

What is a Spreadsheet?

Learning Outcomes

At the end of this section you should be able to -

- Understand what a spreadsheet is
- Identify elements of a spreadsheet
- Understand and read cell references
- Identify operators used in a formula
- Understand the structure of a spreadsheet
- Identify areas of a chart

Spreadsheets

A spreadsheet is essentially a large working area composed of rows and columns. The intersection of a row and column is called a cell. Text and numbers are entered into these cells and formulas are used to manipulate the data to provide information required.

Microsoft Excel 2010 (or any spreadsheet program) makes calculations easy - it replaces your pencil, paper and calculator. If you change data in a worksheet, every formula associated with that data will be automatically recalculated accordingly.

Data can therefore be altered to re-calculate budgets and to forecast results using different sales projections. Worksheets can be saved on disk, retrieved and printed as required.

Note In this book Microsoft Excel 2010 will be referred to as Excel 2010.

Spreadsheets are widely used -

- 1 **In industry and commerce for**
 - financial accounts
 - forecasting and projection results
 - recording and comparing data
 - personnel details
- 2 **At home for**
 - budgeting
 - calculations, eg painting, wallpapering
 - savings and travelling expenses
- 3 **At schools for**
 - test and examination results
 - timetables
 - school rolls
- 4 **At clubs for**
 - membership fees
 - sports results
 - sponsorship details

Examples of other spreadsheet programs include Lotus 1-2-3, Corel Quattro Pro and OpenOffice Calc (the last of which can be freely downloaded from the Internet).

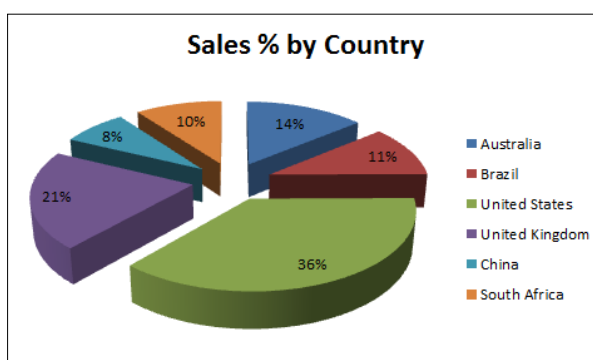
Spreadsheet/Worksheet

The word *spreadsheet* is a general term for any document created by a spreadsheet program; a spreadsheet is referred to in Excel 2010 as a *worksheet*. Both of these terms are used throughout this book but they refer to the same thing.

Samples of Spreadsheets

	A	B	C	D	E	F	G	H
1	Day Trippers							
2								
3	Tours	January	February	March	April	May	June	Total
4	Hinterland Tour	256	353	178	125	374	322	1608
5	The Coast Tour	312	262	285	310	345	370	1884
6	Bryon Bay and Tweed Heads	408	478	324	314	423	384	2331
7	Fraser Island	993	810	826	786	874	882	5171
8	Brisbane in a Day	554	487	512	456	492	414	2915
9	Brisbane at Night	452	435	478	398	416	488	2667
10	Total	2975	2825	2603	2389	2924	2860	16576

	A	B	C	D	E	F
1	VitaHealth Products - Worldwide Sales					
2	2011					
3						
4		Q1	Q2	Q3	Q4	Total
5	Australia	105,000	95,600	87,500	160,200	448,300
6	Brazil	85,000	92,300	75,000	96,000	348,300
7	United States	199,000	357,000	224,785	391,255	1,172,040
8	United Kingdom	153,000	169,000	158,700	180,250	660,950
9	China	62,500	52,500	49,000	82,000	246,000
10	South Africa	75,000	84,000	70,400	96,100	325,500
11						
12	Total	679,500	850,400	665,385	1,005,805	3,201,090



	A	B	C	D	E	F
13						
14						
15	2010					
16						
17		Q1	Q2	Q3	Q4	Total
18	Australia	55,000	88,000	76,000	155,350	374,350
19	Brazil	75,000	85,300	72,400	95,000	327,700
20	United States	155,000	225,000	123,950	250,780	754,730
21	United Kingdom	125,000	255,690	155,890	175,500	712,080
22	China	65,000	45,650	45,000	75,000	230,650
23	South Africa	78,000	89,000	65,890	95,200	328,090

	A	B	C	D	E	F	G
24							
25	Total	553,000					
26							
27							
28	Te Kea Trading Company						
29	<i>Pricing Structure for December Sale</i>						
30							
31		Q1					
32	Australia	125,000					
33	Brazil	75,000					
34	United States	185,500					
35	United Kingdom	145,500					
36	China	65,000					
37	South Africa	72,500					
38	Total	668,500					
39							
40							
41							
42							
43							
44							
45							
46							
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Advantages of Spreadsheets

- Calculations can be performed quickly and easily.
- If data is altered, the calculations automatically adjust.
- Worksheets within a workbook can be used for different groups of data. Data from a group of worksheets can be calculated onto one summary worksheet.
- Charts can be used to visually display data, eg bar, column, pie, line.
- Data can be manipulated, grouped and sorted into a specific order for lists, databases, etc. Data within a spreadsheet can then be quickly located.

What is a Spreadsheet?

Manual Spreadsheet

Before spreadsheet software programs were available, calculations were made on grid paper. When doing this, each column was named by a letter of the alphabet, in the first row (except the first column). The first column was used to number each row (except for the first row, used for column headings). The characters used to identify each column are called Column Headings. The numbers used to identify each row are called Row Headings. An example of a basic spreadsheet is shown below.

Elements of a Spreadsheet

	A	B	C	D	E
1					
2	Fashion House - Sales				
3					
4					
5		Australia	America	Britain	TOTAL
6	Shirts	897.00	1,586.96	2,425.28	4,909.23
7	Skirts	1,200.00	1,800.50	2,000.00	5,000.5
8	Jackets	950.00	1,060.96	1,250.25	3,261.21
9	Trousers	660.50	501.23	680.20	1841.93
10	Other	80.00	100.00	95.00	275.00
11					
12	TOTAL	\$3,787.50	\$6,049.64	\$6,450.73	\$15,287.87
13					
14					

Data was written into the grid as shown above. The figures in each column could then be added on a calculator and the total written into the Total row at the bottom of the column. To double check that all the calculations were correct you would calculate each row and insert the total amount in the Total column. Calculate the Total column and it should equal the same amount as the Total row.

Labels

Labels are text or numbers that are not used in a mathematical formula or equation. They help the reader understand different parts of a worksheet, ie column headings, row headings, title of a worksheet, etc.

Values

Values are data that are used to calculate results or the end result of a calculation.

Reference to particular data could easily be described by the use of cell references to show how an amount was calculated, eg the Total Shirts figure of \$4,909.23 would be shown in an electronic spreadsheet as a formula, =B6+C6+D6. If one of the figures was changed the formula would update automatically because *cell references* are used to calculate the total and not the actual figures.

Working with Formulas

A spreadsheet with the figures already calculated is shown below. You will see later that an Excel worksheet is similar, except you can view the *formulas* on screen (as well as the calculated results).

	A	B	C	D	E	F	G
1	Kelly's Budget						
2							
3		January	February	March	Total	Average	
4	<u>Income</u>						
5	Wages	380	380	380	1140	380	
6							
7	<u>Expenses</u>						
8	Clothing	100	80	120	300	100	
9	Makeup	18	26	10	53	17.67	
10	Car	80	80	80	240	80	
11	Board	100	100	100	300	100	
12	TOTAL	298	286	310	893	297.70	
13							
14	Balance	82	96	70	247	82.33	
15							
16	Check Expenses Total			893			
17	Check Balance Total			247			
18	Check Average Total			82.33			

In an electronic spreadsheet a formula uses cell references and operators (such as +, -, *, /). Formulas can be identified by the = sign that appears at the beginning of a formula.

Cell References

A cell reference is used to identify data and is made up of two parts. The first part is the column letter. The second part is the row number. For example, the total of the January expenses is in cell reference B12 (B = column B and 12 = row 12). Total Income is cell reference E5.

Solutions to the following tasks are located at the end of this section.

Task 1

➤ Complete the table below using the spreadsheet above.

Cell Reference	Description of Data
	Check Average Total (figure)
F5	
D16	
	March Wages (figure)
	Average Car (figure)
E12	

Basic Formulas

In an electronic spreadsheet a formula always starts with =. This identifies that the cell contains a formula, not general data. Cell references and operators are used to create formulas.

Operators

An operator is a mathematical action, eg addition, subtraction, multiplication, division, etc.

Operator Symbols

+	Addition	/	Division
-	Subtraction	*	Multiplication

A few examples of formulas at work are shown below.

	A	B	C	D	E	F	G
1	Kelly's Budget						
2							
3		January	February	March	Total	Average	
4	<u>Income</u>						
5	Wages	380	380	380	1140	380	

The formula in cell E5 would read: =B5+C5+D5

The formula in cell F5 would read: =E5/3

Task 2

- Write formulas for the following. The first one has been completed for you. The solution to this Task can be found at the end of this section.

Question	Answer
The average of the following cells: D6, D7, D8, D9	=(D6+D7+D8+D9)/4
Adding cells B6, D6 and E6 together.	
The difference between cells E9 and E12.	
What is average profit over the 12 months if the total for all the months is shown in cell D20.	
Total value of stock where Unit Price = C3 and Quantity = B3	

Using Formulas to Check other Formulas

The spreadsheet below displays arrows that show the flow of data that is calculated. The data in rows 5, 8-11 are added and the results displayed in the Total column. The data in the Total column is added in sections down the column.

The Check Expenses Total is the total of each column added together as if you were adding across row 12. The figure produced can then be checked against the figure displayed in the Total column. This is called “cross-checking”.

	A	B	C	D	E	F	G
1	Kelly's Budget						
2							
3		January	February	March	Total	Average	
4	<u>Income</u>						
5	Wages	380	380	380	1140	380	
6							
7	<u>Expenses</u>						
8	Clothing	100	80	120	300	100	
9	Makeup	18	26	10	53	17.67	
10	Car	80	80	80	240	80	
11	Board	100	100	100	300	100	
12	TOTAL	298	286	310	893	297.70	
13							
14	Balance	82	96	70	247	82.33	
15							
16	Check Expenses Total			893			
17	Check Balance Total			247			
18	Check Average Total			82.33			

Formulas used

	A	B	C	D	E	F	G
1	Kelly's Budget						
2							
3		January	February	March	Total	Average	
4	<u>Income</u>						
5	Wages	380	380	380	=B5+C5+D5	=E5/3	
6							
7	<u>Expenses</u>						
8	Clothing	100	80	120	=B8+C8+D8	=E8/3	
9	Makeup	18	26	10	=B9+C9+D9	=E9/3	
10	Car	80	80	80	=B10+C10+D10	=E10/3	
11	Board	100	100	100	=B11+C11+D11	=E11/3	
12	TOTAL	=B8+B9+B10+B11	=C8+C9+C10+C11	=D8+D9+D10+D11	=E8+E9+E10+E11	=E12/3	
13							
14	Balance	=B5-B12	=C5-C12	=D5-D12	=E5-E12	=E14/3	
15							
16	Check Expenses Total			=B12+C12+D12			
17	Check Balance Total			=B14+C14+D14			
18	Check Average Total			=D17/3			

Task 3

- Write the formulas for the spreadsheet shown below. The solution to this exercise is at the end of this section.

	A	B	C	D	E	F	G
1	PARKINSON INDUSTRIES						
2				JANUARY	FEBRUARY	MARCH	TOTAL
3	<u>INCOME</u>						
4	NET SALES			155,000	120,000	115,000	
5							
6	<u>OPERATING EXPENSES</u>						
7	SALARIES			35,000	30,000	25,000	
8	UTILITIES			15,000	14,000	13,250	
9	RENT			3,500	3,500	3,500	
10	ADVERTISING			1,000	1,000	1,000	
11	COST OF GOODS SOLD			50,000	50,000	50,000	
12	TOTAL OPERATING EXPENSES						
13							
14	OPERATING INCOME						
15							

Task 4


- Use a calculator to calculate the formulas you wrote in above. Fill in the spreadsheet below with the results. Solutions to this Task are at the end of this section.

	A	B	C	D	E	F	G
1	PARKINSON INDUSTRIES						
2				JANUARY	FEBRUARY	MARCH	TOTAL
3	<u>INCOME</u>						
4	NET SALES			155,000	120,000	115,000	
5							
6	<u>OPERATING EXPENSES</u>						
7	SALARIES			35,000	30,000	25,000	
8	UTILITIES			15,000	14,000	13,250	
9	RENT			3,500	3,500	3,500	
10	ADVERTISING			1,000	1,000	1,000	
11	COST OF GOODS SOLD			50,000	50,000	50,000	
12	TOTAL OPERATING EXPENSES						
13							
14	OPERATING INCOME						
15							

Solving a Problem with a Spreadsheet

Spreadsheets are used to provide a solution to a problem. An example of a problem for The Music Box is shown below. On the next page you will see a sketched solution using a spreadsheet.


Hi Tony
 Could you put together a spreadsheet for me. I need to know the total sales for each month. The information sent in by each branch is attached.

 **The Music Box**
 Nelson Branch

Facsimile

To: Kevin
 From: June
 Date: 20 May
 Subject: Sales
 No. of pages: 1


January 18,750
 February 19,250
 March 16,000
 April 16,750

 **The Music Box**
 Gisborne Branch

Facsimile

To: Kevin
 From: Max
 Date: 19 May
 Subject: Sales Figures
 No. of pages: 1


January	19,750
February	18,250
March	19,000
April	17,750

 **The Music Box**
 Douglas Branch

Facsimile

To: Kevin
 From: Bruce
 Date: 22 May
 Subject: Sales for January-April
 No. of pages: 1

Month	Sales
January	12,580
February	11,500
March	11,250
April	12,750

 **The Music Box**
 Bayswater Branch

Facsimile

To: Kevin
 From: John
 Date: 18 May
 Subject: Jan-April Sales
 No. of pages: 1

January 15,800; February 16,200;
 March 17,750; April 15,200

Regards
 John

Solution created manually

	A	B	C	D	E	F	G
1	The Music	Box					
2							
3		January	February	March	April	Total	
4	Nelson	18,750	19,250	16,000	16,750	=B4+C4+D4+E4	
5	Douglas	12,580	11,500	11,250	12,750	=B5+C5+D5+E5	
6	Bayswater	15,800	16,200	17,750	15,200	=B6+C6+D6+E6	
7	Gisborne	19,750	18,250	19,000	17,750	=B7+C7+D7+E7	
8		=B4+B5+	=C4+C5+	=D4+D5+	=E4+E5+	=F4+F5+	
9		B6+B7	C6+C7	D6+D7	E6+E7	F6+F7	
10							

The + operator is used to calculate a column or row, in the above manual spreadsheet.

Ranges

In cell B8 above you have used +B4+B5+B6+B7. As you can imagine, it would be very time consuming in a very large spreadsheet to have to add cells in this way. A “range” is therefore used.

B4:B7 is referred to as a “range”, which is simply a group of cells. Cell B4 indicates the start of the range, the colon indicates “to” and cell B7 indicates the end of the range. A range is easier to use instead of typing =B4+B5+B6+B7.

In Excel a group of cells can be selected and the data totalled using the AutoSum button Σ . The AutoSum button uses the function called SUM which is the term used “to add”.

The formula in cell B8 would therefore be =SUM(B4:B7), ie add cells B4 to B7.

Solution created in Excel

	A	B	C	D	E	F
1	The Music Box					
2						
3		January	February	March	April	Total
4	Nelson	18,750	19,250	16,000	16,750	70,750
5	Douglas	12,580	11,500	11,250	12,750	48,080
6	Bayswater	15,800	16,200	17,750	15,200	64,950
7	Gisborne	19,750	18,250	19,000	17,750	74,750
8		66,880	65,200	64,000	62,450	258,530
9						

Task 5

- Write down the formula (using a range) Excel would use in cell F4 above.

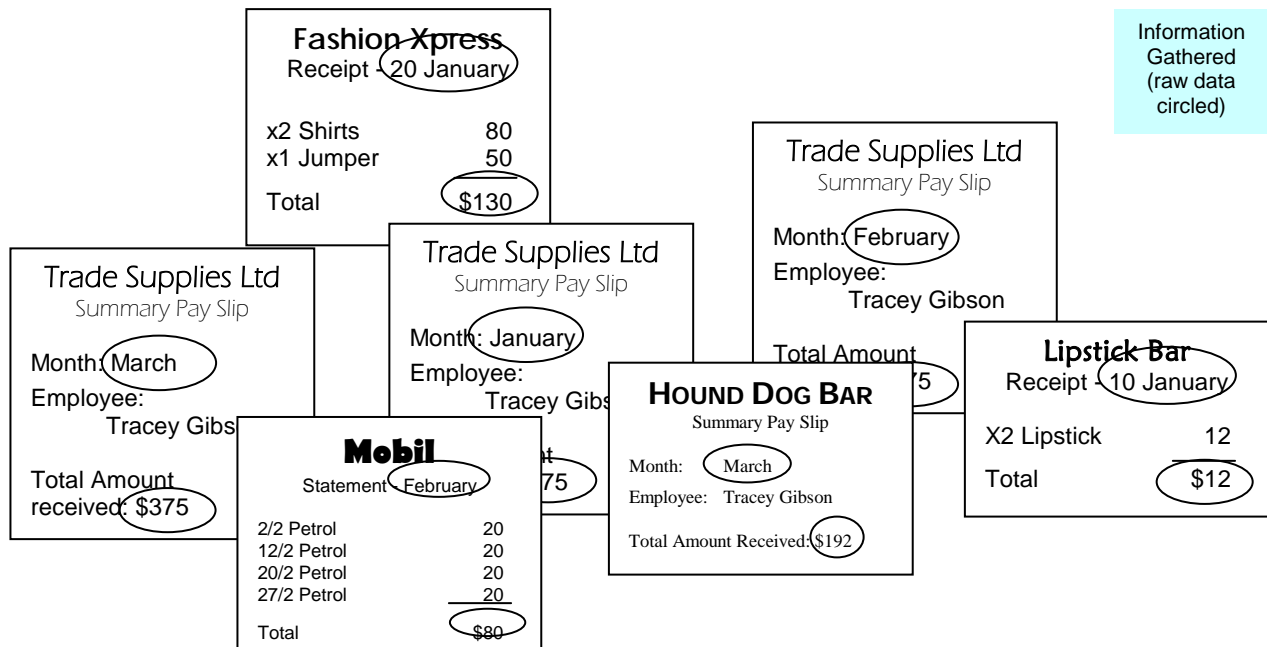
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Spreadsheet Design

Before designing a spreadsheet you need to gather all information required and determine whether producing a spreadsheet will help you solve the problem. Once you have decided that a spreadsheet can be used to solve the problem, the information gathered is analysed by asking the following questions:

- What is the purpose of the spreadsheet?
- Who is the spreadsheet for?
- What data is relevant?
- What data is irrelevant?

Below is some of the raw data that Tracey is going to use to plan her budget; the data includes her income and expenditure. (A sample of the completed spreadsheet is shown on the next page.)



By asking the questions listed above you can quickly determine what information is going into the spreadsheet.

First a spreadsheet will need to have a heading identifying its purpose. This heading will need to explain what the spreadsheet is about and the data displayed, eg Tracey's Budget, January-March.

Raw/source data (numbers, etc to be entered from the information gathered) will need to be arranged into a logical order, eg arranged into columns by month. If there are multiple calculations to be performed you will need to evaluate what data is required for which calculations. The example used here contains raw data for income and for expenses, you would group all the income together and group the expenses in a separate area of the spreadsheet. This would allow you to calculate the total income and the total expenses without getting the two different sets of data confused.

Data is grouped by month

	A	B	C	D	E
1	TRACEY'S BUDGET				
2	January-March				
3					
4		January	February	March	Total
5					
6	Income				
7	W/P Job	375	375	375	
8	Dairy Job	80	75	130	
9	Waitress	120	150	192	
10					
11	TOTAL INCOME				
12					
13	Expenses				
14	Clothing	130	75	104	
15	Makeup	12	18	9	
16	Car	80	80	80	
17	Board	100	100	100	
18	Leisure	75	75	75	
19					
20	TOTAL EXPENSES				
21					
22	BALANCE				
23					

Spreadsheet is identified

Income is grouped

Expenses are grouped

The format and appearance of a spreadsheet needs to be kept clear, simple and consistent.

In the above example all major headings appear in bold. The totals for each group are shown with a line separating the data from the calculation. The final calculation (BALANCE) is shown with a single top border and double bottom border for importance and to indicate it is a separate calculation.

Typically data should flow down the spreadsheet so it is easy to read with the final outcome at the bottom.

When designing and producing a spreadsheet you need to ensure that it complies with the following guidelines.

Appropriate Formatting	Appropriate fonts and font sizes should be used so that the spreadsheet is easy to read and interpret. Suitable borders and shading highlight important information so that it stands out.
Data Integrity	Check the entered data against source documents to ensure that it is valid. Human error such as transposing numbers (accidentally changing the arrangement of the numbers, eg typing 19 instead of 91) can easily be overlooked.
Accuracy	Ensure that formulas and cell references are correct. Because spreadsheets look professional it is easy for an error to go unnoticed so check the document for accuracy. Loss of finances or acute embarrassment could be the result of an error. Tests should be carried out to check that formulas work properly.

Audited Formulae	Errors in a spreadsheet will result in information that is inaccurate and misleading. Auditing tools are available in Microsoft Excel to assist the user in checking formulas and the range of cells that are dependent on the outcome.
Check Totals	Most spreadsheets calculate data across columns and rows to arrive at a final amount. Use a cross checking method to ensure that the totals of both the columns and rows arrive at the same answer.
Readability	Spreadsheets must be easy to read and interpret. The user should be able to identify numbers and headings at a glance and understand how the results are arrived at. Printouts are not always used by the person that builds the spreadsheet. Other users could be data entry staff checking for accuracy or managers interpreting results. Contrasting text and background colours can be used to make headings stand out but as a general rule avoid using more than three colours on a worksheet (including black and grey).
Legibility	The spreadsheet printout should be easy to read. Text size and spreadsheet styles such as fonts and general formatting need to be selected wisely.
Presentation	Spreadsheets should look professional and well presented. Data should fit properly into columns with meaningful headings. If a specific style is used by your organisation, then apply that style type to your spreadsheet.

Charts

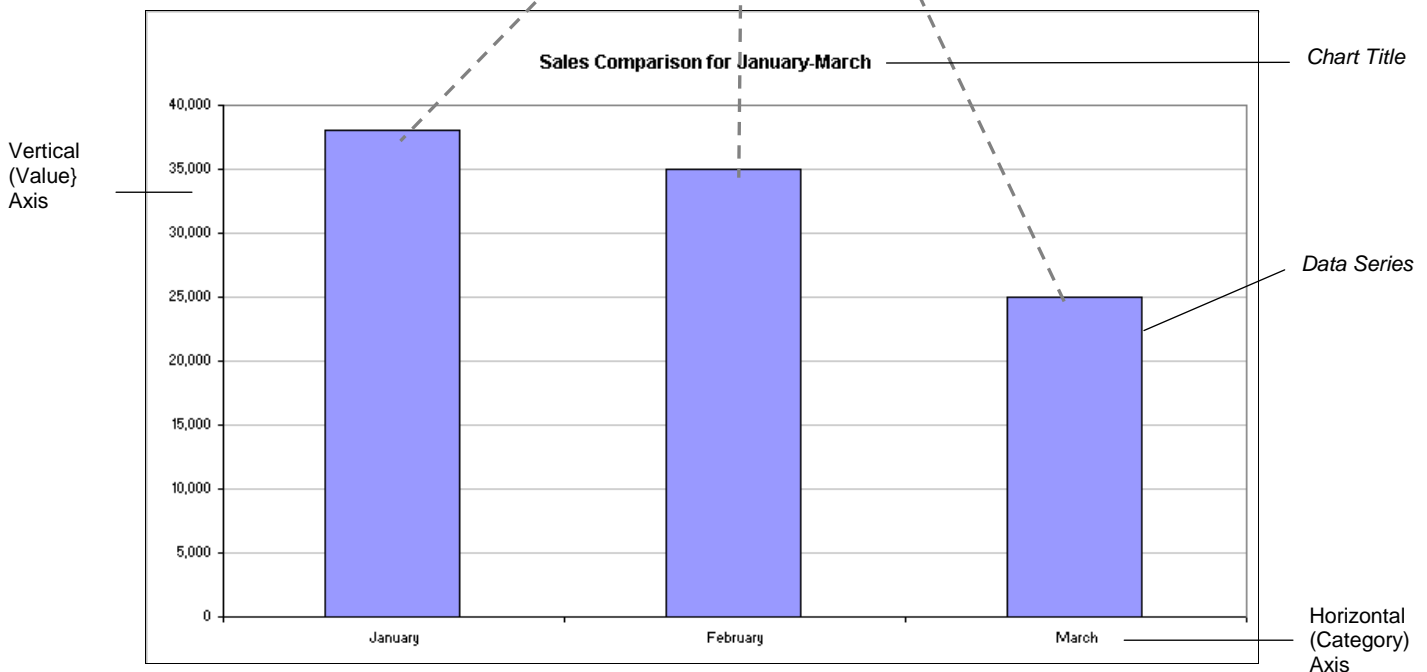
A chart (or graph) represents data graphically. Displaying the data as a chart allows you to see comparisons or trends that you might not have necessarily seen when looking at the spreadsheet data.

A column chart representing The Shoe Shop data is shown below to compare total sales for each month.

The Shoe Shop

	January	February	March	Total
Bayswater	12,000	10,800	9,500	32,300
Albany	8,500	8,000	8,300	24,800
Belmont	6,000	5,200	5,400	16,600
Glenfield	11,500	11,000	1,800	24,300
	38,000	35,000	25,000	98,000

This group of data is represented below and is referred to as the *Data Series*



The common elements of a chart are shown above - Excel assigns the names shown in italics.

The process in creating a manual chart is as follows:

- 1 Determine the data that is to be displayed in the chart. This usually provides the name of the chart (eg Sales Comparison for January-March).
- 2 Round the highest value upwards to the nearest 5,000 unit, eg 38,000 will be rounded upwards to 40,000. This will be the highest point of the range of values at the left of the chart. Insert figures in increments evenly down the left of the chart to 0 (our example shows increments of 5,000 but other increments could be used).

To create the chart, you will use the column headings (ie categories), eg January, February and March which will be displayed at the bottom of the chart and the totals, eg 38,000, 35,000, 25,000.

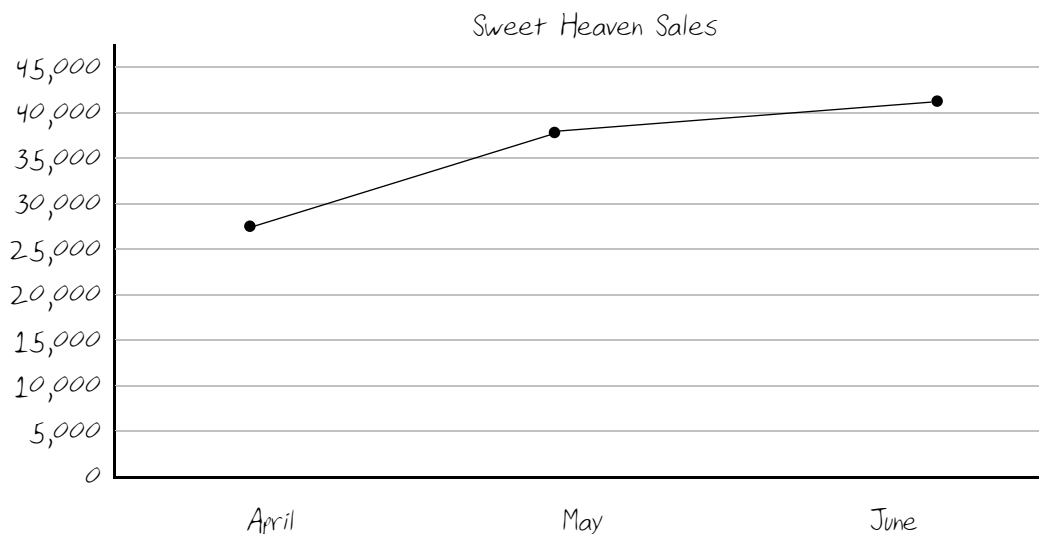
- 3 Write the names of the categories, eg January, February and March, along the bottom of the chart.
- 4 Draw blocks representing the value for each category, eg for January draw upwards to 38,000; February 35,000; March 25,000.

Examples of charts - column chart and line chart - that have been created manually.

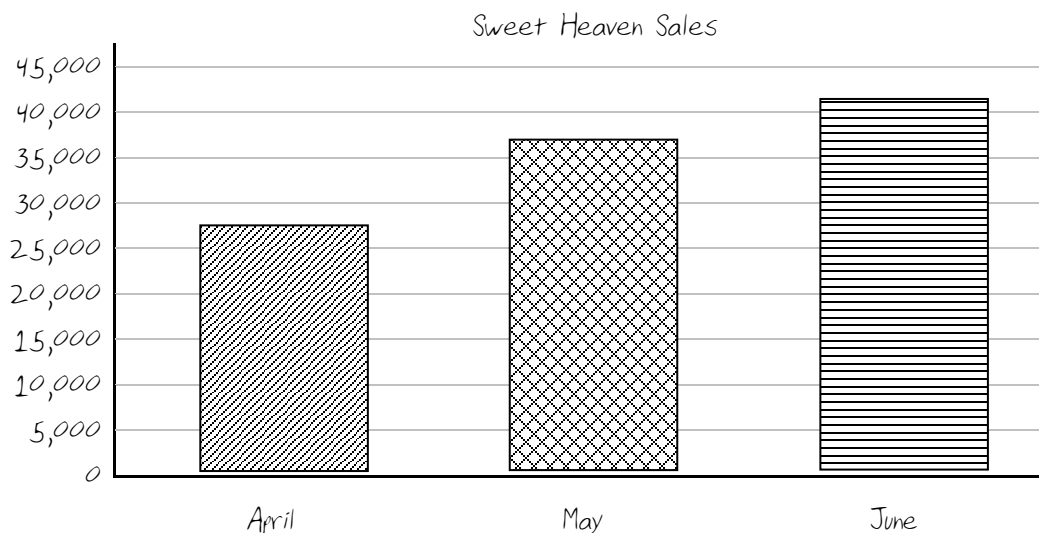
SWEET HEAVEN SALES				
	APRIL	MAY	JUNE	TOTAL
GISBORNE	10,450	11,880	13,200	35,530
BRUNSWICK	9,130	8,800	9,100	27,030
DRUMMOND	5,940	5,720	6,600	18,260
GLENROY	1,980	12,100	12,600	26,680
	27,500	38,500	41,500	107,500

Data displayed in the charts below

Line Chart



Column Chart



In Excel data can be selected, a chart type chosen and Excel will then create the chart for you. If data is altered in the worksheet the changes made will be reflected in the chart. Later in this book you will learn more about charts.

Task 6

- Using the data marked below manually create a *line* chart to show the Sales Commission for October, November and December in the area provided (use increments of 500). Give the chart an appropriate title.

SALES COMMISSION	OCTOBER	NOVEMBER	DECEMBER	TOTAL
MARK	2,000	1,000	1,000	4,500
CINDY	1,500	2,500	2,000	6,000
ROBERT	2,500	1,000	2,500	7,000
	6,000	4,500	5,500	17,500

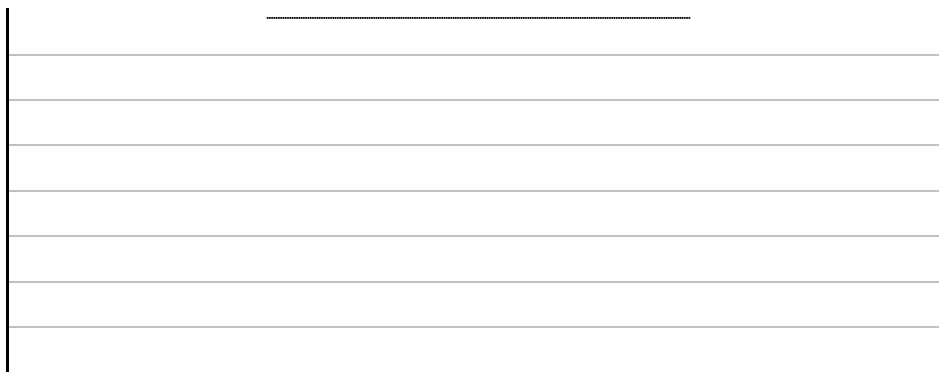
Chart this data



Task 7

- Using the data below manually create a *column* chart in the area provided to show the comparison of distance learning class enrolments (use increments of 100). Give the chart an appropriate title.

Distance Learning - Students	Basic Computing	Word Processing	Spreadsheets	Databases
Term 1	500	650	400	300



Solutions to Tasks

Task 1

Cell Reference	Description of Data
D18	Check Average Total (figure)
F5	Average Wages Total (figure)
D16	Check Expenses Total (figure)
D5	March Wages (figure)
F10	Average Car (figure)
E12	Total

Task 2

Question	Answer
The average of the following cells: D6, D7, D8, D9	$=(D6+D7+D8+D9)/4$
Adding cells B6, D6 and E6 together.	$=B6+D6+E6$
The difference between cells E9 and E12.	$=E9-E12$
What is average profit over the 12 months if the total for all the months is shown in cell D20.	$=D20/12$
Total value of stock where Unit Price = C3 and Quantity = B3	$=C3*B3$

Task 3

	A	B	C	D	E	F	G
1	PARKINSON INDUSTRIES						
2				JANUARY	FEBRUARY	MARCH	TOTAL
3	<u>INCOME</u>						
4	NET SALES			155,000	120,000	115,000	$=D4+E4+F4$
5							
6	<u>OPERATING EXPENSES</u>						
7	SALARIES			35,000	30,000	25,000	$=D7+E7+F7$
8	UTILITIES			15,000	14,000	13,250	$=D8+E8+F8$
9	RENT			3,500	3,500	3,500	$=D9+E9+F9$
10	ADVERTISING			1,000	1,000	1,000	$=D10+E10+F10$
11	COST OF GOODS SOLD			50,000	50,000	50,000	$=D11+E11+F11$
12	TOTAL OPERATING EXPENSES			$=D7+D8+D9+D10+D11$	$=E7+E8+E9+E10+E11$	$=F7+F8+F9+F10+F11$	$=G7+G8+G9+G10+G11$
13							
14	OPERATING INCOME			$=D4-D12$	$=E4-E12$	$=F4-F12$	$=G4-G12$
15							

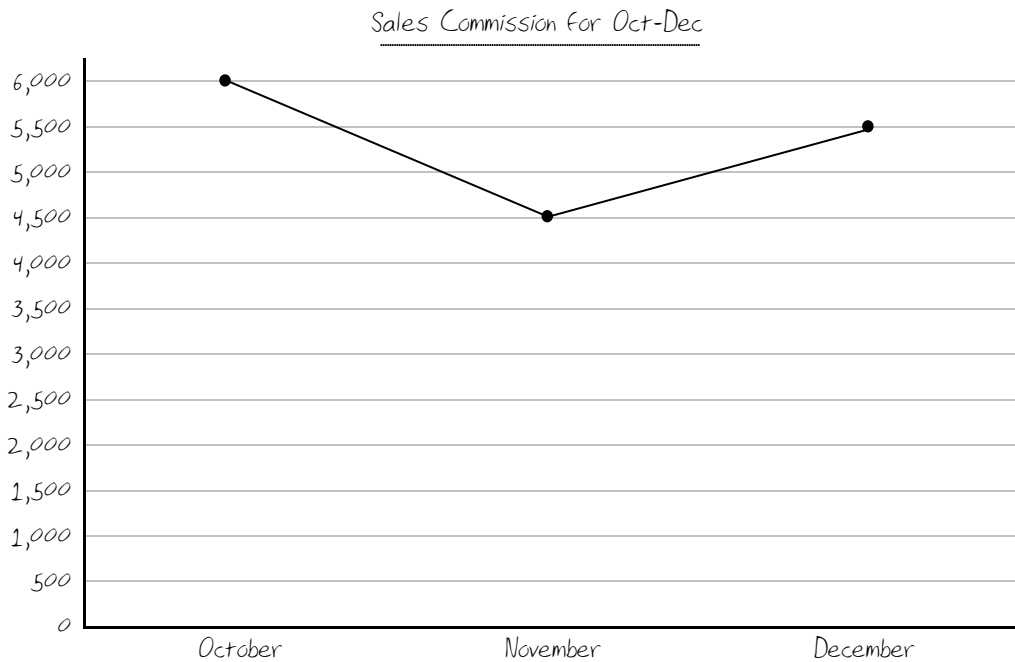
Task 4

	A	B	C	D	E	F	G
1	PARKINSON INDUSTRIES						
2				JANUARY	FEBRUARY	MARCH	TOTAL
3	<u>INCOME</u>						
4	NET SALES			155,000	120,000	115,000	390,000
5							
6	<u>OPERATING EXPENSES</u>						
7	SALARIES			35,000	30,000	25,000	90,000
8	UTILITIES			15,000	14,000	13,250	42,250
9	RENT			3,500	3,500	3,500	10,500
10	ADVERTISING			1,000	1,000	1,000	3,000
11	COST OF GOODS SOLD			50,000	50,000	50,000	150,000
12	TOTAL OPERATING EXPENSES			104,500	98,500	92,750	295,750
13							
14	OPERATING INCOME			50,500	21,500	22,250	94,250
15							

Task 5

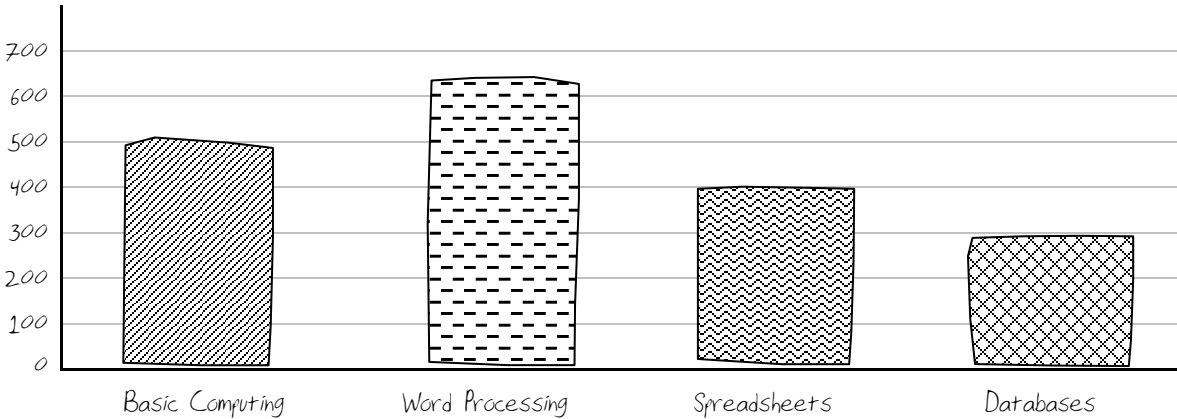
=SUM(B4:E4)

Task 6



Task 7

COMPARISON OF DISTANCE LEARNING CLASS ENROLMENTS



Revision

1 What is a label?

.....
.....

2 What is a cell reference?

.....
.....

3 Which symbol is used to identify a formula?

.....

4 List two elements commonly found in a spreadsheet.

.....
.....

5 What can be used to enhance the appearance of your spreadsheet?

.....
.....

6 What information is usually included in a worksheet that identifies the data shown?

.....
.....
.....

7 What is a chart?

.....
.....

8 What is another name for chart?

.....

9 What does the Vertical (Value) Axis represent?

.....
.....
.....

10 Match the operator symbols with the names.

- | | |
|---|----------------|
| * | Addition |
| + | Multiplication |
| - | Division |
| / | Subtraction |