

Learning Unit 4

Introduction to Excel

Focus areas:

1. Arithmetic operations in Excel (addition, subtraction, multiplication, division)
2. Computation of statistical values in Excel (mean, median, mode, variance, standard deviation)
3. Using Excel to draw graphs (bar graph, pie chart, histogram)

Module Manual
Reference:
Learning Unit 4 on
page 97 of your
Module Manual

Arithmetic Operations

Addition

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graph TD; A[Addition] --> B[Using the + sign]; A --> C[Using the SUM function];
```

Using the + sign

Using the SUM function
'=SUM'

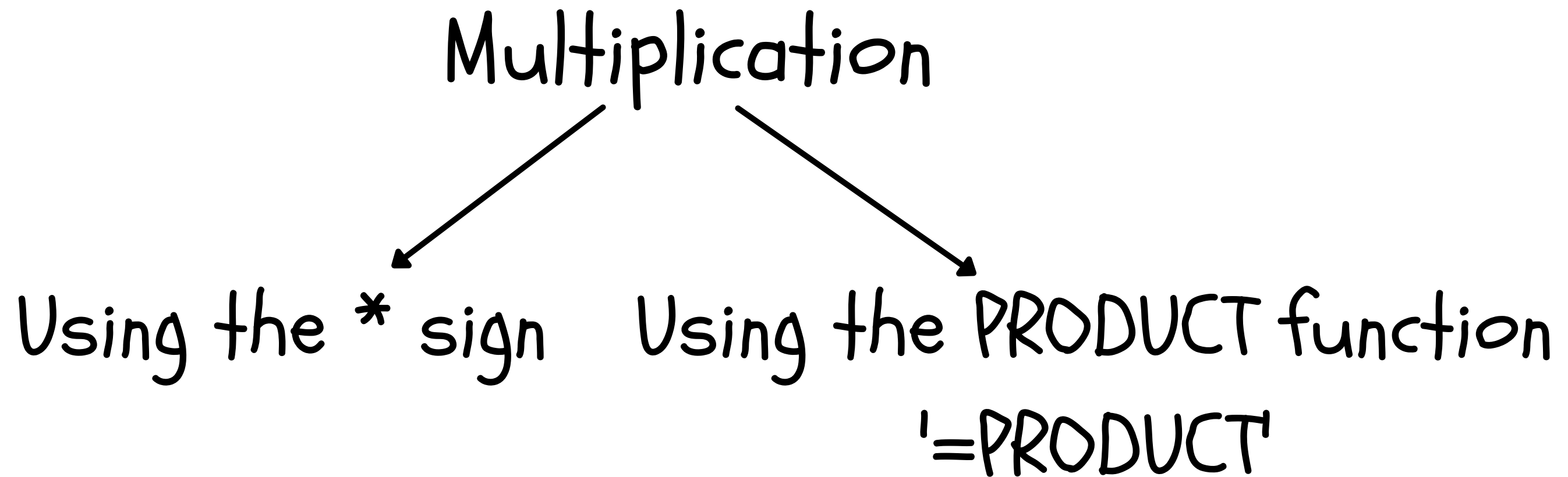
Arithmetic Operations

Subtraction



Using the - sign

Arithmetic Operations



Arithmetic Operations

Divison



Using the / sign

Computation of Statistical Values

The Mean



'=AVERAGE'

To get your answer rounded off to two decimal places: Right-click in cell > click on 'Format Cells. . .', > under 'Category' select 'Number' > next to 'Decimal place' select '2', > click 'Ok'.

The mean is the average value of a data set.

Interpretation: the average value for the data set is . . .

Computation of Statistical Values

The Mode



'=MODE' or '=MODE.SNGL'

The mode is the most frequently occurring value in a data set.

Interpretation: . . . occurs most frequently in the data set.

Computation of Statistical Values

The Median



'=MEDIAN'

The median is the middle value of an ordered data set. Half of the values in the data set are less than or equal to the median, while half of the values in the data set are greater than or equal to the median.

Interpretation: half of the values in the data set are less than or equal to . . .

Creating a Bar Chart in Excel

Bar charts are figures used to indicate how often each particular category of a qualitative (non-numerical) variable occurs).

Step 1

Highlight the relevant cells (do not include the 'Total' row).

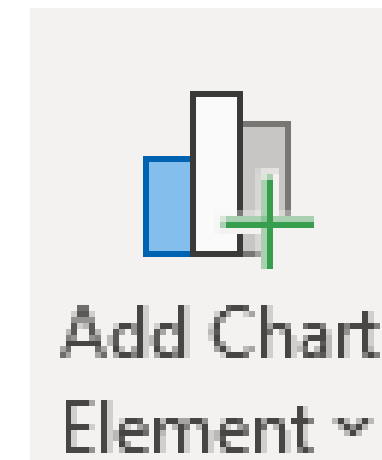


Step 2

Select the 'Insert' tab > create a Column Chart > select the '2-D Column' option > then select the 'Cluster Column' type (1st option).



Step 3



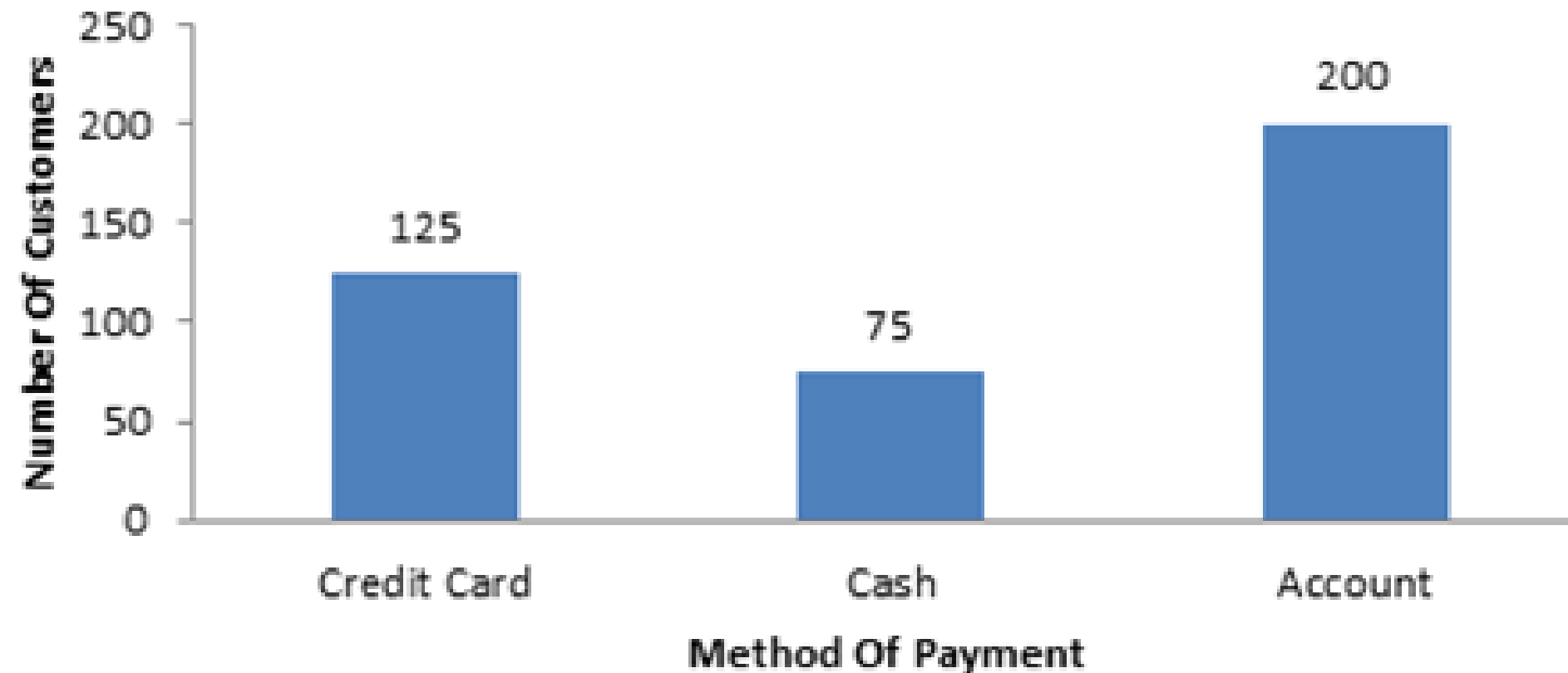
Click on 'Add Chart Element' and add the following:

- Chart Title (above chart)
- Axis Titles (Horizontal & Vertical)
- Data Labels (Outside End)

Creating a Bar Chart in Excel

Bar charts are figures used to indicate how often each particular category of a qualitative (non-numerical) variable occurs).

Preferred Method Of Payment By Customers



Creating a Pie Chart in Excel

Pie charts provide an alternative to bar charts as a means by which to indicate how often each particular category of a qualitative (non-numerical) variable occurs.

Step 1 → Step 2 → Step 3 → Step 4

Highlight the relevant cells (do not include the 'Total' row).

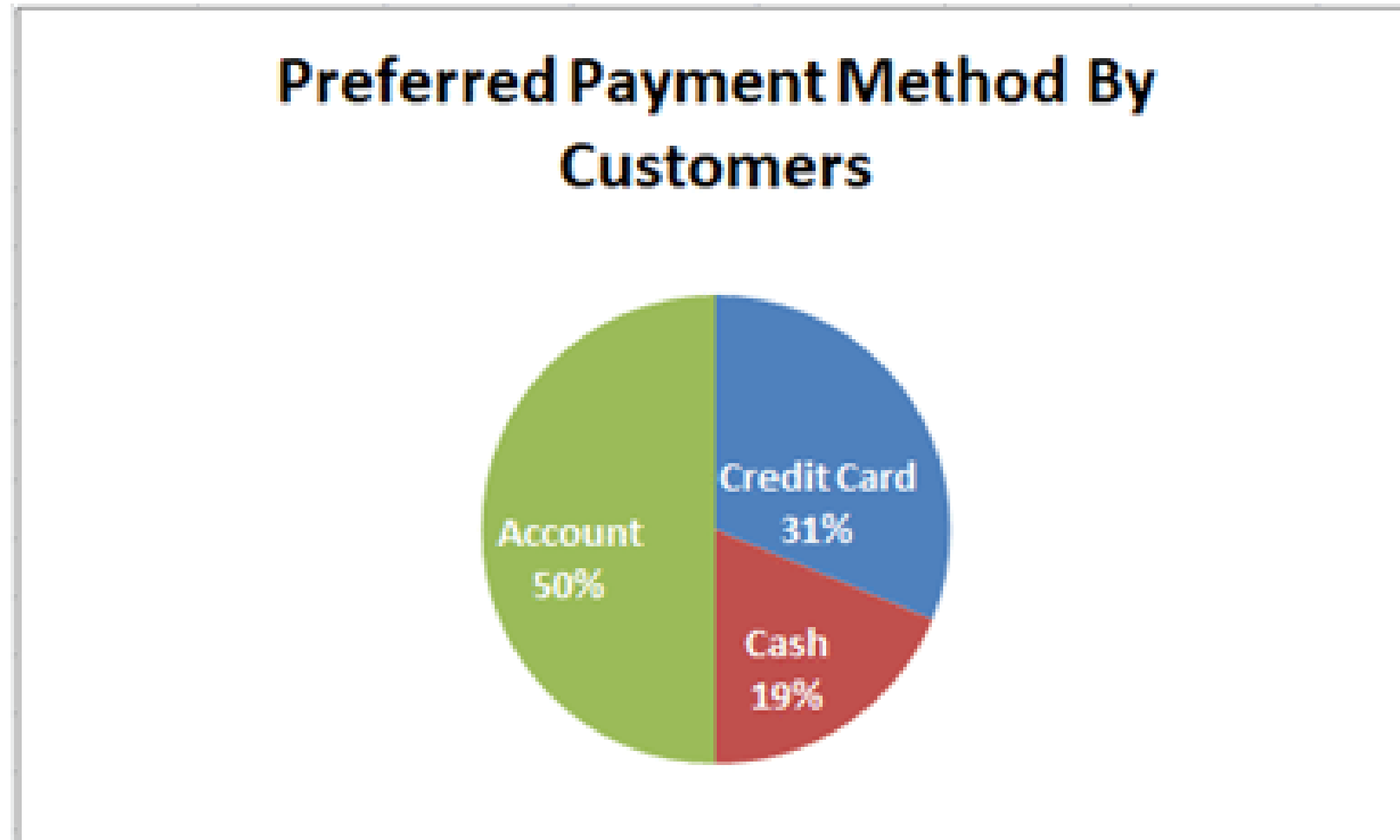
Select the 'Insert' tab > create a Pie Chart > select the '2-D Pie' option > then select the 'Pie' graph type (1st option).

Click on the title at the top of the chart and type in an appropriate title for the given data set.

Click on 'Add Chart Element' and add 'Data Labels' selecting the 'Data Callout' label type.

Creating a Pie Chart in Excel

Pie charts provide an alternative to bar charts as a means by which to indicate how often each particular category of a qualitative (non-numerical) variable occurs.



Creating a Histogram in Excel

A histogram provides a graphical means by which to indicate how often a number or a grouped class of numbers occurs.

Step 1 → Step 2 → Step 3

Highlight the relevant cells.

Select the 'Insert' tab > create a Column Chart > select the '2-D Column' option > then select the 'Cluster Column' type (1st option).

Click on 'Add Chart Element' and add the following:

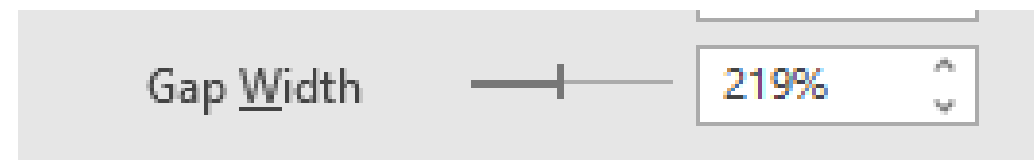
- Chart Title (above chart)
- Axis Titles (Horizontal & Vertical)
- Data Labels (Outside End)

Creating a Histogram in Excel

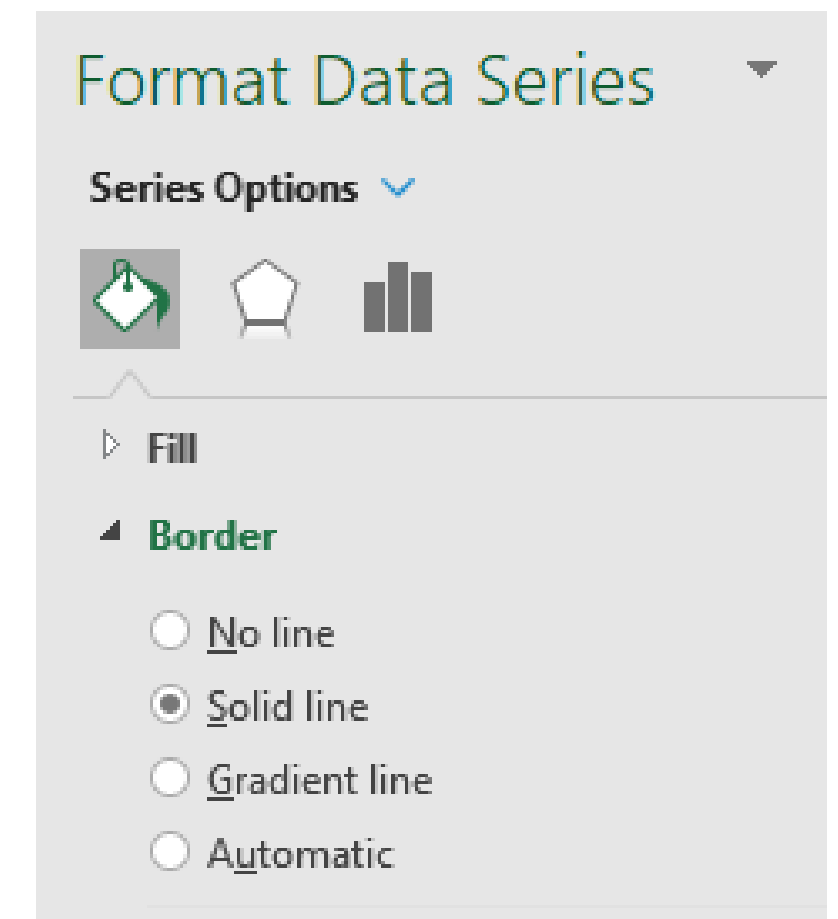
A histogram provides a graphical means by which to indicate how often a number or a grouped class of numbers occurs.

Step 4  Step 5

Right-click on one of the columns in the chart. Select 'Format Data Series'. Next to 'Gap Width' drag the slider all the way to the left, signifying that there should be no gap between the bars in the chart.



Click on the Border option in the 'Format Data Series' dialog box. Choose the 'Solid line' border option. Click on the drop-down menu next to the Colour option and choose the colour black. Click on the Close button on the dialog box.



Creating a Histogram in Excel

A histogram provides a graphical means by which to indicate how often a number or a grouped class of numbers occurs.

