# Line Graph and Chart Worksheet

This exercise will cover the following:

- Illustrating data
- Line Graphs
- Pie Charts
- Area graphs
- Clustered Column Charts

Exercise Name: Line Graph and Chart Worksheet

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**The exercise begins:**

## Question 1:

Marco Funding Institute has issued their data for Last Year and Current Year, covering the regional areas of North, South, and Central.

**Marco Funding Institute**

*Funding in Millions*

| Area | Last Year | Current Year | Next Year |
|---|---|---|---|
| North | 100 | 110 | |
| South | 50 | 70 | |
| Central | 50 | 40 | |

(a) Plot the data on a Line Graph with all the usual requirements

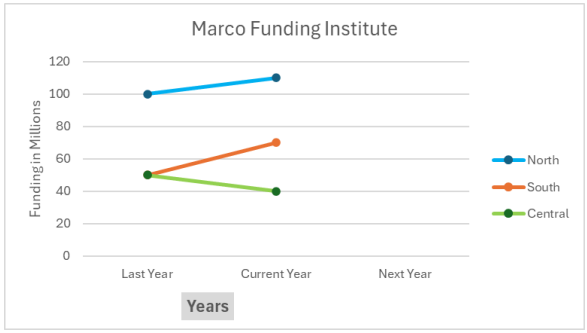
(b) Use the Line Graph to illustrate the probability as to figures for Next Year to help forecast the future

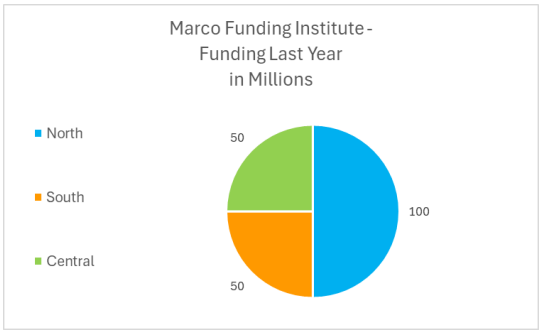
(c) Show the split using a Pie Chart and appropriate angles for each segment occupying part of the pie, with all the usual requirements of a chart

**ANSWER:**

See next page for answer...

# Line Graph and Chart Worksheet



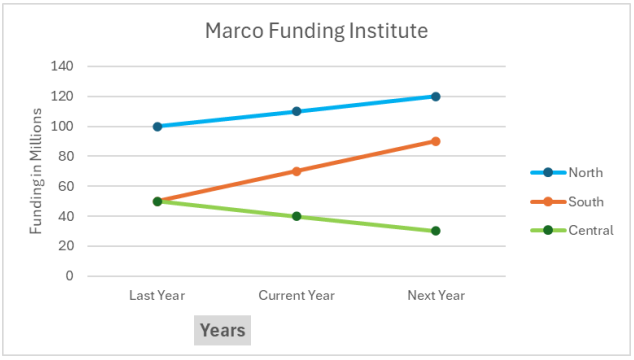




If you have something similar to the above, well done.
If you have missed any elements, make a note and correct yourself.

The line graph should have something very similar.

For (c) using the graph and accommodating for the next year, continuing lines on the line graph and plotting for Next Year can assist with forecasting.

EXAMPLE FORECAST:




The pie chart should have 180 degrees segment (half of total) for North and a quarter (90 degrees) for each of the other segments being South and Central.

Continued on next page ...

# Line Graph and Chart Worksheet

## Question 2

Mark Co – Funding Analysis specialists have published their accounting figures enabling a comparison between the annual spend on marketing and the company sales, all in millions, covering the first five years of operations.

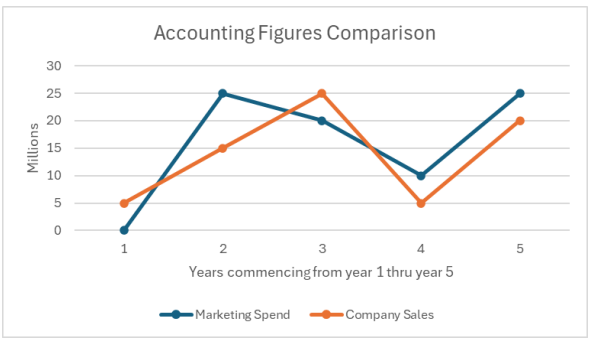
**Mark Co - Funding Analysis**

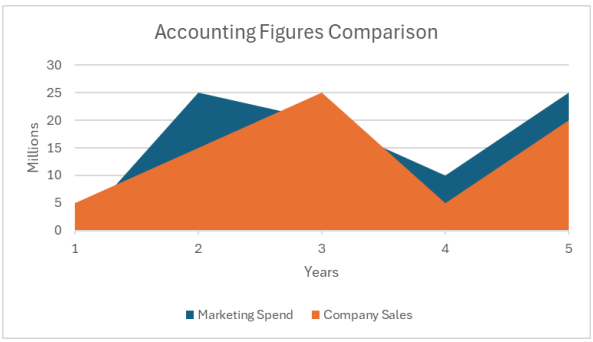
| | Accounting Figures Comparison (Millions) | |
|---|---|---|
| **Year** | Marketing Spend | Company Sales |
| 1 | 0 | 5 |
| 2 | 25 | 15 |
| 3 | 20 | 25 |
| 4 | 10 | 5 |
| 5 | 25 | 20 |

(a) Plot the information onto a line graph with usual elements for a line graph

(b) Illustrate the area occupied upon the graph by drawing another similar graph using shading or colour showing the company sales against a backdrop of marketing spending. To show how one is more prominent than the other.

**ANSWER:**




If you have something similar to the above, well done.
If you have missed any elements, make a note and correct yourself.

The line graph should have something very similar.

Second graph should have colouring / shading of areas, similar to the above.

Continued on next page...

# Line Graph and Chart Worksheet

## Question 3

Efficiency index has been calculated and published by Gillan Corp.
Each department contributes to the organisational efficiency drive and figures issued across a period of three years.

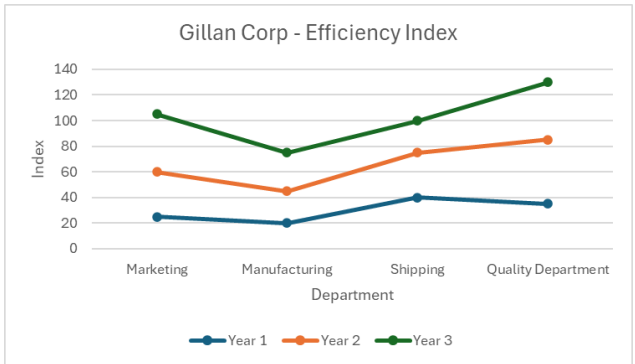
**Gillan Corp - Efficiencies Index**

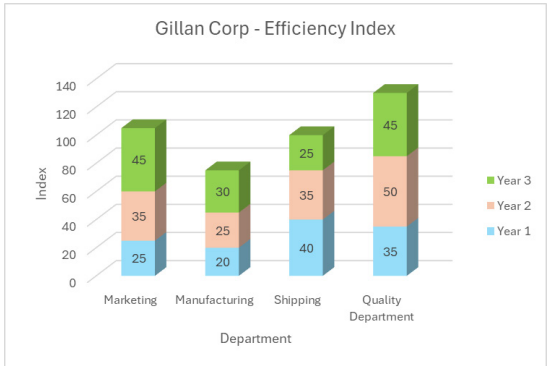
| | | Index | | |
|---|---|---|---|---|
| | | Year 1 | Year 2 | Year 3 |
| Department | Marketing | 25 | 35 | 45 |
| | Manufacturing | 20 | 25 | 30 |
| | Shipping | 40 | 35 | 25 |
| | Quality Department | 35 | 50 | 45 |

(a) Plot the information onto a line graph showing how each year index amount compares between each other for each department.

(b) Illustrate the contribution of each year to the overall departmental total using a relevant chart.

**ANSWER:**




If you have something similar to the above, well done.
If you have missed any elements, make a note and correct yourself.

The line graph should have something very similar.
Second chart to the right should be a clustered chart, possibly either column or bar – answer shows a clustered column chart with each year index contributing to an overall total for each department. Summary of all answers on next page ...

# Line Graph and Chart Worksheet

Your answers do NOT have to be EXACTLY the same as the model answers provided, but should generally be similar. More information and checks ...

Line graphs should have axis amounts starting at zero and reaching just above the largest amount, major lines from an amount increasing evenly without the need for every single line. Minor lines could be drawn but would be less bold and not as important.

Plotting on the chart at places such as in between the major numbers is acceptable. The main thing is for the viewer to understand.

You should never have unequal representation of figures or place markings or numbers specifically for the data. Always draw a graph or chart to then accommodate the information.

Each graph and chart has a legend showing what each segment / part is named. Each graph and chart has a main title / chart title, axis titles, and clearly shows any pattern or requirement for viewing.

Colours and shading should be easy on the eye, ensuring no misunderstanding.

It is always important to ensure information is represented correctly and equal to the data itself. The viewer should misinterpret – graphs and charts are used to illustrate and enhance the speed of interpretation of data, much easier than looking at tables.

Every illustration through graphs or charts should allow the viewer to take a story from it all. Graphs and charts should help the viewer, not hinder.

If you remain unsure, please use the tutorials and video tutorials again, then come back and try this exercise along with others. Pre-assessments will include the need for graphs and charts, testing your knowledge even more.

**The exercise ends. Check your work.**

 Lecturer: Mark Gillan