



مدرسة قطر للعلوم المصرفية وإدارة الأعمال الثانوية
Qatar Banking Studies and Business
Administration | Secondary School

ICT Skills

مهارات تكنولوجيا المعلومات

Grade 11 | Business

نبني
اقتصادي
المستقبل

• Semester 1

طبعة 2022-1444



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قَسَمًا بِمَنْ نَشَرِ الضِّيَاءَ
تَسْمُو بِرُوحِ الْأَوْفِيَاءِ
وَعَلَى ضِيَاءِ الْأَنْبِيَاءِ
عِزٍّ وَأَمْجَادِ الْإِبَاءِ
حُمَاتُنَا يَوْمَ النَّدَاءِ
جَوَارِحُ يَوْمِ الْفِدَاءِ

قَسَمًا بِمَنْ رَفَعَ السَّمَاءَ
قَطْرُ سَتَبَقَى حُرَّةً
سِيرُوا عَلَى نَهْجِ الْأَلَى
قَطْرُ بِقَلْبِي سِيرَةً
قَطْرُ الرَّجَالِ الْأَوَّلِينَ
وَحَمَائِمُ يَوْمِ السَّلَامِ

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Published by:

Qatar Banking Studies and Business Administration
Independent Secondary School
PO Box 31202
DOHA QATAR
Telephone: +974 44876351 Facsimile: +974 42417211

Printed for Qatar Banking Studies and Business
Administration Independent Secondary School

First published: September 2011 Version: 3



Acknowledgements

These resources were developed by the Qatar Commercial Education Project Team in the State of Qatar, in conjunction with Holmesglen Institute of TAFE in Melbourne, Australia. Holmesglen Institute of TAFE would like to acknowledge the contribution made by:

Mr Warren Wilkinson	Australian Team Project Manager
Mr Graham Smith	Business/Banking Teaching Adviser
Ms Debra Plueckhahn	ESL Teaching Adviser
Mr Stephen Parratt	Teacher Training Adviser

All of the teaching staff at Qatar Banking Studies and Business Administration Independent Secondary School who have made a contribution to the development of these resources.

Refinement and editing of education content has been further developed by the Learning Innovation and development department at Holmesglen Institute of TAFE, in particular:

Ms Grisel Arancio	Administration and template design
Ms Krystal Robinson	
Mr Matt Morris	Graphic design



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About this Learner Resource

The purpose of this Learner Resource is to provide you with the underpinning knowledge required to assist you in completing assessment/s in Produce spreadsheets.

This Learner Resource also contains activities for you to test your knowledge and examples of skills application.

Throughout this Learner Resource, you will see an icon that provides opportunities to test your knowledge and practice skills. This icon is displayed as follows:



Practice

This icon is used to highlight an ideal time to test your knowledge or practice what you have learnt.

How will I be assessed?

In order to achieve competency in Produce spreadsheets you will need to demonstrate the skills and knowledge required for the unit.

Your teacher will decide with you how and when you will be assessed.

Copyright

Parts of this Learner Resource (text and graphics), may have been obtained from other sources and are reproduced within the laws and rights of copyright.

About this unit

Welcome to the Learner Resource for Produce spreadsheets. In this Learner Resource you will be learning about the performance outcomes, skills and knowledge required to develop spreadsheets through the use of spreadsheet software.

It is suggested that to meet all the requirements of Produce spreadsheets you will need to complete the following tasks:

- Read the information contained in this Learner Resource.
- Complete the activities.
- Complete all the required assessment/s for this unit.

The topics in this Learner Resource are:

- Select and prepare resources
- Create simple spreadsheets
- Produce simple charts
- Finalise spreadsheet



Introduction



You are about to commence a vocational course where you will be required to demonstrate your competency in developing spreadsheets through the use of spreadsheet software. This unit of competency covers the skills and knowledge required to create and design spreadsheets that encompass formatting, formulae and charts, working under minimal supervision.



Select and prepare resources

The first task you will need to consider when producing spreadsheets is how to select and prepare the resources you will need to successfully complete the task.

Workplace health and safety issues

The ergonomic requirements of the individual employee is a significant workplace health and safety (WHS) issue. As this unit focuses on using the computer to create and use spreadsheets, we need to be aware of the design of the office environment and the individual workstation.

It is recommended that you consider the following to prevent WHS issues when operating computers at workstations within an office environment:

- style of workstation or desk, depending upon the functions to be performed
- workstation or desk height
- placement of workstation within the office
- placement of keyboard to align with computer monitor and body, mouse and computer monitor, in-out tray, and other equipment regularly used
- computer monitor stand, wrist or forearm rests or document holders, and their placements
- placement of storage facility for items needed to be accessed regularly, such as training manuals, paper, envelopes, pens and so on
- placement of necessary filing cabinets
- adequate leg room underneath workstation or desk
- footrest
- lighting, including optimum lighting for the required task(s), reduction of glare and reflections from work surfaces

- noise of nearby equipment or machinery
- provision of privacy and place to talk without interrupting others
- air quality, temperature, including impact from heating/cooling vents
- adjustable chair to provide proper support and height
- telephone headset for frequent use
- cabling protection.

Look at the following checklist and answer the questions about your current workstation.

Checklist	Yes	No
Do you have an individual workstation?		
Is there enough space around your furniture to gain access to the workstation and move around it comfortably?		
Is your desk large enough to accommodate all your work?		
Is your desk at the correct height?		
Is your chair comfortable and able to be adjusted?		
Is your computer screen at a comfortable reading distance?		
Is the height and angle of your monitor correct?		
Is there sufficient space to move your mouse effectively?		
Is the keyboard angled correctly?		
Do you have to twist your neck to see your work?		
Are document holders available?		
Can you place your feet on the floor or is there a footrest available?		
Is the monitor clean and the image stable?		
Does your monitor reflect glare from windows and other objects?		
Is the lighting satisfactory, not too bright or too dull?		

Many employees spend most of their day using the computer. It is essential that a correct posture is maintained throughout the day to avoid muscle or joint strain.

Developing touch-typing skills helps to reduce strain in moving the head frequently in order to look at the keyboard, particularly when typing from a document.

When typing, you should ensure that your fingers are curved over the keyboard with each of your thumbs over the spacebar. Wrists should not be raised and elbows should be alongside your body.

At your workstation, you should exercise frequently to prevent injuries from overuse. Be mindful of wrists, arms, shoulders, neck and head, taking adequate breaks from repetitive tasks, such as using a keyboard and mouse.

Eye strain is also a common problem when working at the computer for long periods of time. Look away from the monitor frequently to give your eyes a rest. Blinking often will stop your eyes from drying out.

If ergonomic requirements are not considered, then a worker could suffer all, or any of the following:

- aggravation of an existing injury or illness
- neck, shoulder, back, or repetitive strain injury
- eye strain or damage.

It is the responsibility of each individual to position their computer and keyboard to reduce the possibility of workplace injury.

Tick off the following to ensure that your computer and keyboard are correctly positioned.



Arrange your work area so that you are directly facing both the computer and keyboard. This helps to avoid unnecessary twisting and turning.

The monitor should be at eye level when sitting. Check to see you are looking directly at the top line of the screen. This reduces the chance of stressing your neck muscles.

Place monitor at arm's length away from you to reduce visual fatigue.

Tilt your screen to reduce glare.

Provide enough workspace for the keyboard, mouse, and other attachments so you are able to move about freely without bumping into things.

Adjust your chair so that the keyboard is at elbow level. Your forearms, wrists and hands should be in a straight line parallel to the floor as you type



You are required to adjust your workspace, furniture and equipment every time you use the computer facilities. You will be observed and assessed throughout this course on your ability to consistently demonstrate appropriate ergonomic practices.

Conservation techniques

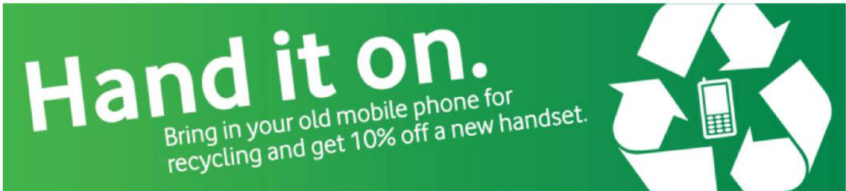
Environmentally sustainable work practices are procedures adopted within a work environment that contribute to a reduction in the use of the earth's limited resources. It is generally accepted that we must conserve and manage these resources for our own needs so that we do not compromise the ability of future generations to meet their needs.

Some states and countries will have laws that apply to large corporations. There may also be laws that relate to specific industries which ensure that materials are disposed off appropriately.

Organisations will also have policies and procedures in place to minimise wastage. For example, some businesses will have policies for the shredding of paper or the correct disposal or recycling of consumables.

Vodafone Qatar is proactive in promoting environmentally sustainable work practices.

Read the following advertisement to see one way in which it is pursuing its environmentally sustainable ideals.



Hand it on.
Bring in your old mobile phone for recycling and get 10% off a new handset.

Hand it on.
Bring in your old mobile phone for recycling and get 10% off a new handset.

Hundreds of thousands of unwanted mobile phones are discarded every year. When dumped in landfills, the metals and chemicals from these handsets leak out and pollute the land, air and water. But there is a better way.

Vodafone has launched Qatar's first mobile phone recycling programme. If you've got an old mobile phone that you don't need anymore, bring it in-store and drop it in our handset recycling box. Phones that no longer work will be dismantled and recycled in a responsible way, while phones that do will be given a new life elsewhere.

What's in it for you?

To thank you for recycling your old mobile phone and taking care of our environment, we'll give you a voucher for **10% off** the price of a brand new handset.

So go on, hand it on.

What can businesses do to respond to conservation issues?

- Use of email instead of printing and mailing correspondence
- Water conservation
- Paper recycling – prepare note pads from scrap paper`
- Make double sided paper copies where possible
- Shredding of confidential waste paper for recycling
- Turn off mobile phones
- Recycling of printer cartridges
- Use of energy efficient lighting
- Electronic filing and archiving
- Use of power-saving options and stand-by functions on office equipment
- Turning office equipment off at power source when not in use
- Car pooling

Read the following article to see what other procedures Vodafone Qatar has implemented in support of its environmentally sustainable work practices.

News

Vodafone Qatar offers 'green' ideas to all companies

Friday 22 October 2010 | 11:13 CET

Vodafone Qatar is encouraging all companies to adopt some of its "simple yet effective" ideas to "make a world of difference" in protecting the environment following the success of its "Green Office" drive. To kick start the campaign, Vodafone introduced video-conferencing facilities to cut down on business travel and reduce carbon emissions, and purchased non-polluting, energy efficient items such as office furniture and carpets that can be reused and recycled at the company's Qatar Science & Technology Park headquarters. The operator says nurturing a 'Green' world is one of the pillars of its Vodafone Corporate Responsibility, which aims to lead activities that protect environment and its resources. Ultimately, all paper used at Vodafone Qatar is collected and recycled by Al Sawaidi, the only paper recycling facility in Qatar. Staff training and education in environmental issues is a key factor to the success of the campaign, Vodafone said.



Practice

Practice activity 1

List the practices you believe could be implemented here at school to assist with the conservative techniques.

Task requirements

Often, supervisors will require a task to be completed by the employee. However, the supervisor may not provide specific or detailed instructions that will enable the employee to complete the task.

If this is the case, the employee will have to use appropriate questioning techniques in order to find out what key information is required to be able to perform the task.

The employee may have to consider who will be the best person to answer their questions. An organisational chart may have to be consulted in order to determine the most appropriate person to ask.

With spreadsheets, we may need to ask specific questions, such as:

- What is the purpose of the spreadsheet?
- What program is to be used?
- What data, numbers or text has to be entered?
- What is the output requirement and what formulae to Create simple spreadsheets?
- Will entering data into a spreadsheet be required?
- How is the data to be presented?
- Will the presentation of charts be necessary?
- How and where will the data be stored?

Create simple spreadsheets

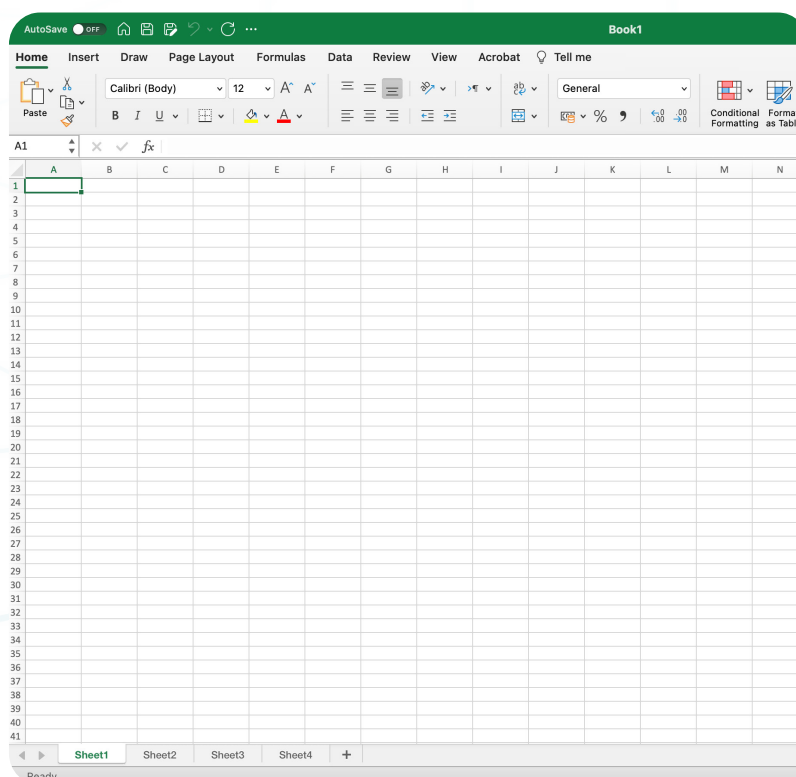
Entering data into a spreadsheet

Once you have selected and prepared the resources you need to commence creating your spreadsheet.

You first need to understand a number of basic concepts associated with spreadsheets.

A spreadsheet is actually a worksheet which is a part of a workbook. If you look at the bottom left hand corner of the page you will see that 'Sheet 1' is highlighted. We can use and save any number of sheets, which will then form parts of the same workbook.

You will also see that there are numbers down the left hand column, and letters across the top of the page. The numbers on the left, correspond to the rows across the page, and the letters at the top correspond to the columns appearing vertically. This is essentially a grid reference system, which uses these numbers and letters to determine the exact location of a cell.



When you open a worksheet, the box at the top left hand corner should be clearly highlighted – that is the active cell, and is called 'A1' as it appears at the junction of the number 1 row and number A column. As you move between cells, the highlighted cell is the 'active' cell, and its reference appears in the left hand panel below the toolbar or ribbon.



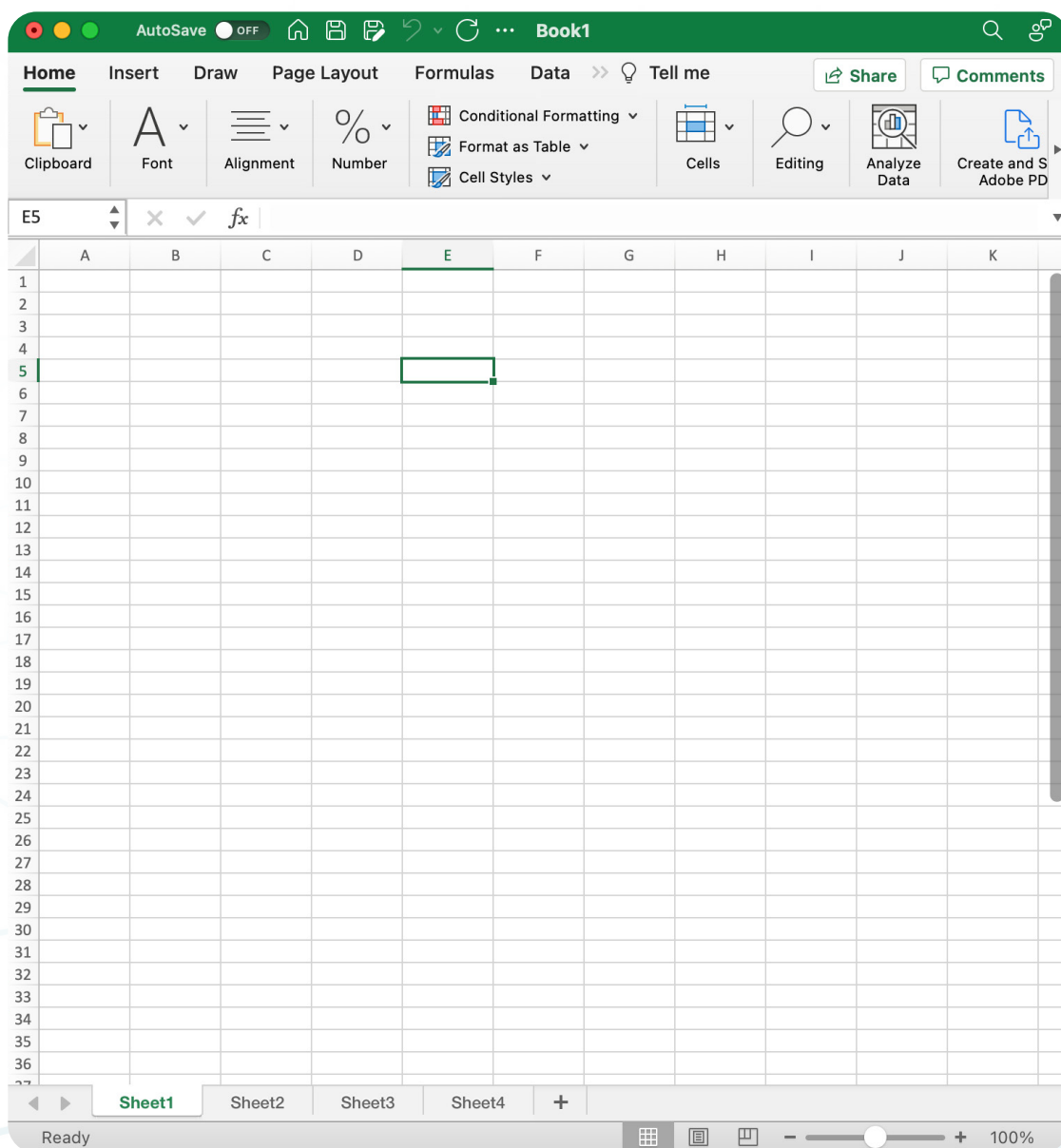
Practice

Practice activity 2

Look at the following worksheet.

What is the location of the active cell?

What is the name of the worksheet?



You can move between cells by using your mouse, left-click to activate a cell, or by using the Tab key. You should note that some manuals will tell you to press 'Enter' to secure data in the active cell and move to the next, and other programs will tell you to record data and then move to the next cell by pressing the Tab key. Provided that the correct data appears in the cell once you move to the next active cell, it does not matter which method you use to enter the data.

We will now practise working with a spreadsheet. Open excel and create a new worksheet and enter the data below. The data consists of both text and numbers.

The screenshot shows the Microsoft Excel interface with the 'Formulas' tab selected. The spreadsheet contains the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	ABC CO												
2													
3	Product	January	February	March	April	May	June						
4	A100	20	25	28	32	25	22						
5	A200	42	38	44	45	47	41						
6	A300	102	108	97	85	112	109						
7	A400	68	72	73	70	74	81						
8	A500	15	20	23	25	26	24						
9													
10													
11													
12													
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24													
25													
26													
27													

Spreadsheets consist of rows and columns of numeric data. Mathematical calculations are performed upon this data. It is therefore most important that the data entry has to be completely accurate if the results of the spreadsheet are to be relied upon.

To enter the numeric data, engage the number lock at the right hand side of your keyboard and use the numeric keys in that section or use the numeric keys located above the alpha keys in the main section of the keyboard.

Identify the differences in the following worksheet and make the changes to the spreadsheet you have already created.

Product	January	February	March	April	May	June
A100	20	25	28	32	25	22
A200	42	38	44	45	47	41
A300	102	108	97	85	112	109
A400	68	72	73	70	74	81
A500	15	20	23	25	26	24

We have seen how important it is to identify the task requirements and how you may need to consult an organisational chart to determine who the most appropriate person is to assist you with enquiries.

It is equally important to be aware of the organisational requirements in preparing spreadsheets. There may be a number of style and presentation requirements you would need to meet in order to satisfy organisational procedures. For the purposes of this unit, we will assume the following procedures should be followed at all times, unless otherwise stated.

1. Spreadsheets to be named 'drive\BSBITU304A\document_title\date'.
2. Spreadsheets to be printed showing gridlines and row and column headings.
3. Always preview your spreadsheet before printing to ensure you do not waste paper. Make sure the gridlines and row and column headings are showing.
4. Print your document but take care to make sure you only print a particular sheet or selection of a worksheet.



5. Save your work using correct protocol.
6. Amend your spreadsheet to correct any data entry or calculation errors.
7. Save your corrected work or 'save as' a different file name.

Formatting a spreadsheet using software functions

We are now ready to start creating your first main spreadsheet. The following task requirement is set out as well as all of the data you need.



Practice

Practice activity 3

You are employed by the stationery division of an organisation, and the manager wants you to calculate which of its pen products is the most profitable. The purpose of this spreadsheet is to calculate the net profit received for the sale of Super 6 pens over a period of six months.

Spreadsheet data:

- In January, the division sold 20 pens in the first week, 11 in the second week, 7 in the third week and 25 in the last week.
- In February, the numbers were 30 in the first week, 22 in the second week, 11 in the third week and 29 in the last week.
- The numbers for March were 28, 19, 8, and 22; for April they were 21, 10, 6, and 18; for May they were 15, 9, 15, and 18; and for June they were 16, 22, 20, and 21.
- Each pen sells for \$15 and the cost to the division for acquiring each pen is \$7.

Data entry:

So how do we go about this? Follow the steps in order.

Step 1

Open a new workbook.

Step 2

In the A1 cell enter 'Super 6 pens'.

Step 3

In A2 enter the word 'Month', in A3 enter 'Week 1', in A4 enter 'Week 2', in A5 enter 'Week 3' and in A6 enter 'Last week'.

Step 4

In B2 enter January, in C2 enter February, in D2 enter March, in E2 enter April, in F2 enter May, and in G2 enter June.

Step 5

Then you have to enter the number of pens sold.

1	A	B	C	D	E	F	G
2	Month	January	February	March	April	May	June
3	Week 1	20	30	28	21	15	16
4	Week 2	11	22	19	10	9	22
5	Week 3	7	11	8	6	15	20
6	Last Week	25	29	22	18	18	21

Step 6

Now we are going to total the number of pens sold in each month.

First, enter the words 'Month total' in A7, and then enter the following formulae:

- in B7 ' $=B3+B4+B5+B6$ ' (eg we are directing the program to add the amount of pens sold in the first, second, third and last week of January)
- in C7 ' $=C3+C4+C5+C6$ '
- in D7 ' $=D3+D4+D5+D6$ '
- in E7 ' $=E3+E4+E5+E6$ '
- in F7 ' $=F3+F4+F5+F6$ '
- in G7 ' $=G3+G4+G5+G6$ '.

All totals for the month should now show as 63, 92, 77, 55, 57 and 79.

Step 7

The next step is to calculate the monthly sales value, at \$15 per pen:

In A9 please enter the words 'Total sale price', then enter the following formulae:

- in B9 enter ' $=B7*15$ ' (eg we are directing the program to multiply the total number of pens sold in January by the sale price of \$15)
 - in C9 enter ' $=C7*15$ '
 - in D9 enter ' $=D7*15$ '
 - in E9 enter ' $=E7*15$ '
 - in F9 enter ' $=F7*15$ '
 - in G9 enter ' $=G7*15$ '.

The total sale price for each month should now show as 945, 1,380, 1155, 825, 855 and 1,185.

Step 8

Now let's add the total value of sales for the six months period by inserting the words 'Total sale price for period' in A11, and then in G11 entering the formula ' $=B9+C9+D9+E9+F9+G9$ ' (eg we are directing the program to add the value of pens sold for the months of January to June, both inclusive).

The value of the total sales should now be shown as \$6,345.

Step 9

We discover that we have made an error. Before we calculated the value of the total sales, we should have calculated the cost of buying the pens in order to arrive at a net profit figure. Do we have to do this all over again, or is there another way?

Fortunately, we can use the program to make most calculations, so this time we do not need to start from the beginning.

We know that the purchase price of each pen is \$7. So first we need to add up the total number of pens for the period in question.

In A13 insert the words 'Total number of pens', and then in E13 insert the formula ' $=B7+C7+D7+E7+F7+G7$ ' (eg we are directing the program to add up the total number of pens sold for each month).

The number shown should be 423.

Then in A14 insert the words 'Total cost of pens', and in E14 insert the formula ' $=E13*7$ ' (eg we are directing the program to multiply the total number of pens for the period by the purchase price of \$7).

In E14 the total acquisition cost should be shown as \$2,961.

Step 10

So now we know that the total amount the division received for the Su-

per 6 pens during the period was \$6,345 (G11), and the total costs for the Super 6 pens sold in that period was \$2,961 (E14). How do we then ascertain the net profit?

In A16 insert the words 'Net profit for period', and then in H16 insert the formula ' $=G11-E14$ ' (eg we are directing the program to deduct the total cost of the pens for the period as shown in E14, from the total sale price of the pens for the period as shown in G11).

The amount shown in H16 should be \$3,384.

Step 11

Your employer has decided that to calculate the true profit, a percentage of 2% should be deducted for handling and freight costs.

So how do we do this?

We could multiply the net cost by 2% and then deduct that 2% from the total, or we could simply multiply our total by 98% to arrive at the true profit figure.

Therefore, in A18 please insert the words 'True net profit after deduction of 2% handling', and in I18 insert the formula ' $=H16*98\%$ ' (eg we are directing the program to find 98% of the amount in H16).

The figure shown should be \$3,316.32.

Step 12

You have now completed Sheet 1 in your workbook. Save that workbook by using the designated naming and storing requirements.

Step 13

Print Sheet 1, using the designated preview/printing requirements, and place your printed work in your portfolio.

Step 14

Please turn to Activity answer 3 at the back of this workbook to check your spreadsheet and take a rest break.



Practice

Practice activity 4

Unfortunately, your employer provided you with some incorrect data and the spreadsheet previously prepared has to be amended.

However, just in case he or she decides that the original data was not an error, we will decide to be prudent and retain the previously saved spreadsheet just in case.

Spreadsheet data

Week 1 sales for March should be 15, the last week's sales for May should be 22 and June's sales for week 2 should be 20.

Data entry

Retrieve the spreadsheet you have just completed.

Follow the steps in order to insert your information into another sheet and then correct the data.

Step 1

With your mouse, using click and drag techniques, highlight all of the cells From sheet 1 and including A1 to I18.

Step 2

Copy the selection of cells and paste the selection into Sheet 2.

Step 3

In D3 change 28 to 15, in F6 change 18 to 22, and in G4 change 22 to 20.

You will notice that all of the cells in which formulae have been inserted will automatically re-calculate.

Step 4

However, we have not finished yet. Your employer has decided that the handling allowance should be 3% instead of 2%.

Step 5

Please alter cells A18 and I18 accordingly.

Step 6

Check that your work is the same as Activity answer 4 at the back of this workbook.

Step 7

Save your work.

Step 8

Review and print Sheet 2 for inclusion in your portfolio.

Step 9

Check that you have the original Sheet 1, and your new Sheet 2, in your workbook, exit the spreadsheet application and take a rest break.



Practice

Practice activity 5

You now have to re-name and colour your sheets, and then print them using the print option facility.

Spreadsheet data

Sheet 1 is to be renamed 'Original Data Super 6 pens' and sheet 2 is to be renamed 'Updated Data Super 6 pens'. Both new sheet names are to be coloured.

Data entry

Re-open your spreadsheet application, and then re-open the sheets you created in the previous two activities. Follow the steps.

Step 1

Make sure your active sheet is Sheet 1. Double left click on the 'Sheet 1' tab in the bottom left hand corner. Over the words 'Sheet 1' enter Original data Super 6 pens.

Step 2

Move to Sheet 2. Double left click on the 'Sheet 2' tab in the bottom left hand corner. Over the words 'Sheet 2' enter 'Updated data Super 6 pens'.

Step 3

Return to 'Original data super 6 pens', right click and colour the tab. Repeat and use a different colour for the tab for 'Updated data Super 6 pens'.

Step 4

Check that your work matches Activity answer 5.

Step 5

Go into Print preview, then Setup, then Header/Footer, Custom header, and in the centre section type 'Original data Super 6 pens', then 'OK' twice. Check that the print preview matches Activity answer 5.

Step 6

Print a copy of your 'Original data Super 6 pens' sheet, and include this in your portfolio.

Step 7

Repeat these actions in respect to 'Updated data Super 6 pens', make sure you save your amendments, print a copy for your portfolio and then take a rest break.



Practice

Practice activity 6

You now have to format your spreadsheet by merging cells, centring headings, expanding column widths and changing the page orientation.

Spreadsheet data

'Updated Data Super 6 pens' is to be formatted into a new sheet, renamed

'Formatted updated data Super 6 pens' and with the tab coloured. The heading, Super 6 pens is to be merged and centred.

Column A is to be expanded.

Both new sheet names are to be coloured.

Data entry

Re-open your spreadsheet application, and then open the sheets you created in the previous activities. Follow the steps below.

Step 1

Open your 'Updated data Super 6 pens sheet', and then copy and paste it into Sheet 3.

Rename Sheet 3 as 'Formatted Super 6 pens sheet'.

Step 2

We will now change some attributes in your sheet:

- Go to cell A1, click and drag across to I1. In the Home tab and in the alignment section of the ribbon, click on 'merge and centre'.
- Then in B25 type the total net profit figure of 3197.12, then in A25

type 'Total net profit Super 6 pens' and press 'Enter'.

- You will see that all of the words in A25 are not visible in the cell (although you can see them in the top right hand panel).
- Whilst the active cell is A25, please go to Format Cells (right click), Alignment, click 'Shrink to fit' and 'OK'. You will now be able to see all of the words in A25.

Then with your mouse, click on the junction of A and B, and move the cell divider to the right until you can see the words in A25 in normal size.

Column I is now located on page two of the sheet, and will appear on a separate page when printed!

Step 3

You will need to make some changes to ensure that all of the figures appear on the same page. We have a number of options:

- Go to Print or Print preview, find the Page setup, and set orientation to Landscape.
- Alternatively, you could go to Print or Print preview and 'shrink' to fit to one page. All components of the sheet will then print on the same page.

Step 4

Check that your work is the same as Activity answer 6.

Step 5

Print two copies using each of the methods above. Print one copy using landscape orientation and print another copy by shrinking and 'fit to one page' on portrait. Save your changes, include both printed sheets in your portfolio and take a rest break.

Using and testing of formulae to meet task requirements

It has been noted previously how important it is to enter data correctly. The same applies to entering formulae. Entering incorrect formulae will trigger an error response from the software or will produce incorrect results.

One way of checking the formula is to highlight the cell containing the formula and look at the panel under the toolbar. This will indicate exactly what formula is being used in that cell.

For more complicated formulae, you can use the 'Trace precedents' function in the formula auditing section of the Formulas tab. We will work through a simple exercise so you can see how this function works. It is a far more useful function when the worksheet is large and full of numbers with many formulae.

There are other methods of checking your formulae. Try 'Error checking' and 'Show formulas'.



Practice

Practice activity 7

Trace formulae to ensure accuracy.

Spreadsheet data

Create a new sheet.

Enter the following numbers in cells A1, B1, C1 and D1 – 235, 226, 273, 274.

Data entry

Open the spreadsheet file we have been working on and then follow the steps.

Step 1

When you opened your new workbook, this should have opened automatically with three sheets. The first thing we are going to do here is to create a new sheet in your existing workbook:

- Click on 'Insert' and then 'Worksheet'.
- Using your mouse and the left click function, and the small arrow which will appear above the pointer, drag the new sheet to the right of your 'Formatted updated data super 6 pens'.
- Then using the steps you followed in previous learning activities, re-name that sheet 'Checking formulae' and colour code.

Step 2

Type the following data in your 'Checking formulae' sheet:

- in A1 insert the figure 235, in B1 226, in C1 273, in D1 274
- in B3 insert the formula $'=A1+B1+C1+D1'$
- in B5 insert the formula $'=A1+B1+C1'$
- in B7 use the comparison operator formula $'=B3=B5'$, to find out whether in fact B3 does equal B5.

Step 3

Then go to Formula, Formula auditing and activate 'Show formula auditing toolbar'.

- Activate cell B3, and then on the toolbar click on 'Trace precedents'. You can see that the program then links B3 with the four cells which provided data for the formula.
- Then activate cell B5, and again click on 'Trace precedents'. Again, the program links B5 with the three cells which provided data for the formula.
- Then if you trace the precedents for cell B7, you will see that this is also linked.
- Leaving the arrows as they appear, preview and then print this sheet, and include the printed sheet in your portfolio.



Practice

Practice activity 8

You are still employed by the stationery division of an organisation, and you have now been asked to prepare a spreadsheet for one of the other pen products sold by the division, the Slick 7.

The purpose of this spreadsheet is to enable the division to compare the net profit received from the sale of each line of pens – Super 6 and the Slick 7.

Spreadsheet data

- In January, the division sold 9 pens in the first week, 8 in the second week, 13 in the third week, and 21 in the last week.
- In February, the numbers were 20 in the first week, 28 in the second week, 8 in the third week, and 39 in the last week.
- The numbers for March were 15, 16, 9, and 18; for April they were 19, 17, 7, and 21; for May they were 10, 19, 10, and 12; and for June they were 13, 15, 18, and 31.

Data entry

Step 1

Open a new sheet in your existing workbook, and name the sheet 'Data Slick 7 pens'.

Step 2

Include appropriate descriptors in all applicable columns and rows.



Step 3

Enter the data above.

Step 4

Enter the necessary formulae to calculate the total pens sold in each month.

Step 5

Enter the necessary formula to calculate the total number of pens sold over the six months period.

Step 6

Enter the necessary formula to calculate the net profit for the total six months period where each pen sells for \$14, and the cost of purchasing each pen is \$6.

Step 7

Then enter the necessary formula to adjust the total net profit, taking into account handling costs of 1%.

Step 8

Apply shading to all cells which contain written descriptors.

Step 9

Include an appropriate header in your worksheet.

Step 10

Print your worksheet, including row and column headings but not grid-lines, and include that worksheet in your portfolio.

Step 11

Save your work and exit the spreadsheet application, and take a rest break before moving to the next section.

Use of manuals and online help

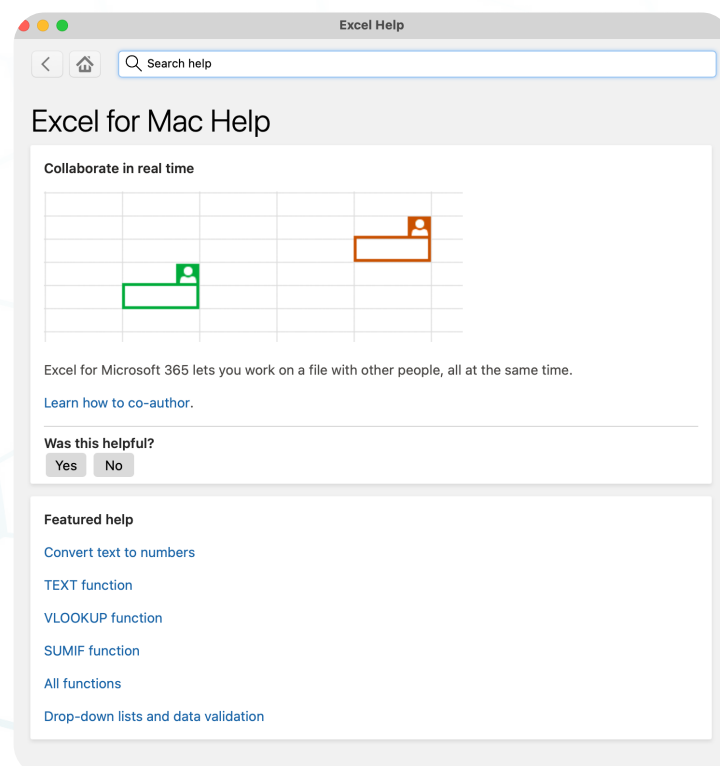
When you experience problems in working with spreadsheets, there are many ways in which you can get assistance.

The Help function in excel is very good. You can search under headings or you can use the search tool. See the offline Excel Help screen below.

You can also search online for assistance with Excel.

Comprehensive user manuals are also available. These provide a useful resource for users of spreadsheet applications.

Many employers will also provide employees with organisational procedures, specific user documentation, style guides and presentation requirements.





Practice

Practice activity 9

Using the online Help function, write a brief description of how to do the following.

How do you add or remove worksheet columns?

.....

.....

.....

How do you add headers and footers to worksheets?

.....

.....

.....

How do you change the number formatting?

.....

.....

.....

How do you save a workbook in another file format?

.....

.....

.....

Produce simple charts

Selection of chart type to meet task requirements

You can produce simple charts based on your spreadsheet data.



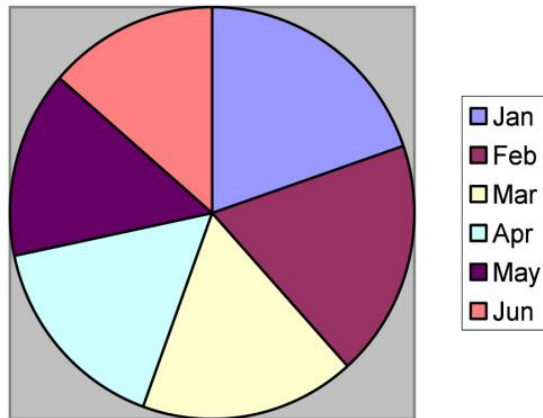
Now that you have completed entering data into a spreadsheet you can now use that information to produce a simple chart.

Charts are used for many purposes.

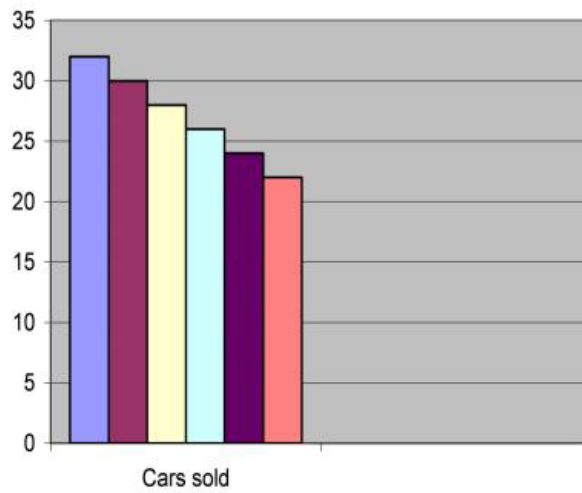
One purpose is to demonstrate the data contained in a spreadsheet - or in some other document - in a more visual way in order to increase its impact.

For example, if a colleague told you that in January this year his or her department sold 32 cars, but in each month since then the department had sold two cars less than the month before, or handed you a spreadsheet with the figures, you would hear the information, but it may not have a lot of impact. You might think, 'Oh well, business is slowing down a little, that's too bad'. However, if your colleague presented you with either of the following charts, you might view the information in a different way.

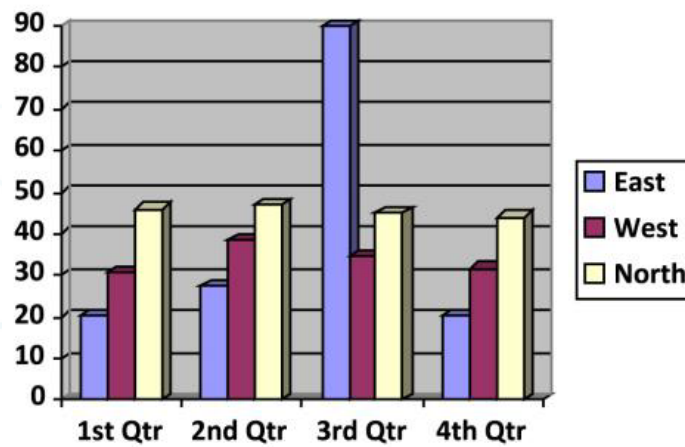
Cars sold



Pie chart showing cars sold



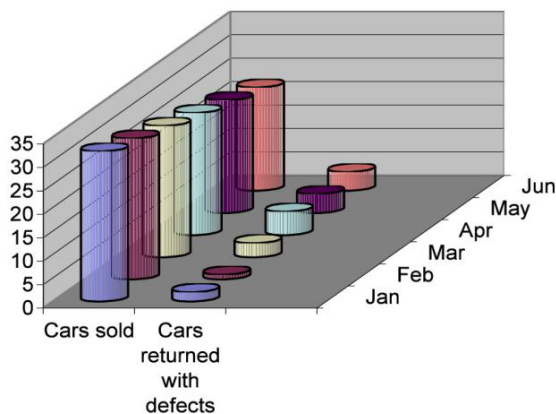
Bar chart showing cars sold



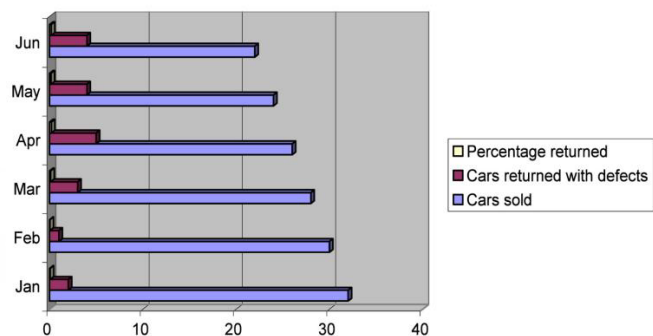
Bar chart showing quarterly results by region

Charts can be presented in many different ways, and the type of chart will often depend upon the business or organisation and the targeted audience.

Let's use our cars again as an example, and add the element of cars being returned because of defects. The chart could be presented as follows.



Three dimensional chart showing cars sold and defect returns



Bar chart showing cars sold and defect returns

These are only some of the types of charts we can choose from, with some other selections being scatter, bubble, line, pie or 3D pie.

In all cases, the type of chart will be dependent upon the nature of the business and the target audience.

For example, some businesses or organisations might prefer very 'se-date' types of charts, such as the first two charts we included; whilst others will prefer those which provide significant visual impact. Some audiences might easily understand very complicated charts, whilst others will become lost in the details if they are too complicated.

In Excel, go to the Insert tab and look at the different types of charts that are available. Click on the other charts icon to see other available chart designs.



Practice

Practice activity 10

After viewing these charts, select three different types and in the following table write down in what circumstances (types of presentation / industry / audience) you think these could be used.

Type of chart	Use of chart

Creating and modifying charts

Charts are most commonly created within a spreadsheet based upon the spreadsheet data.

Depending upon the task requirements and how the work is prepared, this can result in information being provided in a manner which combines statistical information (spreadsheet data), with visual information (chart).



Practice

Practice activity 11

You now work at Hussain's shop. Hussain wants to approach his local bank for a loan so that he can expand his business. At the moment, Hussain sells computers, printers, and printer toner cartridges, and wants you to prepare a spreadsheet showing his sales figures for the past 12 months.

Hussain thinks that a chart will emphasise the point that his sales are steady and he instructs you to include a chart in the spreadsheet you are preparing based on his sales figures. Hussain does not specify what type of chart he wants.

Spreadsheet data

- Computer sales for the 12 months (January – December):
 - 9, 4, 5, 9, 8, 11, 12, 13, 10, 7, 8, 11.
- Printer sales for the 12 months (January – December):
 - 20, 15, 12, 11, 12, 13, 15, 17, 16, 17, 21, 22.
- Toner sales for the 12 months (January – December):
 - 25, 12, 21, 19, 18, 19, 21, 23, 22, 26, 19, 20.

Data entry

Work through the following steps to create the spreadsheet:

Step 1

Open a new workbook.

Step 2

In Sheet 1, enter the following data:

- in column B insert the following figures in rows 2 – 13: 9, 4, 5, 9, 8, 11, 12, 13, 10, 7, 8, 11
- in column C insert the following figures in rows 2 – 13: 20, 15, 12, 11, 12, 13, 15, 17, 16, 17, 21, 22
- in column D insert the following figures in rows 2 – 13: 25, 12, 21, 19, 18, 19, 21, 23, 22, 26, 19, 20
- in B14 insert the calculation required to add all of the numbers in A2 – A13
- in C14 insert the calculation required to add all of the numbers in B2 – B13
- in D14 insert the calculation required to add all of the numbers in C2 – C13.

Step 3

Label A1 as 'Sales', B1 as 'Computer sales', C1 as 'Printer sales', and D1 as 'Toner sales'. Use your mouse to click at the top of each column and drag the right hand border so that all of the words in B1, C1 and D1 appear in full.

Step 4

Commencing at A2, insert 'Jan', 'Feb' to 'Dec' down that row, and the word 'Totals' in cell A14.

Step 5

Insert a blank row before the totals so that the totals now appear in row 15.

Step 6

Insert a header for the document by going to 'View' then 'Header/Footer', then to 'Custom header'. In the centre section insert the words 'Hussain's shop', increase the font to Arial 12, and underline these words.

Step 7

Rename that sheet 'Hussain's Shop Sales'.

Now we are ready to insert a chart.

In order for the program to prepare a chart based on the figures contained in your spreadsheet, you have to instruct the program accordingly, and you can do this by highlighting cells A1 – D13 in your spreadsheet.

Work through the following steps to create your chart.

Step 1

Click on the Insert tab, select a '3-D column' chart.

Step 2

The chart appears on screen in a text box. With your mouse, move the chart directly underneath the spreadsheet.

Step 3

Click the Layout tab and select 'Chart title' and then 'Above chart'. In the

text box that appears, insert the words 'Sales – January to December' over the top of the words 'Chart title'.

Step 4

Check to see that your work is the same as Activity answer 11.

Step 5

Save your work and print a copy to add to your portfolio.

Step 6

Repeat the process and experiment to see what other graphs look like.



Practice

Practice activity 12

Hussain has reviewed the previous spreadsheet and chart you prepared.

Some figures are incorrect and need to be changed, and he would also like you to change the type of chart presentation to a 3D line chart.

Hussain does not want gridlines, or row and column headings shown in the printed spreadsheet.

He needs the updated spreadsheet and chart quite urgently, as he has an appointment with the bank manager tomorrow.

Assuming you saved your data and correctly exited the application in the previous activity, you will be able to retrieve your original spreadsheet data (and chart).

Spreadsheet data

- Changes to computer sales:
 - October change from 7 to 11
 - November change from 8 to 12.
- Changes to printer sales:
 - January change from 20 to 18
 - July change from 15 to 16
 - October change from 17 to 20.
- Changes to toner sales:
 - November change from 19 to 22
 - December change from 20 to 24.



Data entry

Work through the following steps to create the spreadsheet.

Step 1

Re-open your spreadsheet application, open your 'Hussain's Shop' workbook, and copy your spreadsheet data to Sheet 2.

Step 2

Rename Sheet 2 as 'Hussain's Shop Sales revised date', and make the following data amendments:

B11 change 7 to 11, B12 change 8 to 12, C2 change 20 to 18, C8 change 15 to 16, C11 change 17 to 20, D12 change 19 to 22, D13 change 20 to 24.

Step 3

Prepare and include a 3D line chart in your spreadsheet based on the revised figures.

Step 4

Review your revised spreadsheet and chart, and ensure that gridlines and row and column headings will not be shown on printing, and ensure that the spreadsheet information and chart are neatly set out on page 1.

Step 5

Print a copy of your revised spreadsheet and chart for inclusion in your portfolio.

Step 6

Save your work and exit the spreadsheet application.



Practice

Practice activity 13

Hussain failed to obtain his additional finance, and you are now working on a part-time basis. You are also again working for the stationery division of an organisation on a part-time basis. The manager of the stationery division is aware that you can prepare charts and has asked you to prepare some charts for the spreadsheets you have previously prepared.

Spreadsheet data

Spreadsheets for the Super 6 and the Slick 7 pens.

Data entry

Open your spreadsheet application, and return to the spreadsheets you previously prepared ('Formatted updated data Super 6 pens') and ('data Slick 7 pens'), and then carry out the following.

Step 1

Copy the spreadsheets into a new workbook, into two sheets.

Step 2

The new workbook is to be saved and stored using the naming and storing conventions and is to be named 'Super 6 and Slick 7 pen comparison'.

Step 3

Sheet 1 is to be used for the Super 6 pen data, and is to be renamed 'Super 6 pen data'; Sheet 2 is to be used for the Slick 7 pen data, and is to be renamed 'Slick 7 pen data'.

Step 4

Create a line chart with markers in each of the sheets, using the data in those sheets, labelling the charts appropriately.

Step 5

Copy each chart into Sheet 3, and rename that sheet 'Comparison charts Super 6 and Slick 7 pens'.

Step 6

Insert an appropriate header in each of the three sheets.

Step 7

Using 'Print preview', implement the organisation's requirements regarding gridlines, and row and column headings in the 'Super 6 pen data' and 'Slick 7 pen data' sheets.

Step 8

Print a copy of all three sheets for inclusion in your portfolio.

Step 9

Ensure your work has been saved, and then exit the application.

Step 10

Back up the 'Super 6 and Slick 7 pen comparison' workbook using a USB.

Finalise spreadsheet

Preview, adjustment and printing

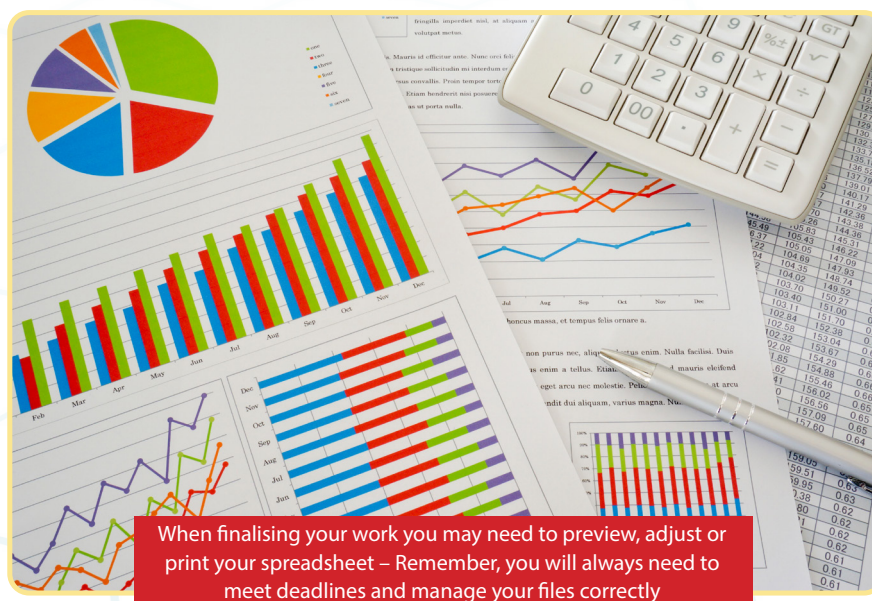
The last task you will need to complete as part of creating a simple spreadsheet is to finalise the work.

We have already considered adjusting data in a spreadsheet, and have worked through previewing spreadsheets.

We have also considered how the appearance of a chart can alter when the underpinning spreadsheet data changes, and also how we can select different types of charts which might be used in different situations and also, change their appearance.

There is no 'right way' to prepare spreadsheets or charts, as what is required will depend upon the particular task and organisational requirements.

Always preview (print preview) and adjust the spreadsheet prior to printing a hard copy. Because the columns and rows are almost endless, it is very easy with spreadsheets to waste papers. After amending the spreadsheet, preview to ensure it has not moved over to the next page.



When finalising your work you may need to preview, adjust or print your spreadsheet – Remember, you will always need to meet deadlines and manage your files correctly

Designated timelines

A designated timeline might include an organisational timeline where, for example, information might be required for presentation to a company the auditor, an external customer or client may require the organisation to produce a spreadsheet or a chart within a certain time, that is to assist in a presentation to the customer's employees, or it may simply be a timeline set by a supervisor.

If a timeline is set, then of course it must be met; and for this purpose, your teacher may allocate a designated timeline to any of your activities or assessment tasks.



An example of a diary which may be used to write down your timelines for your activities or assessment tasks

Storing spreadsheets

After all the work is done, it is very important to ensure the spreadsheet is saved and stored correctly. We have already considered organisational requirements as to file and folder naming protocols. You should be following school protocols to save your work in the appropriate location.

Passwords on the school computers will ensure unauthorised access to your account will not take place. It is important that you do not share your passwords with anyone else.

How often do you back up your files, especially those that you may use between school and home? Think about what information would be lost if all your files were corrupted. Your files at school will be backed up regularly.

However, you should ensure your personal files are backed up frequently. USBs are often used for this purpose.

Organisational policy and procedures will ensure that business data is protected. Always carefully follow instructions that relate to back up of files.

Methods of storage include CD ROM, zip drives, external hard drives and USBs.

Practice activity answers

The practice activity answers section is provided for you to self check your responses to the practice activities contained within this Learner Resource. In some instances you will notice that sample or typical answers may be given, these answers are only what might typically be expected as an answer. In these instances, if you cannot relate the answer given to your response you should contact your facilitator to discuss your responses.



Practice

Activity answer 1

- ☐ Recycling paper.
 - ☐ Turning off lights when you leave the room.
 - ☐ Turning off electrical equipment at the end of the day.
 - ☐ Utilising sleep modes on equipment.
 - ☐ Flash drives to store data electronically rather than print hard copies.
 - ☐ Use email to send documents rather than print hard copies.
-



Practice

Activity answer 2

- ☐ The active cell is C5.
 - ☐ The name of the worksheet is 'Blank'.
-



Practice

Activity answer 3

Spreadsheet should be completed as per the following.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Super 6 pens														
2	Month	January	February	March	April	May	June								
3	Week 1	20	30	28	21	15	16								
4	Week 2	11	22	19	10	9	22								
5	Week 3	7	11	8	6	15	20								
6	Last week	25	29	22	18	18	21								
7	Month total	63	92	77	55	57	79								
8															
9	Total sale price	945	1380	1155	825	855	1185								
10															
11	Total sale price for period						6345								
12															
13	Total number of pens				423										
14	Total cost of pens				2961										
15															
16	Net profit for period							3384							
17															
18	True net profit after deduction of 2% freight							3316.32							
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															



Practice

Activity answer 4

Spreadsheet should be completed as per the following.

The screenshot shows a Microsoft Excel spreadsheet titled 'Appendix 1 - Microsoft Excel'. The spreadsheet contains data for 'Super 6 pens' across six months (January to June). The data is organized into columns A through O and rows 1 through 29. The 'View' tab is active in the ribbon, showing options like 'Ruler', 'Gridlines', 'Headings', 'Message Bar', 'Zoom', 'New Window', 'Arrange All', 'Freeze Panes', 'Split', 'View Side by Side', 'Synchronous Scrolling', 'Reset Window Position', 'Save', 'Switch Workspace', and 'Macros'.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Super 6 pens														
2	Month	January	February	March	April	May	June								
3	Week 1	20	30	15	21	15	16								
4	Week 2	11	22	19	10	9	20								
5	Week 3	7	11	8	6	15	20								
6	Last week	25	29	22	18	22	21								
7	Month tot	63	92	64	55	61	77								
8															
9	Total sale	945	1380	960	825	915	1155								
10															
11	Total sale price for period						6180								
12															
13	Total number of pens				412										
14	Total cost of pens				2884										
15															
16	Net profit for period							3296							
17															
18	True net profit after deduction of 3% freight								3197.12						
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															





Practice

Activity answer 5

Spreadsheet should be completed as per the following.

The screenshot shows a Microsoft Excel spreadsheet titled 'Appendix 3 - Microsoft Excel'. The spreadsheet contains data for 'Super 6 pens' across six months (January to June). The data is organized into columns for months and rows for weekly sales, monthly totals, and summary calculations. The formula bar shows the formula $E7*15$ in cell E9.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Super 6 pens														
2	Month	January	February	March	April	May	June								
3	Week 1	20	30	15	21	15	16								
4	Week 2	11	22	19	10	9	20								
5	Week 3	7	11	8	6	15	20								
6	Last week	25	29	22	18	22	21								
7	Month tot	63	92	64	55	61	77								
8															
9	Total sale	945	1380	960	825	915	1155								
10															
11	Total sale price for period						6180								
12															
13	Total number of pens				412										
14	Total cost of pens				2884										
15															
16	Net profit for period							3296							
17															
18	True net profit after deduction of 3% freight								3197.12						
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															



Practice

Activity answer 6

Spreadsheet should be completed as per the following.

Original data super 6 pens

Super 6 pens	January	February	March	April	May	June	
Month							
Week 1	20	30	28	21	15	16	
Week 2	11	22	19	10	9	22	
Week 3	7	11	8	6	15	20	
Week 4	25	29	22	18	18	21	
Month total	63	92	77	55	57	79	
Total sale price	945	1380	1155	825	855	1185	
Total sale price for period						6345	
Total number of pens				423			
Total cost of pens				2961			
Net profit for period						3384	
True net profit after deduction of 2% freight						3318.32	



Practice

Activity answer 7

Spreadsheet should be completed as per the following.

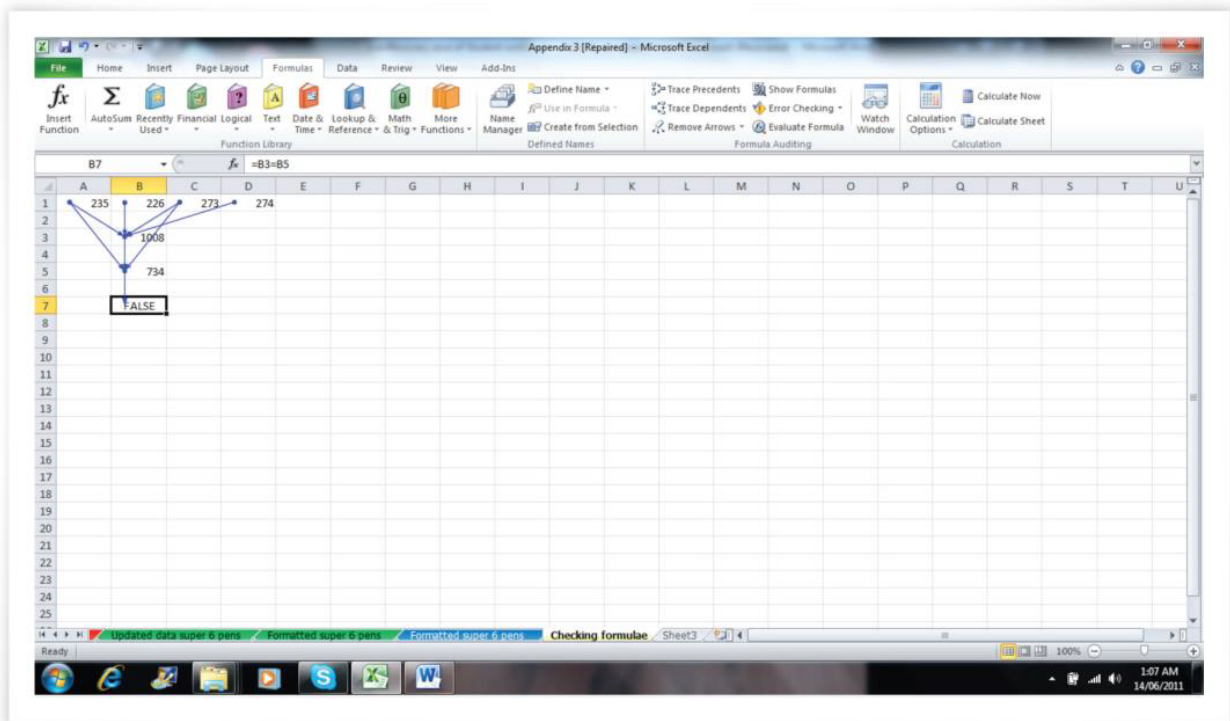
Super 6 pens							
Month	January	February	March	April	May	June	
Week 1	20	30	15	21	15	16	
Week 2	11	22	19	10	9	20	
Week 3	7	11	8	6	15	20	
Last week	25	29	22	18	22	21	
Month total	63	92	64	55	61	77	
Total sale price	945	1380	960	825	915	1155	
Total sale price for period						6180	
Total number of pens				412			
Total cost of pens				2884			
Net profit for period						3296	
True net profit after deduction of 3% freight							3197.12
Total net profit super 6 pens	3197.12						



Practice

Activity answer 8

Spreadsheet should be completed as per the following.





Practice

Activity answer 9

1. Select the columns to be deleted. Go to the 'Home' tab and in the 'Cells' group click delete.
2. Click on the worksheet. Go to the 'Insert' tab and in the 'Text Group' click on Header/Footer.
3. Click on the cell or range of cells to be formatted and go to the 'Cells' tab and click on format.
4. Click 'Save As' and in the 'Save As' type click the type of file you want to save.



Practice

Activity answer 10

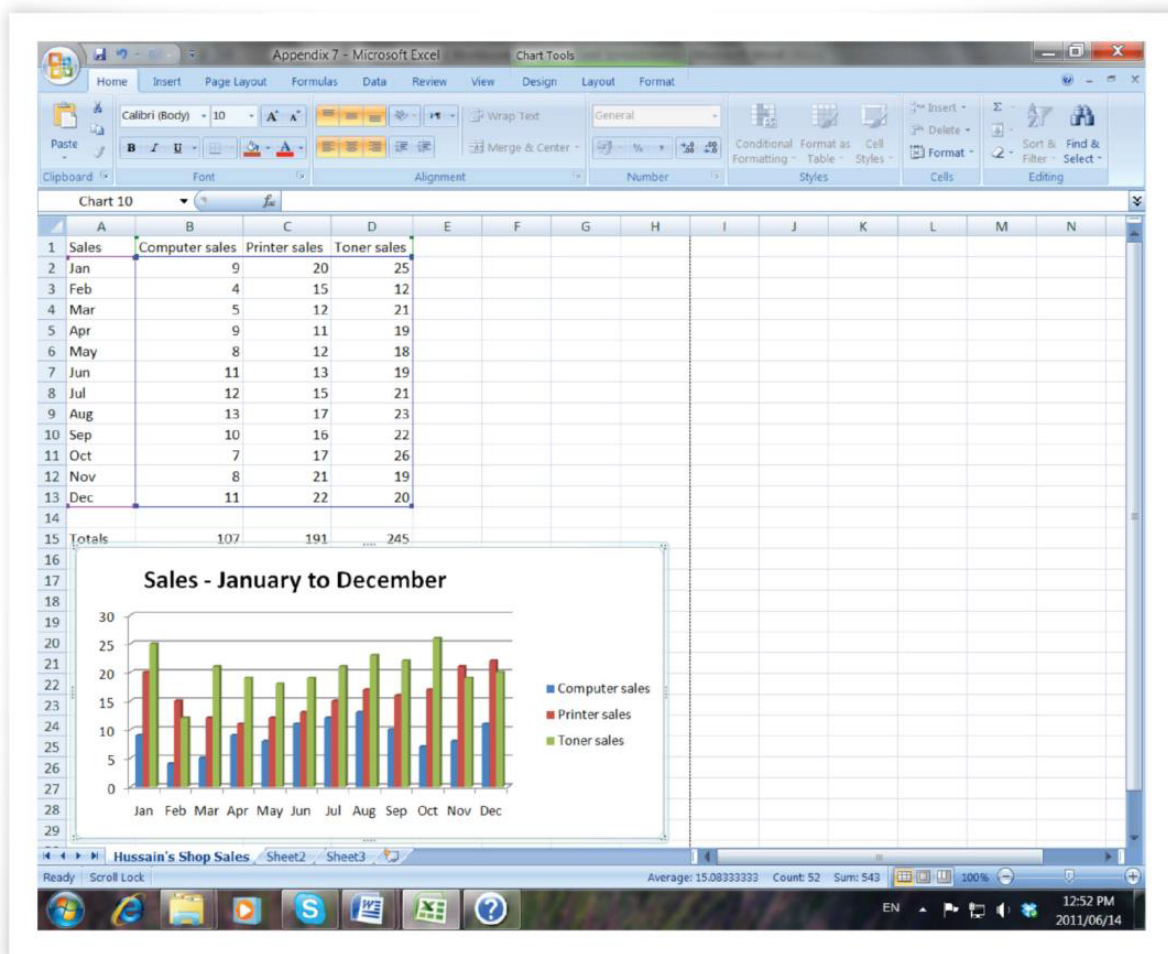
Pie graph	Show a break up of different selling expenses
	Show a break up of services by type
Line graph	Show the net profit figure month by month
	Show the weekly payroll figure
Bar graph	Show departmental expenses
	Show the number of employees by department



Practice

Activity answer 11

Spreadsheet should be completed as per the following.





Practice

Activity answer 12

Spreadsheet should be completed as per the following.

The screenshot shows a Microsoft Excel spreadsheet titled 'appendix 8 - Microsoft Excel'. The spreadsheet has columns A through L and rows 1 through 15. The data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Denominations			Sun								
2	Notes	\$100.00		\$0.00								
3		\$50.00		\$0.00								
4		\$20.00		\$0.00								
5		\$10.00		\$0.00								
6		\$5.00		\$0.00								
7	Coins	\$2.00		\$0.00								
8		\$1.00		\$0.00								
9		\$0.50		\$0.00								
10		\$0.20		\$0.00								
11		\$0.10		\$0.00								
12		\$0.05		\$0.00								
13				\$0.00								
14	Enter cash register total											
15				\$0.00								





Practice

Activity answer 13

Spreadsheet should be completed as per the following.

	A	B	C	D	E	F	G	H	I	J	K	L	M
7		\$5.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
8	Coins	\$2.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
9		\$1.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
10		\$0.50		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
11		\$0.20		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
12		\$0.10		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
13		\$0.05		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
14				\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
15	Enter cash register total												
16				\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	
17													
18													
19													
20													
21													
22													

Semester 1

ICT Skills Business Activities



Activity 1

You are required to establish a folder for the purpose of saving all of the work you do in this subject.

Create a folder called 'Spreadsheets'.

Activity 2

In sheet 1 Type the following spreadsheet and format it to look like the example below.

Task requirements

1. Type in all text and numbers shown in the spreadsheet below.
2. Center the spreadsheet headings above each column.
3. Format all text and numbers as displayed in the example below.
4. Click on cell B4 and write down the contents of this cell.

5. Click on cell E5 and write down the contents of this cell.

6. Save your work again and exit the program correctly.

	A	B	C	D	E	F
1						
2	Products	Sunday	Monday	Tuesday	Wednesday	Thursday
3	Software	2,455	3,584	2,793	2,705	3,621
4	Hardware	4,581	5,141	5,842	6,745	4,873
5	Stationery	1,404	1,864	1,739	1,557	1,815
6						
7						

Activity 3

Type the following spreadsheet and format it to look like the example below.

Task requirements

1. Type in all text and numbers shown in the spreadsheet below.
2. Format all text and numbers as displayed in the example below.
3. Select the range of cells 'B2:F2', and go to the Alignment tab and click on the center alignment icon.
4. Everything in column A is to be in bold.
5. Use sum to calculate total
6. Change format to row (10)

	A	B	C	D	E	F	G
1	Sales of 2019						
2		Jan	Feb	Mar	Apr	May	June
3	Cost of sales	85,658	74,281	48,524	65,048	75,931	84,482
4	Insurance	29,412	22,843	18,632	21,795	24,802	28,058
5	Gross Profit	11,715	10,627	12,924	11,715	10,584	12,924
6	Selling Expenses	15,651	15,843	14,739	16,882	14,927	17,455
7	Admin Expenses	10,584	12,924	11,715	10,627	12,804	11,193
8	Finance Expenses	5,200	5,200	5,850	5,200	5,200	5,850
9							
10	Total						

Activity 4

Type the following spreadsheet, and format it to look like the example below.

Instructions

- Type in all text and numbers shown in the spreadsheet below.
- Use an appropriate format for all numbers.
- Center the spreadsheet heading 'Travel Expenses for the Month of May' across the spreadsheet.
- Format all text as displayed in the example including the rotated text labels.
- Apply all borders and shading (color) shown in the example.
- Calculate the total (use sum).

	A	B	C	D	E	F	G	H	I
1	Travel Expenses For The Month Of May								
2	Sales Rep	Week 1 Km	Week 2 Km	Week 3 Km	Week 4 Km	TOTAL Km Traveled	Amount Due		
3	Morrison W	150	230	95	186				
4	Oliver A	210	309	120	95				
5	Parker J	105	126	142	86				
6	Potts D	155	148	162	135				
7	Watson K	110	152	133	122				
8	Weatherby L	108	123	121	111				
9	Wilson J	106	164	153	145				
10	Woolley T	101	132	135	162				
11	Mike Dale	198	205	210	187				
12									

Activity 5

1. Create a new worksheet and use these fields

Name	Arabic	Islamic	English	computer	accounting	spread sheet	MATH	Total
Ismael	40	35	45	40	35	40	45	
Mohamad	41	48	29	41	48	41	29	
Osama	33	46	41	33	46	33	41	
AHMED	25	24	33	25	24	25	33	
Nasr	41	28	43	41	28	41	43	
Waleed	35	39	46	35	39	35	46	
Abdo	28	47	28	47	47	28	28	
Assem	39	26	36	26	26	39	36	
Yasser	48	47	48	47	47	48	48	

2. sort (name) filter A to Z

3. format all numbers (Arial font – size 15)

4. in the header (insert your name) in footer (class)

5. Find and replace

a. Nasser instead of Nasr.

b. Essam instead of Assem

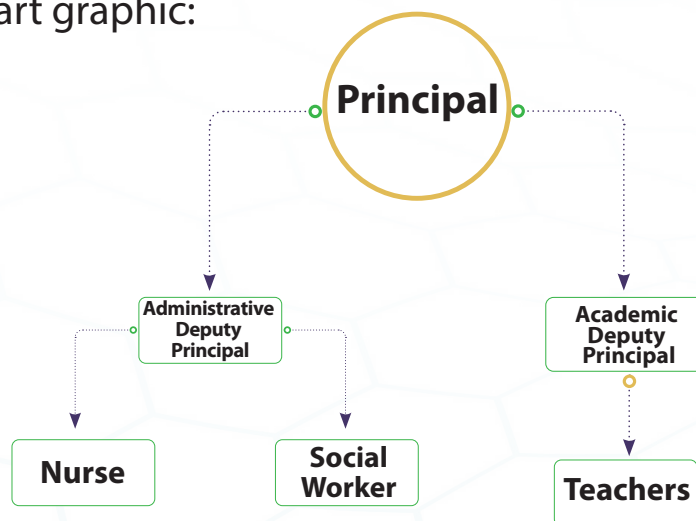
6. insert chart for all students

Activity 6

1. Insert 2 online pictures in workbook and use options:

- a. Change Picture style.
- b. Use Picture border.
- c. Use Picture effect.
- d. Use crop tool .
- e. Grouping two images .
- f. Arrange pictures.
- g. Change pictures size .

2. Insert smart art graphic:



3. Add shape (Rectangle), put (circle) inside it , insert word art.

4. Use the screen shoot tool

Activity 7

1. Use manual formulas :

Calculate the sum , max , min , aver

2. Use increase two decimal

3. Add currency \$ for numbers of sales

4. Add header (your name) and footer (class)

5. Format heading font (Tahoma) and size 18

6. Format subheading font (Calibri) and size 14

Qatar tech company							
Products	Sunday	Monday	Tuesday	Wednesday	Thursday	Total	max
Software	2,455	3,584	2,793	2,705	3,621		
Hardware	4,581	5,141	5,842	6,745	4,873		
Stationery	1,404	1,864	1,739	1,557	1,815		
Books	5,141	5,842	1,404	6,745	2,793		
DVD	2,793	6,745	5,842	1,404	6,745		
CD	6,745	5,842	1,404	2,793	5,842		
Total sales							
Min							
Average							
Max							

Activity 8

1. Calculate the sum , max , min , aver
2. Use increase two decimal
3. Change currency to \$ for numbers of sales
4. Add header (your name) and footer (class)
5. Format heading font (Arial) and size 18
6. Format subheading font (times new roman) and size 14

Weekly sales report										
QBS COMPUTER COMPANY										
Item	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	AVERAGE	Maximum	Minimum
DELL LAPTOPS	€ 10,000	€ 8,000	€ 5,000	€ 9,000	€ 7,000	€ 15,000	€ 7,000			
LENOVO DESKTOPS	€ 15,000	€ 7,000	€ 4,000	€ 10,000	€ 5,000	€ 12,000	€ 8,000			
SAMSUNG TABLETS	€ 5,000	€ 6,000	€ 2,000	€ 8,000	€ 8,000	€ 10,000	€ 7,000			
I PHONE MOBILES	€ 5,657	€ 7,789	€ 3,650	€ 9,832	€ 9,856	€ 9,282	€ 7,643			
SAMSUNG MOBILES	€ 8,443	€ 7,569	€ 8,933	€ 2,342	€ 5,632	€ 2,135	€ 6,546			
TOTAL										

Activity 9

1. use manual formulas :

Calculate the sum , max , min , aver

2. add one decimal FOR ALL numbers

3. add currency \$ for numbers of sales

4. add header (name) and footer (Last name + class)

5. heading font (Tahoma) and size 16

6. subheading font (Calibri) and size 12

Sales 2020	Jan	Feb	Mar	Apr	May	Average	total	max
Current year Expenses	85,658	74,281	48,524	65,048	75,931			
Cost of sales	29,412	22,843	18,632	21,795	24,802			
Selling Expenses	15,651	15,843	14,739	16,882	14,927			
Admin Expenses	10,584	12,924	11,715	10,627	12,804			
Finance Expenses	5,200	5,200	5,850	5,200	5,200			
Total for every month								
Average								
MAX								
Min								

Activity 10

Tick the requirements that apply to the preparation of this task.

Employees salary				
Employee name	Salary	Salary tax	Salary bounus	Net salary
Emad	1200			
Ahmad	1800			
Rashid	1000			
Omar	1500			
Mohammad	1500			
Hassan	1900			
Fahad	2200			
Nawaf	2500			
Ashraf	2100			
Khaled	3000			
Turki	2000			
Total				

Task requirements:

1. Create a new Excel sheet called (Net salary)
2. Enter the following data into Excel sheet.(next page)
3. Change page orientation to landscape for your spreadsheet.
4. Write your name in the header for this spreadsheet.
5. Write your Grade/class in the footer for this spreadsheet.
6. The heading is to be in Arial 18pt, bold, merged and centered above the columns used.

7. The column headings are to be Arial 14pt and bold. The wrap text formatting function should be used for column headings.
8. The remaining table is to be Arial 12pt and bold.
9. All numbers should be in \$, show two decimals and the thousand separator.
10. Change the color for heading and column headings.
11. Sort the table according to the salary column from (smallest to largest)
12. Calculate the salary tax column (salary *20%)
13. Calculate the salary bonus column (salary *5%)
14. Calculate the Net salary column. (salary-salary tax+ salary bonus)
15. Use conditional formatting to show the net salary greater than 1500 \$ with green color.

Activity 11

Qatar football Association					
	Total Income	Operating Expenses	Profit before tax	Tax	Profit after tax
Ahli	335,55	145,211			
Al Arabi	540,916	520,754			
Al saad	321,725	198,340			
Al gharafa	785,841	385,964			
Lekhvia	328,922	65,485			
Total					
Average					

1. Insert a formula to calculate the **Profit before** tax for each branch
(Total income – Operating expenses).
2. Insert a formula to calculate the **Tax** for each branch = 10% (Profit before tax * 10%).
3. Insert a formula to calculate the **Profit after** tax for each branch. (Profit before tax - Tax).
4. Change all number to currency (Qar)
5. Insert header (name) and in footer (class
6. Using " help" by pressing F1
 - Search for " header and footer " .
 - copy result text .
 - Create a new document word , paste above results

Activity 12

1. create a new worksheet and use this fields
2. use appropriate formula
3. change number to \$ currency

Products	Sunday	Monday	Tuesday	Wednesday	Thursday	total
Software	\$ 2,455	\$ 3,584	\$ 2,793	\$ 2,705	\$ 3,621	
Hardware	\$ 4,581	\$ 5,141	\$ 5,842	\$ 6,745	\$ 4,873	
Stationery	\$ 1,404	\$ 1,864	\$ 1,739	\$ 1,557	\$ 1,815	
Books	\$ 5,141	\$ 5,842	\$ 1,404	\$ 6,745	\$ 2,793	
DVD	\$ 2,793	\$ 6,745	\$ 5,842	\$ 1,404	\$ 6,745	
CD	\$ 6,745	\$ 5,842	\$ 1,404	\$ 2,793	\$ 5,842	
Average						

SOFT+HARD

BOOK+
Stationery

CD+DVD

Activity 13

1. Entering data in the following table :

Name	sales	Hourly worked	Reward
Ahmad	30000	120	
Assem	50000	150	
Ismail	80000	160	
Mohamad	20000	80	
Hamad	60000	155	
Waleed	50000	150	
Yasser	90000	185	

2. Use IF to calculate the reward for employees (REWARD = 150 HOURS)

NAME	Arabic	English	Islamic	computer	accounting	OHS	Math	TOTAL	Excellent/ good
Ahmad	27	38	33	27	22	27	22		
Ali	19	45	38	21	29	36	44		
Jassem	44	19	26	44	26	44	26		
Khalid	29	29	24	27	27	29	27		
Muhammad	25	27	26	25	26	21	19		
jaber	29	18	38	27	38	43	38		
Waleed	21	21	42	18	33	33	42		
Naïf	37	39	22	18	24	21	21		

Use IF to know who of the students are Excellent

○ Excellent = (over 200)

○ Good = (under 200)

Activity 14

Prepare the following spreadsheet. Observe the organizational instructions below:

1. The heading is to be in Arial 24pt, bold, merged and centered above the columns used.
2. The column headings are to be Arial 16pt and bold.
3. The remaining table are to be Arial 12pt and bold.
4. Sort the students' Names from A-Z.
5. Use the Sum formula to find the total column.
6. Find the TOTAL column and format without decimals.
7. Use IF function to choose (**pass** > 75) or **fail** for each students.

Student's Name	Test 1	Test 2	Test 3	Test4	Total	Result
ALI	16	13	9	22		
OMAR	14	4	8	23		
AHMAD	17	18	8	33		
MOHAMMAD	17	19	12	34		
FAHAD	15	16	9	29		
RASHID	14	16	11	35		
JABIR	13	14	9	36		
JASSIM	18	16	9	38		
OMRAN	5	5	10	32		
YOUSIF	19	19	8	31		

Activity 15

Prepare the following spreadsheet. Observe the organizational instructions below:

8. The heading is to be in Arial 22pt, bold, merged and centered above the columns used.
9. The column headings are to be Arial 14pt and bold.
10. The remaining tables are to be Arial 12pt and bold.
11. Sort the students' Names from A-Z.
12. Use the Sum formula to find the total column.
13. Use IF function to choose employee who took ICT course .
(employee who took ICT course = 215 \$ for total sales)

QBS TECHNOLOGY (SALES)						
Name	SEP	OCT	NOV	DEC	Total	ICT COURSE
ALI	\$ 50.04	\$ 23.90	\$ 66.50	\$ 48.74		
NAIF	\$ 68.69	\$ 78.20	\$ 19.80	\$ 53.29		
KHLIFA	\$ 48.74	\$ 62.21	\$ 50.04	\$ 67.30		
FAHAD	\$ 53.29	\$ 25.47	\$ 68.69	\$ 56.90		
SAEED	\$ 38.50	\$ 34.60	\$ 48.74	\$ 68.69		
JASSIM	\$ 66.50	\$ 78.20	\$ 53.29	\$ 48.74		
MOHAMMAD	\$ 19.80	\$ 48.74	\$ 38.50	\$ 53.29		
FAISAL	\$ 13.47	\$ 25.47	\$ 23.90	\$ 38.50		
NAWAF	\$ 57.62	\$ 38.50	\$ 78.20	\$ 66.50		
HAMAD	\$ 10.14	\$ 18.70	\$ 62.21	\$ 19.80		

Activity 16

1. Create a Drop Down list for all subjects?

Name	ARABIC	ENGLISH	ISLAMIC	COMPUTER	MATH	SPREADSHEET	ACCOUNTING
Ahmad	36	47	36	35	47	35	47
jassim	40	35	45	40	35	40	35
ismail	35	49	37	39	39	44	49
Mohamad	36	41	36	35	46	49	41
Naif	37	48	39	35	47	48	48
walid	37	46	44	45	48	44	46
Saoud	35	47	38	38	41	43	47

A	50-45
B	45-40
C	40-35

2. Use conditional formatting to highlight cells

A = GREEN

B=BLUE

C=RED

Activity 17

1. Create a Drop Down list
2. USE COUNT IF

NAME	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
Ahmed	present	present	absent	absent	present
Ali					
Aziz					
Ismail					
Mohamed					
Jassim					
Waleed					
Nawaf					

days of attendance	days of absence

Activity 18

Use formula (count if) and (sum if)

Employees salary sheet				
Employee name	Department	Status	Hiring date	Salary
Rashid	sales	full time	2015/9/2	\$ 20,000
Fahad	marketing	full time	2016/12/1	\$ 60,000
Naif	accounting	full time	2014/8/1	\$ 30,000
Mohammad	accounting	half time	2010/5/1	\$ 35,000
Ali	marketing	half time	2009/3/1	\$ 50,000
Omar	sales	full time	2009/3/1	\$ 40,000

How many employees working as full time?		count if
How many employees working at sales department?		count if
How many employees got salaries more than 35,000?		count if
How much is the total of salaries that are greater than 30,000?		sum if
How much is the total of salaries for the employees working as full time?		sum if

Activity 19

The students in 11 C have received the following grades for their October Report.

Name	English	Math	Arabic	Science
Yasser	54	76	66	54
Mohamad	88	90	76	72
Jassim	74	78	44	36
Waleed	88	38	52	88
Nasr	58	78	68	54
Rashid	50	84	59	52
Ali	58	36	76	54
Ahmad	55	72	84	66

You are required to:

1. Create a new worksheet called "chart 1"
2. Sort the students into alphabetical order (A – Z)
3. Create a bar chart and display all data labels for all students.
4. Insert a chart title (October Report) .
5. Insert a pie chart for (Ali) only
6. Insert appropriate axis titles.
7. Move legend to bottom
8. Fill the chart with blue color and make the border brown in 3 pt.

Activity 20

1. Design the following table and enter the data for each product

Products	Sunday	Monday	Tuesday	Wednesday	Thursday
LAPTOP	2,455	3,584	2,793	2,705	3,621
I PAD	4,581	5,141	5,842	6,745	4,873
TAB	1,404	1,864	1,739	1,557	1,815
NOTE	5,141	5,842	1,404	6,745	2,793
MOBILE	2,793	6,745	5,842	1,404	6,745

2. Insert chart (bar & column) to the above table .
3. Add charts pie for items (Tab – Note) .
4. Add title to chart (sales first week) .
5. Add Axis to above chart.
6. Add legend to above chart.
7. Add gridlines to chart .

Activity 21

1. Design the following table and enter data for each Item

	Brands	Marks	Splash	Max	Bhs	H&M
shirt	QAR 33.00	QAR 30.00	QAR 34.00	QAR 22.00	QAR 81.00	QAR 155.00
t-shirt	QAR 52.00	QAR 55.00	QAR 60.00	QAR 54.00	QAR 59.00	QAR 62.00
Suit	QAR 450.00	QAR 543.00	QAR 512.00	QAR 580.00	QAR 560.00	QAR 540.00
Sport suit	QAR 252.00	QAR 260.00	QAR 230.00	QAR 280.00	QAR 240.00	QAR 255.00
dress	QAR 288.00	QAR 312.00	QAR 319.00	QAR 322.00	QAR 344.00	QAR 328.00
Trousers	QAR 150.00	QAR 161.00	QAR 168.00	QAR 165.00	QAR 163.00	QAR 164.00

2. Insert chart (column) to above table .

3. Move chart to another sheet.

4. Change design and format of chart.

5. Add data table to above chart.

6. Add data label to chart

7. add legend below chart .

Activity 22

1. How to calculate all staff age By using Excel Formulas?

last name	first name	position	birthday	age	ICT Course
Ali	Hamad	Salesman	14/Apr/1977		
Hassan	Rashid	Marketing Actor	10/May/1979		
Ahmed	Majid	Customer Service	12/Nov/1988		
Fahad	Said	Help Desk	5/Oct/1974		
Jassim	Waleed	Marketing Actor	14/Oct/1996		
Naser	Tamim	Salesman	17/May/1999		
Jassim	Abdulrhman	Advertising	14/Jun/1997		
Ibrahim	Omer	Help Desk	18/Oct/1998		
Nawaf	Ahmed	Marketing Actor	4/Sep/1975		

2. use conditional formatting to highlight age greater than 40 (green)

3. use if statement to identify employee have ict course

Activity 23

1. Design the following table :

Item	Al-Noor	AL- Forsan	AL- Shams	Al- Jassim	Al- Sharq	Al- Mohandas
desk	QAR 36.00	QAR 33.00	QAR 35.00	QAR 24.00	QAR 88.00	QAR 160.00
chair	QAR 50.00	QAR 55.00	QAR 60.00	QAR 54.00	QAR 59.00	QAR 62.00
table	QAR 500.00	QAR 543.00	QAR 512.00	QAR 580.00	QAR 560.00	QAR 540.00
comp-desk	QAR 250.00	QAR 260.00	QAR 230.00	QAR 280.00	QAR 240.00	QAR 255.00
cupboard	QAR 300.00	QAR 312.00	QAR 319.00	QAR 322.00	QAR 344.00	QAR 328.00
case	QAR 160.00	QAR 161.00	QAR 168.00	QAR 165.00	QAR 163.00	QAR 164.00

2. Freeze pane (top row)

3. Freeze pane (first column)

4. Use hyperlink for all items

