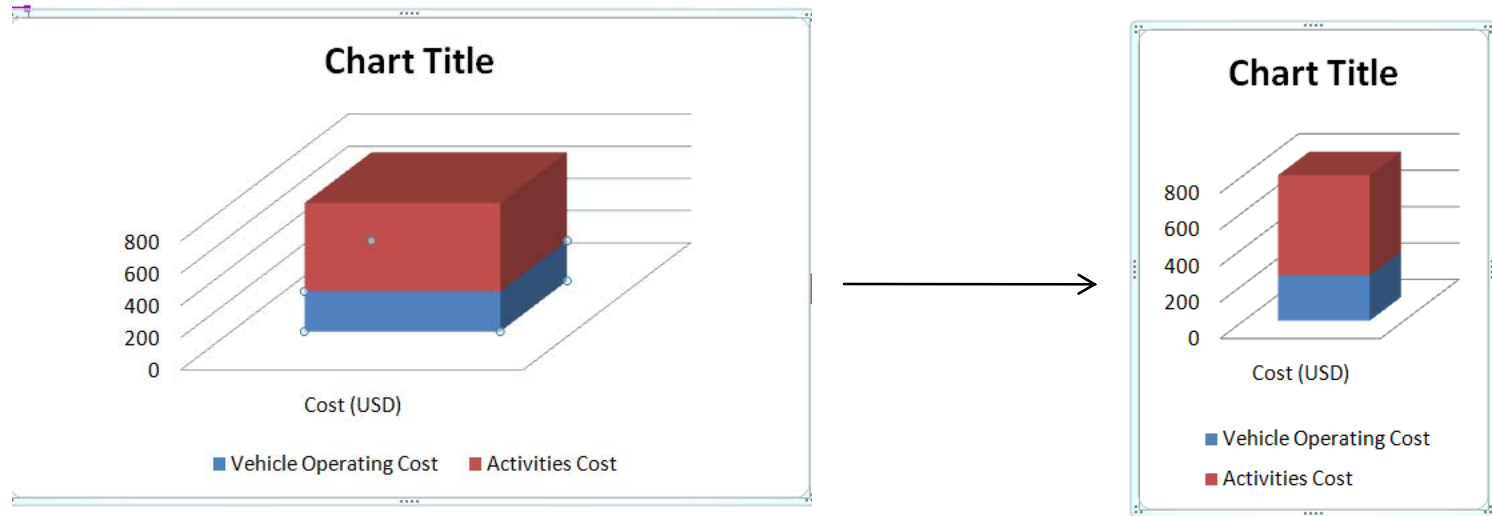
# Column Charts



11. Under 'Layout', select 'Design 3'.

*Note : This will move the legend to the bottom, giving more space for the column chart.*

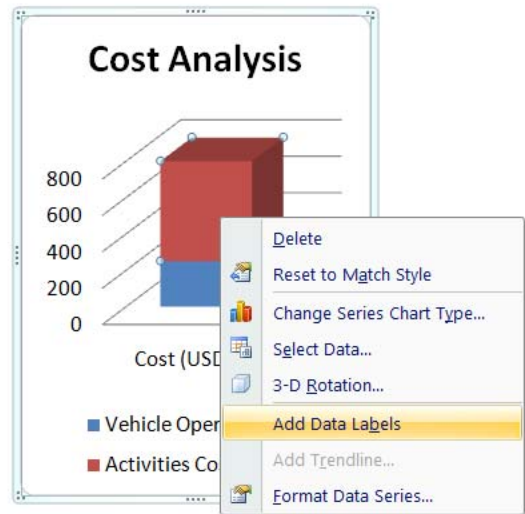
# Column Chart



12. Re-size the chart into a thinner one.

13. Click on the 'Chart Title' textbox and link it to the Cell B3 (Cost Analysis).

# Column Chart – Completed!

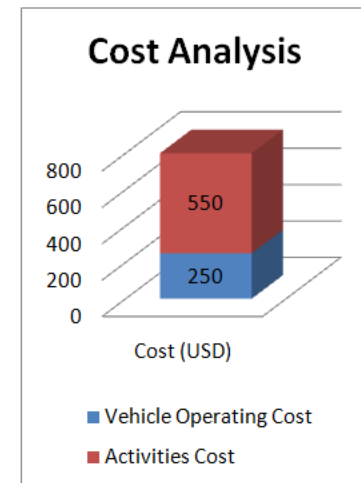
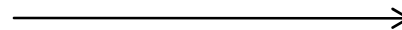


14. Click on the red portion of the column.

15. Right click and select 'Add Data Labels'.

16. Repeat the step 15 for the blue portion of the column.

*After step 16, you should see the two costs in the column chart. You can change the colour to white if necessary.*

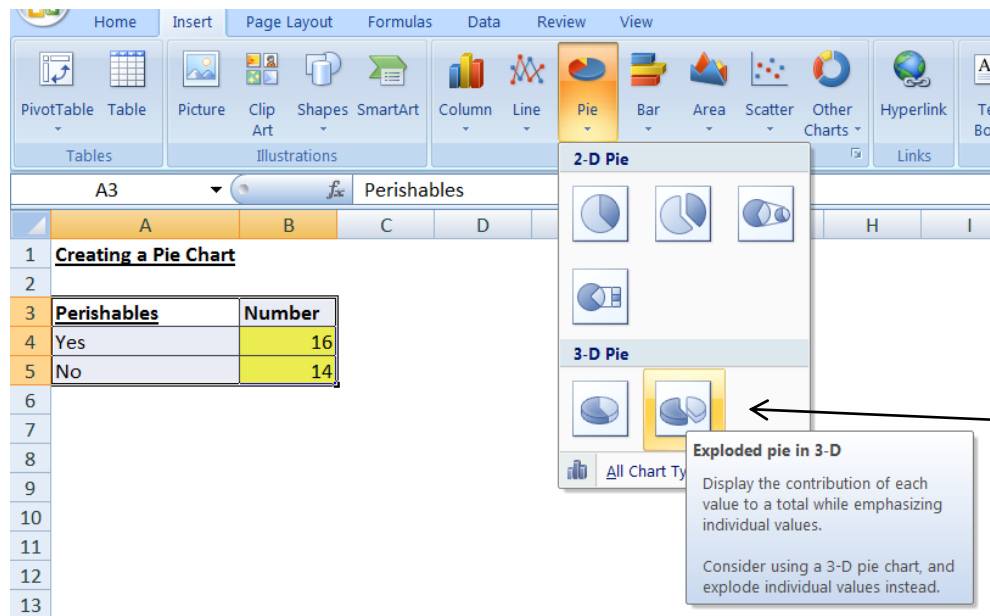


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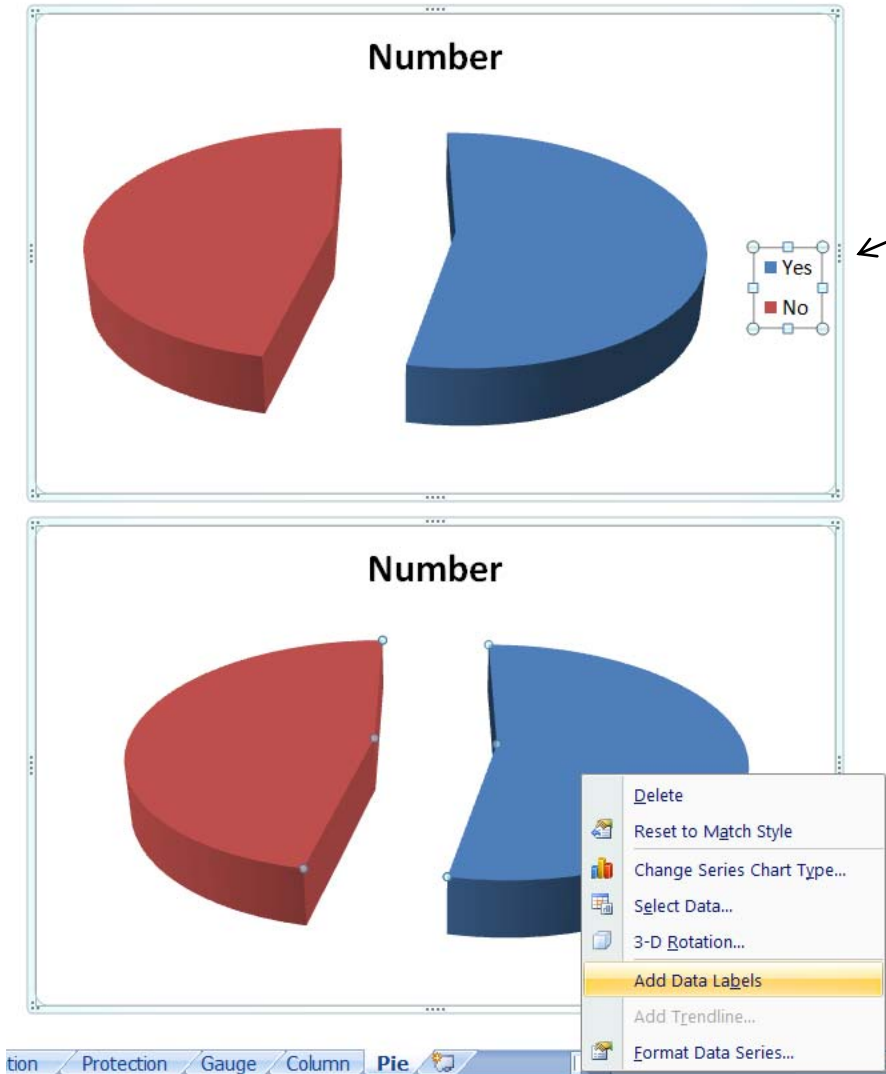
# Pie Chart

|   |                                    |               |   |   |  |
|---|------------------------------------|---------------|---|---|--|
|   | K10                                |               |   |   |  |
|   | A                                  | B             | C | D |  |
| 1 | <b><u>Creating a Pie Chart</u></b> |               |   |   |  |
| 2 |                                    |               |   |   |  |
| 3 | <b><u>Perishables</u></b>          | <b>Number</b> |   |   |  |
| 4 | Yes                                | 16            |   |   |  |
| 5 | No                                 | 14            |   |   |  |
| 6 |                                    |               |   |   |  |



1. Enter the values in Cells B4 and B5.
2. Highlight the entire table.(Cell B3 to Cell C5).
3. Go to Main Tool Bar.
4. Select 'Insert'.
5. Select 'Pie'.
6. Choose **'Exploded Pie in 3D'**.

# Pie Chart

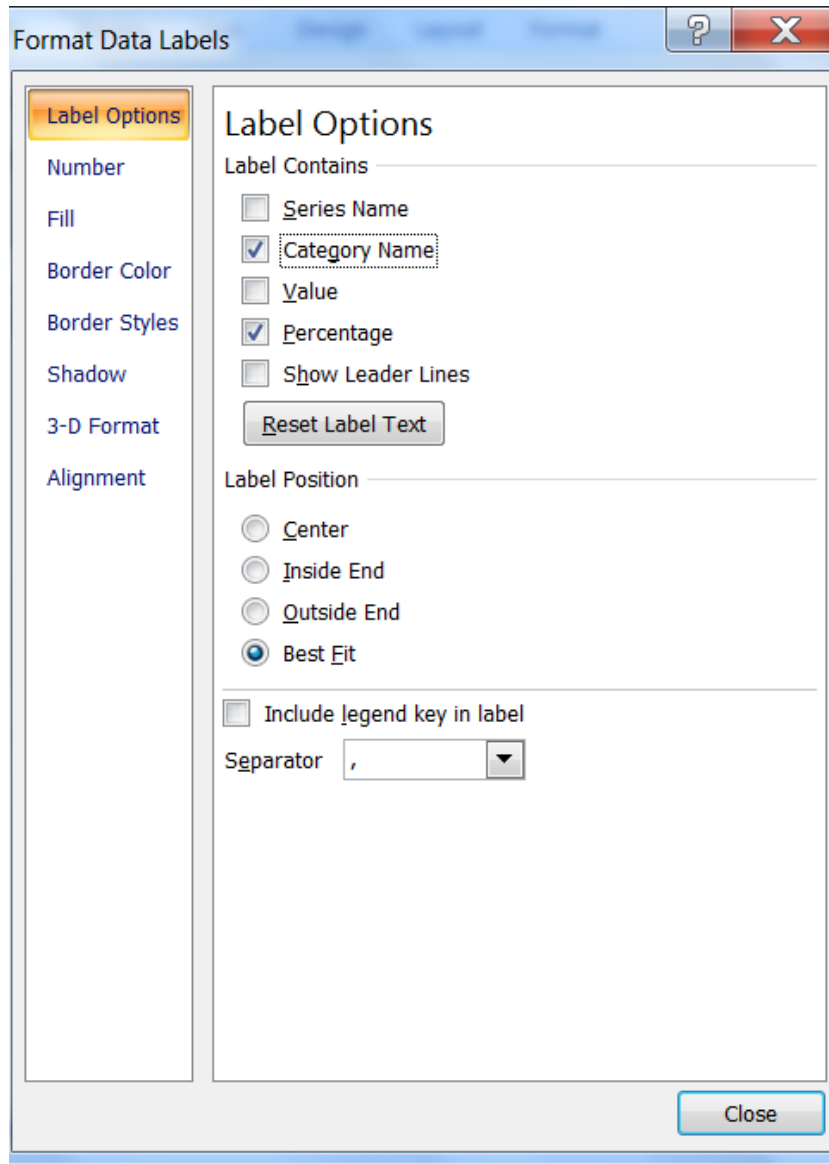


7. Click on the 'Legends Box' and delete it.

8. Right click on the blue portion.

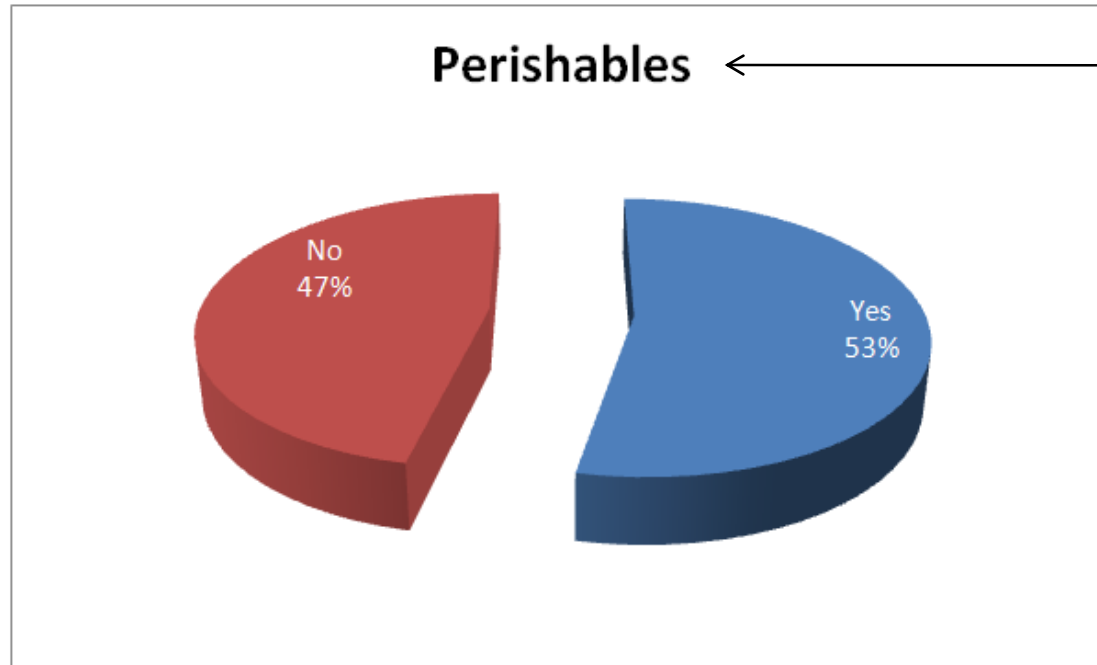
9. Select 'Add Data Labels'.

# Pie Chart



10. In 'Label Options', check the 'Category Name', and 'Percentage'.
11. In the 'Label Position', check the 'Best Fit' option.
12. In the 'Fill' option, select 'No Fill'.
13. In the 'Border Colour' option, select 'No Line'.

# Pie Chart – Completed!



14. Link the Title Box in the Chart to Cell A3 (Perishables).

Congratulations! You have created your pie chart.



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# Validation vs. Protection

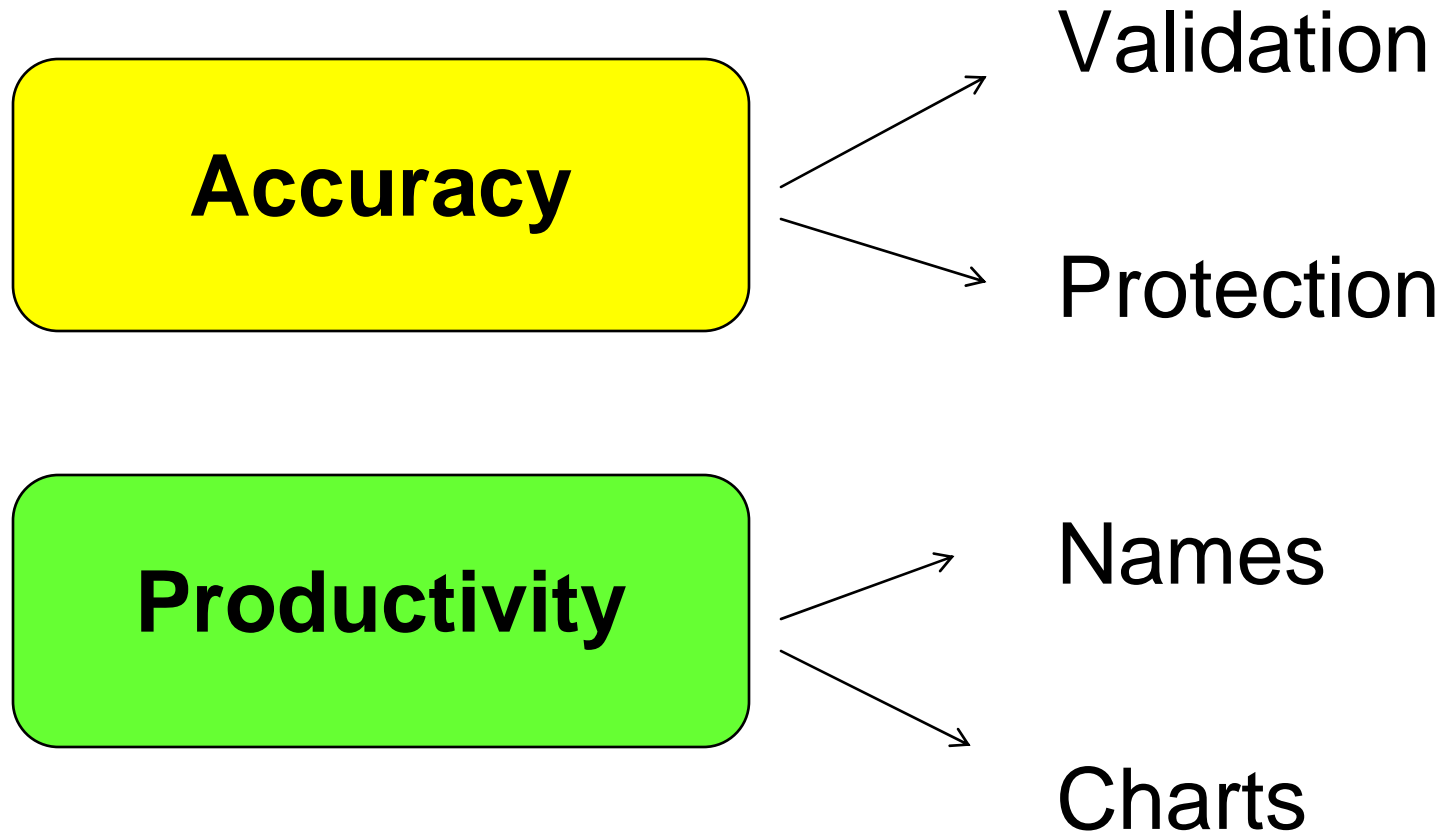
## Validation

- Enforce entry of valid values
- Source is contained in a list
- 3 Types of Error Alerts and Controls

## Protection

- Disallow entry of values into certain parts or cells of a worksheet
- Needs to mark locked or unlocked from 'Format Cells'.
- Lock and Unlock the Cells, depending on your primary objective.

# Quality in Data Entry



# Final Note

You are **NOT** expected to make structural changes to the CPMM Excel Template.

Do discuss with Andy or Max whenever you have a feedback.

The tools given here are to assist you in ***understanding and analyzing*** your own data. You can also apply them in your workplace.

# Thank you



**Max Ee**

Supply Chain Consultant

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