Microsoft Office

Excel 2007

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Version 2.3/12

This tutorial is based on the WordPerfect Suite 6.1 Quattro Pro tutorial written by Paul Stewart & Gabe Kraljevic 1998

Preface

The notations used in this book are as follows:

-Any text in **<** **>** indicates that it is a key on your keyboard.
e.g. **<home>**, **<1>**, **<enter>**

-press & holding a key <CTRL> + <END> means hold down the control key <CTRL> and then tap the <END> key, then release the <CTRL> key.

Introduction

When you start up Microsoft Office Excel 2007 you will see a screen similar to figure 1.

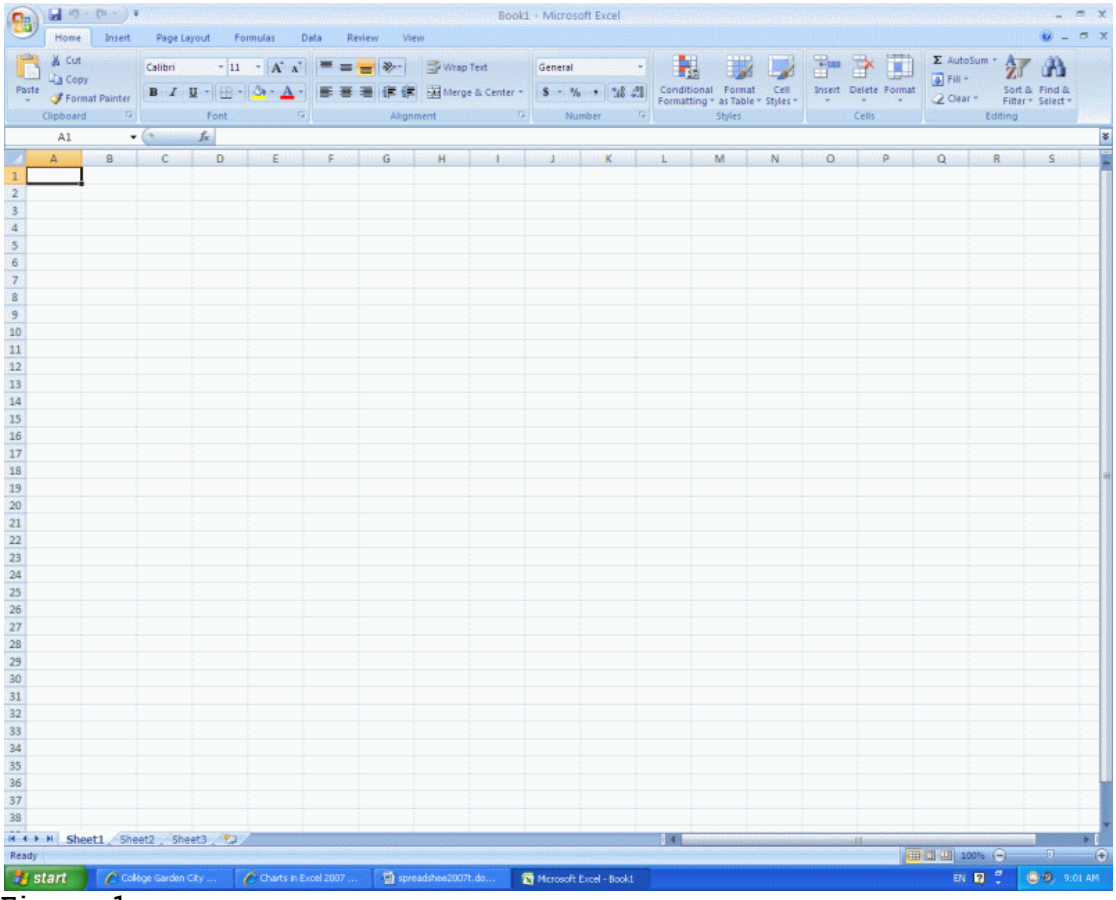


Figure 1

Parts of a Spreadsheet

Each spreadsheet is composed of *columns* and *rows* for easy organization of data. The vertical columns in the spreadsheet are labeled with letters (**A, B, C, D, etc.**). The numbers on the left-hand side show the horizontal *rows* (***1, 2, 3, 4,etc.***). The numbers and letters become important in locating the intersections of rows and columns, which are called *cells*. A cell may contain textual *data, numerical data* or a *formula*.

Notice that one of the cells is highlighted with a box outline. The highlighted area is called the *cell pointer*. This highlighted area shows that any typing or menu choices will be entered here. This area is moved around the screen to enter information.

In the top left of the screen is the cell reference area, this also indicated the *active cell address*. This address is the column letter and row number that is currently highlighted by the cell pointer.

Just to the right of the cell address the *cell contents* will be displayed. Any number, text, or formula that is currently in the cell will be shown here.

Later in the lessons, you will be introduced to the *prompt line* and *status line*.

MOVING ABOUT THE SPREADSHEET

One cell at a time

Press the Right Arrow key (6) and watch the cell pointer move to cell address B1. Continue pressing the Right Arrow key and watch as you move through the cells. Notice the bottom left corner of the screen shows the current cell address of the cell pointer.

What happens when you go past column Z?

Try using the other arrow keys.

Going home

Press the **<Home**> key. Notice the cell pointer automatically jumps back to the home column starting position, column A.

Press the <CTRL> & <Home> keys. Notice the cell pointer automatically jumps back to the home starting position, column A and row 1.

Page movements

Press the **<Page Down>** or **<Pg Dn>** key once and notice you have jumped down one page of rows. Each time you press **<Page Down>** key you jump a page of rows at a time. Try **<Page Up>**

GOTO a specific cell

Sometimes you may wish to go directly to a specific cell address.

Assume you wish to goto cell *AD38*.
1) Press the <**F5**> key
2) type **AD38** and press enter, the cell pointer should be at address AD38.

Move back to the home address cell *A1*.

MOUSE movements

Move the mouse pointer to a cell, then click the left mouse button to move the cursor to that address.

To scroll through the worksheet, click on either the Vertical or the horizontal scroll bars.

OR

Use the mouse scroll wheel.

ENTERING DATA

There are three types of data that can be entered into a spreadsheet.

1) Labels

Labels are used to describe, comment on, emphasize or highlight information. Labels are alphanumeric data that includes numbers, letters and/or other symbols. If you begin an entry with a letter, the spreadsheet assumes that the entry is a label.

NOTE: **do not** start labels with the "=" or A+@ symbol. If you must use one of these symbols start with a Quote mark ‘

2) Values

Values are numerical data. If you begin your entry with a number, the spreadsheet assumes that entry to be a value.

3) Formulas

Formulas are mathematical or logical expressions that will calculate numerical values from other cells. A formula is started with an "@" , “=” or “+” symbol.

Examples of formulas:

FORMULA	DESCRIPTION
=SUM(A1.A3)	Totals the values of cells *A1* + *A2* + *A3*
=AVG(B2.B5)	Calculates the average of the cells B2 through B5.
=D8-A4	Subtracts the value in cell A4 from the value in cell D8.

CREATING A SIMPLE BUDGET

You are going to create a simple home budget worksheet. It will include item categories, budgeted amount, actual amount spent and the net difference.

(Be sure to begin with a NEW worksheet.)

1. Move the cursor to **B2**

2. Type **HOME BUDGET**

You are now going to enter the item categories. As an example we will have the categories' *Groceries*, *Clothes*, *Mortgage*, etc.

3. Move the cursor to cell **A9** and type **Groceries**

4. Now move to the cell below **A10** and type **Clothes**

5. Type the following categories in the appropriate cells
   A11 Mortgage
   A12 Electric
   A13 Gas
   A14 Car
   A15 Water

   Notice how all the labels automatically align on the left side, this is called formatting *Left Justified*.

You are now going to enter the column headings.

6. Move the cursor to **A7** and type **Item**

There are three other columns to label:
Budget, Actual , and *Net*.

7. Move to cell **B7** and type **Budget**
   C7 Actual
   D7 Net

You are also going to calculate the *Minimum*, *Maximum* and the *Total amount* spent.

8. Complete the labels as shown below in Figure 2.

	A	B	C	D	E
1					
2		HOME BUDGET			
3					
4					
5					
6					
7	Item	Budget	Actual	Net	
8					
9	Groceries				
10	Clothes				
11	Mortgage				
12	Electric				
13	Gas				
14	Car				
15	Water				
16					
17	Total				
18	Minimum				
19	Maximum				
20					

Figure 2

Now would be a good time to SAVE the spreadsheet

Save as "Home Budget *your name*"

You are now going to enter the data numbers. To enter a number, move the cursor to the appropriate cell and type the number. Numbers are automatically aligned to the right, this is called *right justified*.

9. Move the cursor to cell **B9** and enter **210.22**

Complete the table as below (figure 3):

Do not worry about missing decimal points, this will be corrected later.

(If you make a mistake just type it in again. Later you will be shown another way of correcting any data.)

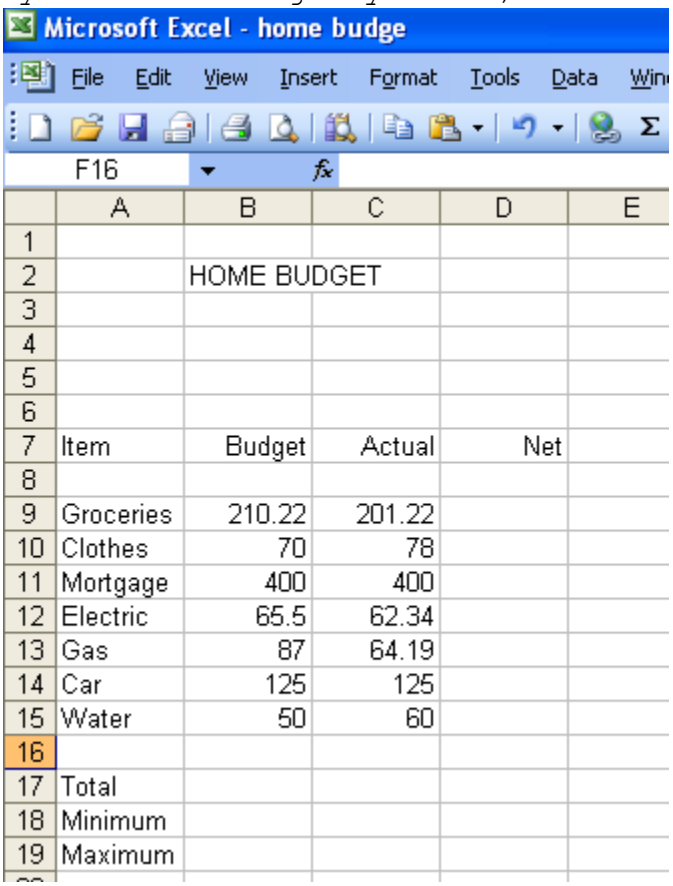


Figure 3

RULE: When entering number amounts, you only use:
digits 0 - 9, + (plus), -(minus), and .(decimal point)

Entering Formulas

You are now ready to enter the calculations you wish the worksheet to perform.

To do this you enter formulas in the cell where you wish the results of the calculations to appear.

In the >Home Budget= we wish to total up the Budget amounts in cells **B9, B10, B11, ... B15** and place this total in cell **B17**

There are two basic methods of doing this, (Choose either one)

Method One
Enter the formula directly

Move to cell **B17,** the cell we wish the answer to appear.

Type the formula **=SUM(B9.B15)** and press **<Enter>**

Remember, the **"="** (equal) sign tells the spreadsheet program you are entering a formula not a label.

The word SUM is a special function found in the spreadsheet program. It must be spelled correctly.

The part of the formula, **B9.B15,** indicates the cells to sum up. i.e. B9 + B10 + B11 + B12 + B13 + B14 + B15

The formulas do not appear in the cells, but when the cells are highlighted the formula can be seen in the *reference area.*

Method Two
Using the *Auto Sum* tool

Highlight the cells to total including the blank location for the answer.

Highlight Cells B9, B10, B11, to B17

Click the Auto*Sum* tool ∑

AutoSum is found in the **Home** tab in the **Edit** Group

The =SUM( ) formula appears in cell B17, this should be the same as the formula entered above.

Enter an =SUM( ) formula to sum column C (C9 to C15, the answer in C17)

You decide which method to use.

You are also going to calculate the smallest (minimum) and the largest (maximum) actual amount spent.

Enter these formulas (remember you must begin the formula by entering an @ symbol or an = ,equals sign)

C18 =MIN(C9.C15)
C19 =MAX(C9.C15)

You may wish to resave the spreadsheet before you move to the next task. Save as "Home Budget *your name*"

Copying Cells

The last set of formulas to enter will calculate the *Net Amount*, or the difference, between the *Budgeted Amount* (Column B) and the *Actual Amount* (Column C). This is calculated by subtracting Column C from Column B. This needs to be done for all seven rows; 9 to 15. You do not have to type the formula in seven times, it can be replicated.

1. Move the cursor to **D9**.

2. Type the formula **+B9-C9**

> Note: You must begin with the **=** , **+** or @ sign. If you do not the spreadsheet assumes the letter B is the start of a label, not a formula.

3. With the cursor still on cell **D9**
   -select **Copy** from the **Home** tab, **clipboard** group.
   OR
   -use the copy quick key <CTRL> & <C>
   OR
   -use the select Copy from the quick menu (right click the cell to bring up the quick menu)

3. Highlight the cells we wish to copy the formula to, **D10 to D15**

   With cells highlighted
   -select **Paste** from the **Home** tab, **clipboard** group.
   OR
   -use the Paste quick key <CTRL> & <V>
   OR
   -use the select Paste from the quick menu (right click the cell to bring up the quick menu)

The results of the calculations are displayed in the cells that contained the formulas.

FORMATTING

Formatting is the process of changing the appearance of your spreadsheet to develop a smart looking document. There are several ways in which you can improve the look of a spreadsheet.

You will notice the headings
BUDGET ACTUAL NET

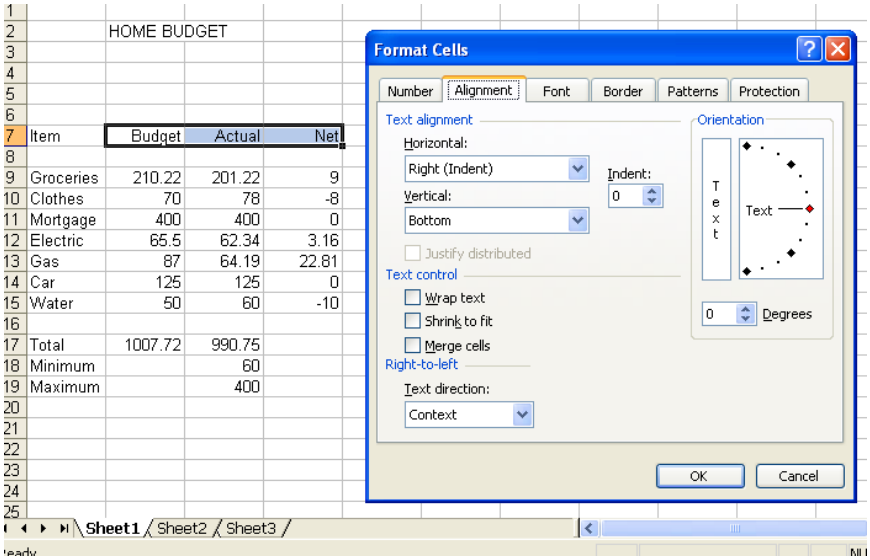
do not appear over the numbers, they are to the left. To move these headings to the right you will need to adjust the *FORMAT* to right justified.

1. Move to cell **B7**

2. Right click the mouse to display the Quick menu.

3. Select **Format Cells** from the Quick menu.

4. Choose the **Alignment** tab from the dialog box.



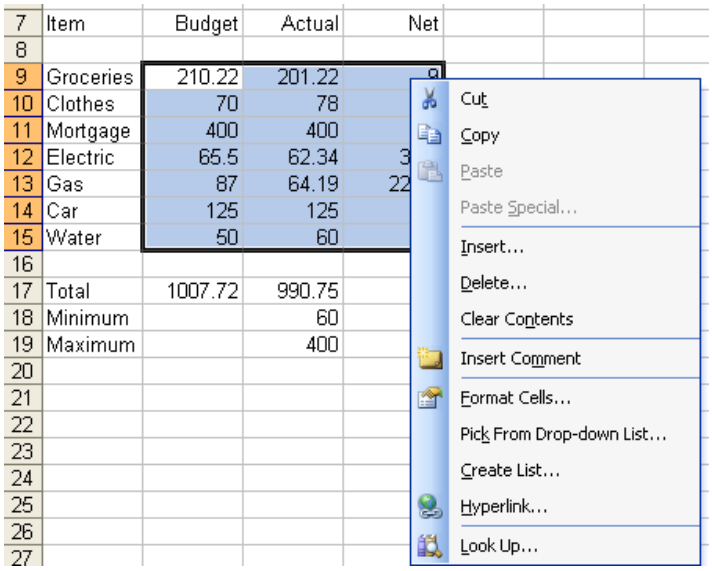
5. Change the *Horizontal Alignment* to *Right(indent)*

6. Do the same for the other two headings

> Note: You can highlight *all* the cells you wish to set to the *same* properties and do them all at once.

You have probably noticed that although the amounts calculated are dollar amounts, the numbers are not all displayed to two decimal places. This is because the program does not know we wish to format the numbers in dollar amounts. This can easily be changed.

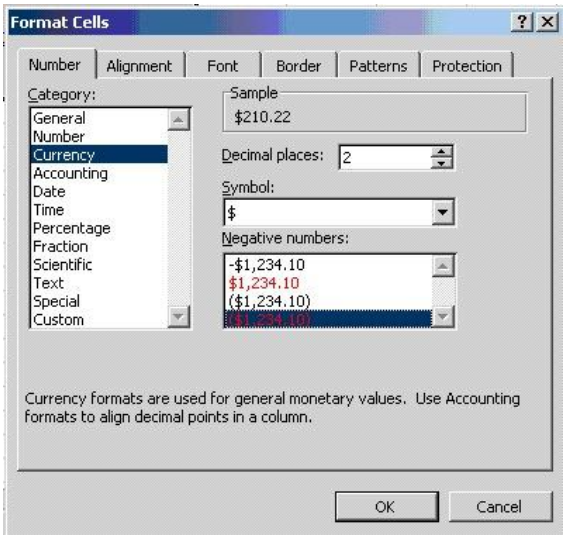
Cells *B9* through *B15*, *C9* through *C15*, and *D9* through *D15 should* all be set to two decimal places. This is called *currency* format.



1. Highlight cells **B9** to **D15**

2. Right click the mouse to display the Quick menu.

3. Select **Format Cell** from the Quick menu.



4. Choose **Number Tab** from the Dialog box

5. Choose **Currency**, **2** decimal places

6. Also format the Totals and the Minimum and Maximum values to Currency, two decimals.

Note: If ####### appear in some cells, the column is not wide enough for the number. *Changing Column Width* is covered later.

Your worksheet should look similar to the one below.

G17 fx

	A	B	C	D	E
1					
2		HOME BUDGET			
3					
4					
5					
6					
7	Item	Budget	Actual	Net	
8					
9	Groceries	$210.22	$201.22	$9.00	
10	Clothes	$70.00	$78.00	($8.00)	
11	Mortgage	$400.00	$400.00	$0.00	
12	Electric	$65.50	$62.34	$3.16	
13	Gas	$87.00	$64.19	$22.81	
14	Car	$125.00	$125.00	$0.00	
15	Water	$50.00	$60.00	($10.00)	
16					
17	Total	$1,007.72	$990.75		
18	Minimum		$60.00		
19	Maximum		$400.00		
20					

NOTE: Amounts in ( ) (parentheses) indicates a negative amount.

Making Changes & Recalculation

A mistake was made in the *ACTUAL AMOUNT* spent on *ELECTRICITY*, the amount should have been *$72.34* NOT *$62.34*

Changing Values

-Move to cell **C12** and type **72.34** and **<Enter>**

-Notice the amount in cell **C12** changed and so did the total in **D12** and **C17**.

Note: If ####### appear in some cells, the column is not wide enough for the number. *Changing Column Width* is covered later.

Changing Column Width

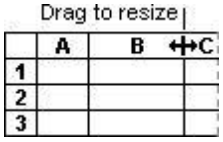
If ####### appear in some cells, the column is not wide enough for the number and you needed to adjust the column width.

-To automatically fit the contents (auto fit)

1. Select the column or columns that you want to change.
2. On the **Home** tab, in the **Cells** group, click **Format**.
3. Under **Cell Size**, click **AutoFit** Column Width.

-To manually set the column width using the mouse:

Click and drag the boundary marker to the right of the column heading



Creating a Simple Graph

We are going to create a simple bar graph of the Home Budget. The graph will show the Budget amount and the Actual amount for each of the items. There are a variety of different graphs Excel can create, this graph will be a 3D bar graph.

To make things easier to graph it is better not to have any blank rows or columns in you spreadsheet.
The Home Budget has a blank row between the headings and the items, Row 8.

1. Move to row 8

2. Select Delete from the quick menu (right click to bring up the quick menu)

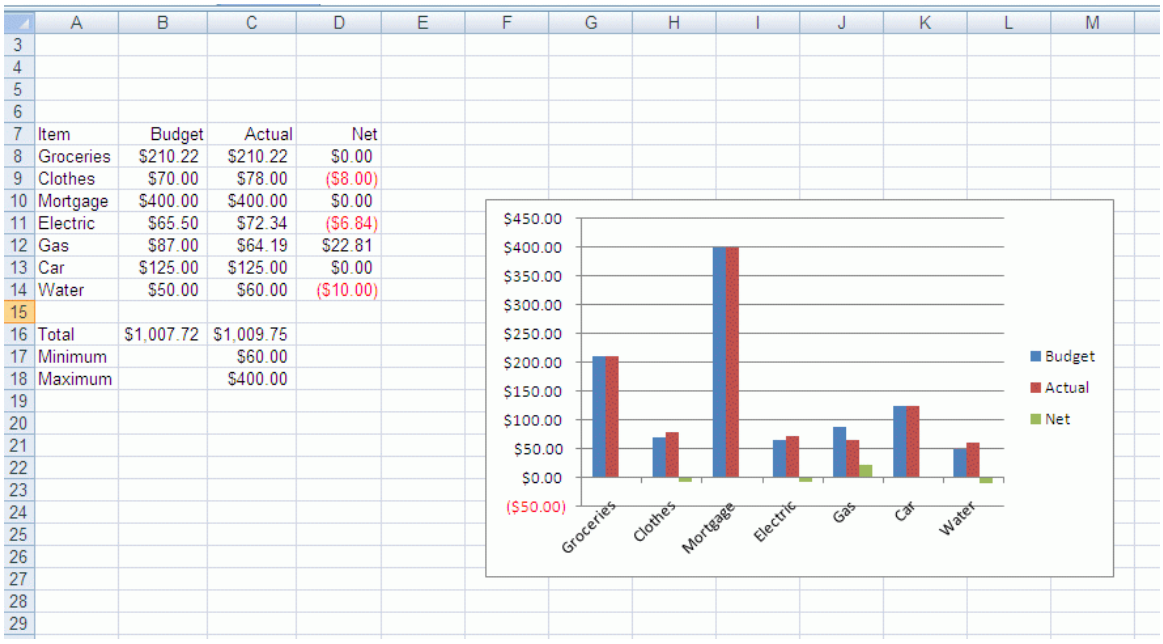
3. Choose *Entire Row*

4. Click OK and the row should disappear, notice how all the other rows shift up one and the formulas still work.

Now to create the graph.

1. Block all the information to be graphed, including the headings. Block from *A7 to D14*

2. From the *Insert* tab, *Charts* group choose *Column* then the first *2D Clustered Columns*



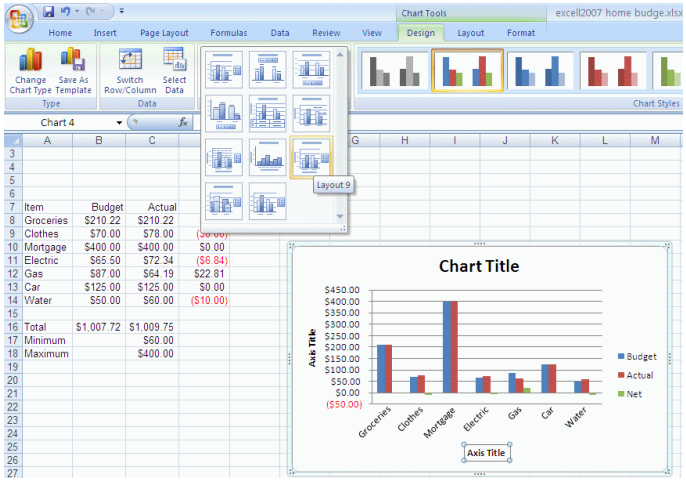
Item	Budget	Actual	Net
Groceries	$210.22	$210.22	$0.00
Clothes	$70.00	$78.00	($8.00)
Mortgage	$400.00	$400.00	$0.00
Electric	$65.50	$72.34	($6.84)
Gas	$87.00	$64.19	$22.81
Car	$125.00	$125.00	$0.00
Water	$50.00	$60.00	($10.00)
Total	$1,007.72	$1,009.75	
Minimum		$60.00	
Maximum		$400.00	

Note: you may need to move the chart box so that your spreadsheet data is visible.

A few things such as titles, and x-axis categories need to be added to the graph.

3. Double click the chart to show the *Chart Tools* in the ribbon bar

4. Choose *Chart Layouts*, then the *Layout 9*.

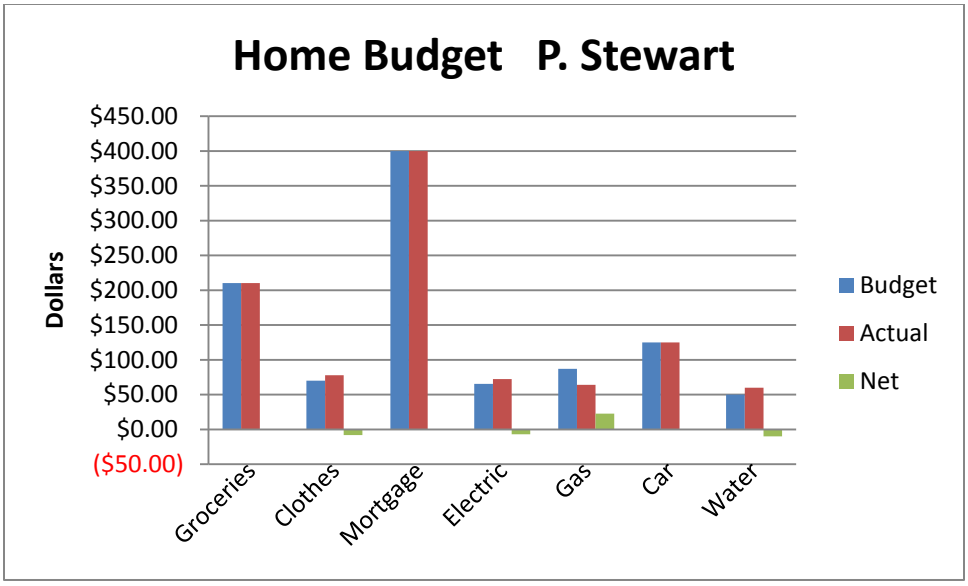


The Main chart title is centered at the top of the graph. The X-axis is across the bottom of the graph and the Y-axis goes up the left side of the graph.

5. For the *Chart Title* right click it and choose *Edit Text* Change it to **HOME BUDGET** and **your name**

6. The X-axis is quite obvious, so it can be deleted

7. The *Y-Axis* is in dollar amount so change it to **Dollars**.



Save as "Home Budget *your name*"
And submit this assignment

Clean-It-Up & Detailing Supplies
Profit Analysis worksheet

Instructions

Start Excel and open the data file "Clean-It-Up-Profit-Analysis" See your instructor on how to access this file. The purpose of this exercise is to use a partially completed workbook, enter formulas and functions, copy formulas and functions, and format titles and numbers. The completed worksheet should look similar to below.

	A	B	C	D	E	F	G
2	Profit Analysis						
3	Item	Unit Cost	Unit Profit	Units Sold	Total Sales	Total Profit	% Total Profit
4	Brush	$ 5.84	$ 3.15	36,751	$ 330,391.49	$ 115,765.65	35.039%
5	Bucket	7.14	2.75	57,758	571,226.62	158834.5	27.806%
6	Drying Cloth	3.52	1.17	42,555	199,582.95	49789.35	24.947%
7	Duster	2.55	1.04	78,816	282,949.44	81968.64	28.969%
8	Polish	7.19	7.80	57,758	865,792.42	450512.4	52.035%
9	Soap	8.52	4.09	50,646	638,646.06	207142.14	32.435%
10	Sponge	2.05	1.84	23,154	90,069.06	42603.36	47.301%
11	Wax	10.15	7.44	53,099	934,011.41	395056.56	42.297%
12	Vacuum	43.91	33.09	17,780	1,369,060.00	588340.2	42.974%
13	**Totals**			**418,317**	**$ 5,281,729.45**	**$ 2,090,012.80**	39.571%
14	Lowest	$2.05	$1.04	17,780	$90,069.06	$42,603.36	24.947%
15	Highest	$43.91	$33.09	78,816	$1,369,060.00	$588,340.20	52.035%
16	Average	$10.10	$6.93	46,480	$586,858.83	$232,223.64	

Tasks to do:

1. Add formulas in Cells E4, F4, G4:
   a. Total Sales (cell E4) = Units Sold * (Unit Cost + Unit Profit)
   b. Total Profit (cell F4) = Units Sold * Unit Profit
   c. % Total Profit (cell G4) = Total Profit / Total Sales (Note: You will set formatting to percent later)

   Copy these three formulas to the range E5:G12

2. Determine the totals for the units sold, totals sales and total profit in row 13. The formula for cell G13 is a copy of the formula in G12.

3. In the cell range B14:B16, determine the lowest value, highest value, and average value, for the values in the range B4:B12. Copy these three functions to the range C14:G16. Delete the average from cell G16, as an average of percentages of this type is mathematically invalid

4. Make the following formatting changes
   a. Change the workbook theme to Concourse (use the themes button on the Page layout tab)
   b. Cell A1 - change the font size to 24, with a green background (column 6 of Standard Colors) and white font colour
   c. Cell A2 – change to a green background and white font colour
   d. Cells B4:C4, E4:F4, E13:F13 – Accounting style formatting with two decimal places
   e. Cells B5:C12, E5:F12 - Comma style formatting with two decimal places
      (for Comma –use Number, with 1,000 separator)
   f. Cells D4:D16 - Comma style formatting with no decimal places
   g. Cells G4:G15 – Percent style formatting with three decimal places
   h. Cells B14:C16, E14:F16 Currency style formatting with two decimal places

5. Switch to Page Layout View(View menu, Page Layout) and enter your name, course, and today's date in the header area. Then change back to Normal View

6. Change the documents properties to include your name and other pertinent information

7. In Column C, use the keyboard to add manually $1.00 to the profit for each product with a unit profit of less than $7.00 and add $3.00 to the profits all other products. You should end up with $2,765,603.80 in cell F13

8. Save the worksheet as "Clean-It-Up-Profit-Analysis *your name*" and submit

Big Time Lemonade Stand

You have gone into an independent business to supplement your income: a corner lemonade stand (diversified into cookies) which you started 5 days ago. Being a computer genius, you are going to automate your books.

Now to start the Lemonade Stand finance report.

(Remember to start a **New** file.)

1. Move the cursor to cell **D1.**

2. Look at the reference area(top left) to confirm that it reads **D1**

3. Type in **(your name) LEMONADE STAND <Enter>**

4. The label appears in the cell and spills over into the adjacent columns.

   Notice the reference area:
   D1 your name LEMONADE STAND

5. Move to cell **A3**

6. Type **Lemonade Selling Price (glass)**

7. Move to cell **A4**

8. Type **Cookie Selling Price (1 cookie)**

9. Move to cell **A6**

10. Type **Lemonade Cost (per glass)**

11. Move to cell **A7**

12. Type **Cookie Cost (per cookie)**

13. Move the cursor to cell **C9**

6. Type **DAY 1.**

7. Now move to cell **D9** and type **DAY 2**

8. Repeat this so that **DAY 3** is in cell **E9**, **DAY 4** in cell **F9** and **DAY 5** in cell **G9.**

9. Now move down to cell **A10**

10. Type in column:

A10 Lemonade Sold
A11 Cookies Sold
A12 Total Sold

Your spreadsheet should look similar to below.

	A	B	C	D	E	F	G	H
1				P. Stewart's Lemonade Stand				
2								
3	Lemonade Selling Price (glass)							
4	Cookie Selling Price (1cookie)							
5								
6	Lemonade Cost (per class)							
7	Cookie Cost (per cookie)							
8								
9			Day 1	Day 2	Day 3	Day 4	Day 4	
10	Lemonade Sold							
11	Cookies Sold							
12	Total Sold							
13								
14								
15								

NUMBER ENTRY

Now you will begin to enter in your remarkable sales figures

The first day, you sold 9 glasses of lemonade

1. Move to cell **C10** type **9** and **<Enter>**

2. *Day 2* you sold *14* glasses.
   Move to cell **D10** and type **14** and **<Enter>**

3. Enter these amounts: **Day 3 - 12, Day 4 - 19, Day 5 - 26.**

4. Now enter the *COOKIE* sales data on row 11
   DAY 1 - 7, DAY 2 - 16, DAY 3 - 11, DAY 4 - 23, DAY 5 - 24

CALCULATIONS

Now you can calculate the totals from the formula for *DAY 1*. The following represents the calculations that we must perform.

Total Sold	*=*	*Lemonade Sold*	*+*	*Cookie Sold*
C12	**=**	**C10**	**+**	**C11**
	=	**9**	**+**	**7**
	=		**16**	

5. Move to cell **C12**

6. Type **=C10+C11** and **<Enter>**.

> Note: You must begin with the **=**, **+** or **@** sign. If you do not the spreadsheet assumes the letter C is the start of a label, not a formula.

REPLICATION (copying formulas)

To obtain the total sold figure for Days 2 - 5, use the copy and paste commands to copy the formula in cell *C12* to cells *D12, E12, F12* and *G12* rather than retyping it four times with different column letters.

1. Move to the cell to be copied, **C12**

   With the cursor still on cell **C12**
   -select **Copy** from the **Home** tab, **clipboard** group.
   OR
   -use the copy quick key <CTRL> & <C>
   OR
   -use the select Copy from the quick menu (right click the cell to bring up the quick menu)

2. Highlight the cells we wish to copy the formula to D**12 to G12**

   With cells highlighted
   -select **Paste** from the **Home** tab, **clipboard** group.
   OR
   -use the Paste quick key <CTRL> & <V>
   OR
   -use the select Paste from the quick menu (right click the cell to bring up the quick menu)

The results of the calculations are displayed in the cells that contained the formulas.

Note that the formulas use different cell addresses. The spreadsheet changes the cell addresses when copying to reflect the relative positions of cells in the copied formula.

Your screen should look like:

	A	B	C	D	E	F	G	H
1				P. Stewart's Lemonade Stand				
2								
3	Lemonade Selling Price (glass)							
4	Cookie Selling Price (1cookie)							
5								
6	Lemonade Cost (per class)							
7	Cookie Cost (per cookie)							
8								
9			Day 1	Day 2	Day 3	Day 4	Day 4	
10	Lemonade Sold		9	14	12	19	26	
11	Cookies Sold		7	16	11	23	24	
12	Total Sold		16	30	23	42	50	
13								
14								

1. Notice the Days labels (Row 9) do not align over the amounts,

   Right Align these headings.

If you forgot how to align headings refer back to the 'Home Budget' Exercise under Formatting.

Now would be a good time to SAVE the spreadsheet

Save as "Lemonade Part I *your name*"

Calculating the Selling Price (absolute addresses)

To figure out the income from the lemonade stand we need to know the selling price of our products.

Lemonade is being sold for $0.15 a glass and
Cookies are being sold for $0.35 each.

1. In cell D3 enter the amount for lemonade .15

2. In cell D4 enter the amount for cookies .35

3. In the following cells enter these labels

A14	**Lemonade Income**
A15	**Cookie Income**
A16	**Gross Income**

4. Since the price and the number sold is known, it is easy to calculate the dollar amount made in sales.

   The formula for dollars of sales for lemonade on...

   Day 1 is:

Lemonade Income	=	*Price of lemonade*	*	*Number sold*
C14	**=**	**D3**	*****	**C10**

   Day 2 is:

Lemonade Sales	=	*Price of lemonade*	*	*Number sold*
D14	**=**	**D3**	*****	**D10**

Notice that the cell <u>address</u> for <u>price</u> of lemonade, **D3**, must **<u>not</u>** change.

Move to cell **C14** and enter the formula **=$D$3 * C10**

In spreadsheets the asterisk (*) is used for multiplication; the forward slash (/) is used for division.

The **$** in front of the D and 3 mean *absolute address*, When the cell formula is copied to another cell, D3 will not change (absolute), where C10 should change when the formula is copied.

<u>NOTE:</u> The answer is NOT to two decimal places, this will be

corrected later.

4. Copy this formula to cells *D14* to *G14*

5. Move to cell **C15** and enter the formula for cookie income =**$D$4*C11**

6. Copy this formula to cells *D15, E15, F15 and G15*.

7. Now enter a formula to calculate the Gross Income.
   (Lemonade Income + Cookie Income)

   Move to cell **C16** and enter the formula **=C14+C15.**

8. Copy this formula to cells *D16, E16, F16*, and *G16*.

   Your spreadsheet should look like below

	A	B	C	D	E	F	G	H
1				P. Stewart's Lemonade Stand				
2								
3	Lemonade Selling Price (glass)			0.15				
4	Cookie Selling Price (1cookie)			0.35				
5								
6	Lemonade Cost (per class)							
7	Cookie Cost (per cookie)							
8								
9			Day 1	Day 2	Day 3	Day 4	Day 4	
10	Lemonade Sold		9	14	12	19	26	
11	Cookies Sold		7	16	11	23	24	
12	Total Sold		16	30	23	42	50	
13								
14	Lemonade Income		1.35	2.1	1.8	2.85	3.9	
15	Cookie Income		2.45	5.6	3.85	8.05	8.4	
16	Gross Income		3.8	7.7	5.65	10.9	12.3	
17								

FORMATTING

You have probably noticed that although the amounts calculated are dollar amounts, the numbers are not all displayed to two decimal places. This is because the program does not know the format we wish to use is for dollar amounts. This can easily be changed.

Cells *C14, D14, E14, F14, G14; C15, D15,...G15;* and *C16, D16,...G16* should all be set to two decimal places, *Currency*, format.

1. Highlight cells **C14** to **G16**

2. With your cursor on any of these cells choose *Format Cells* from the *Quick menu*

3. Select the *Number* tab, *Currency, two decimals*.

4. Format the lemonade & cookie selling price to Currency, 2 decimals. Cells D3 & D4

If you have not already done so, the headings for the Days should align on the right side of the cell to look better

1. Highlight the headings DAY1, DAY2, etc.

2. With your cursor on any of these cells choose *Format Cell* from the *Quick menu*

3. Select the Alignment tab, change the *Text alignment: Horizontal* to *Right(indent).*

Now we need to figure out how much it will cost to produce our products, so that you can determine the Net Profit made.

1. In the Column **D** of rows 6 & 7 add the values.
   A6 Lemonade Cost (per glass) **.03**
   A7 Cookie Cost (per cookie) **.05**

2. Add the following new labels
   A18 Lemonade Cost
   A19 Cookie Cost
   A20 Total Cost

   A22 Net Profit

3. Now to calculate these costs, it is similar to calculating the Lemonade & cookie sold.
   Absolute addresses must be used.

Day 1 Lemonade cost	=	Lemonade cost (per glass)	*	Day 1 Lemonade Sold
C18		$D$6	*	C10

The lemonade cost D6 never changes so it is an absolute address

In cell C18 enter the formula =$D$6*C10

4. Copy this formula to the cells D18, E18, F18, G18

5. Enter a similar formula for Cookie cost, and copy it as needed.

6. The *Total Cost* is calculated by adding *Lemonade Cost* and *Cookie Cost* , enter this formula and copy it.

7. The *Net Profit* is calculated by *Gross Income - Total Cost*, enter this formula and copy it.

8. Format these amounts to Currency, two decimals

The spreadsheet should look like.

	A	B	C	D	E	F	G	H
1				P. Stewart's Lemonade Stand				
2								
3	Lemonade Selling Price (glass)			$0.15				
4	Cookie Selling Price (1cookie)			$0.35				
5								
6	Lemonade Cost (per class)			0.03				
7	Cookie Cost (per cookie)			0.05				
8								
9			Day 1	Day 2	Day 3	Day 4	Day 4	
10	Lemonade Sold		9	14	12	19	26	
11	Cookies Sold		7	16	11	23	24	
12	Total Sold		16	30	23	42	50	
13								
14	Lemonade Income		$1.35	$2.10	$1.80	$2.85	$3.90	
15	Cookie Income		$2.45	$5.60	$3.85	$8.05	$8.40	
16	Gross Income		$3.80	$7.70	$5.65	$10.90	$12.30	
17								
18	Lemonade Cost		0.27	0.42	0.36	0.57	0.78	
19	Cookie Cost		0.35	0.8	0.55	1.15	1.2	
20	Total Cost		0.62	1.22	0.91	1.72	1.98	
21								
22	Net Profit		$3.18	$6.48	$4.74	$9.18	$10.32	
23								

More Formatting

To make the spreadsheet look clearer a number of simple formatting techniques will be applied.

1. Column B is not used for anything, so delete it.
   Move your cursor to the letter **B** in the column indicator, a Down arrow should appear.
   Select *Delete* from the *Quick menu*
   Notice how all the other columns move over, even the formulas are automatically adjusted.

2. Now some of the labels in column **A** are chopped off, this is because the new column B interferes.

   The best solution is to adjust the Width of column A

   If you forgot how to adjust column widths look back at the *Home Budget Changing Column Widths*

When entering Currency amounts, standard accounting procedure is to only put the Dollar sign on the total row, not on every row as has been done in the Lemonade Stand. The non-total rows should have two decimals but not the dollar sign.

3. Highlight the Lemonade Income and Cookie Income amounts (cells B14 to F15).
   Change the *Numeric Format to Number, 2 decimals* ,
   Use 1000 separator.

4. Do the same for the Lemonade Cost and Cookie Cost (cells B18 to F19)

5. Highlight the DAY headings, and choose *Format Cell* from the *Quick menu*

6. Choose *Font*, and change the *Point Size* to *14*, and *Bold*.

7. Do the same to the heading at the top (your name Lemonade Stand)

The spreadsheet should look similar to this.

	A	B	C	D	E	F
1			**P. Stewart's Lemonade Stand**			
2						
3	Lemonade Selling Price (glass)		$0.15			
4	Cookie Selling Price (1cookie)		$0.35			
5						
6	Lemonade Cost (per class)		0.03			
7	Cookie Cost (per cookie)		0.05			
8						
9		**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 4**
10	Lemonade Sold	9	14	12	19	26
11	Cookies Sold	7	16	11	23	24
12	Total Sold	16	30	23	42	50
13						
14	Lemonade Income	1.35	2.10	1.80	2.85	3.90
15	Cookie Income	2.45	5.60	3.85	8.05	8.40
16	Gross Income	$3.80	$7.70	$5.65	$10.90	$12.30
17						
18	Lemonade Cost	0.27	0.42	0.36	0.57	0.78
19	Cookie Cost	0.35	0.80	0.55	1.15	1.20
20	Total Cost	$0.62	$1.22	$0.91	$1.72	$1.98
21						
22	Net Profit	$3.18	$6.48	$4.74	$9.18	$10.32
23						

Be sure to Save your spreadsheet.

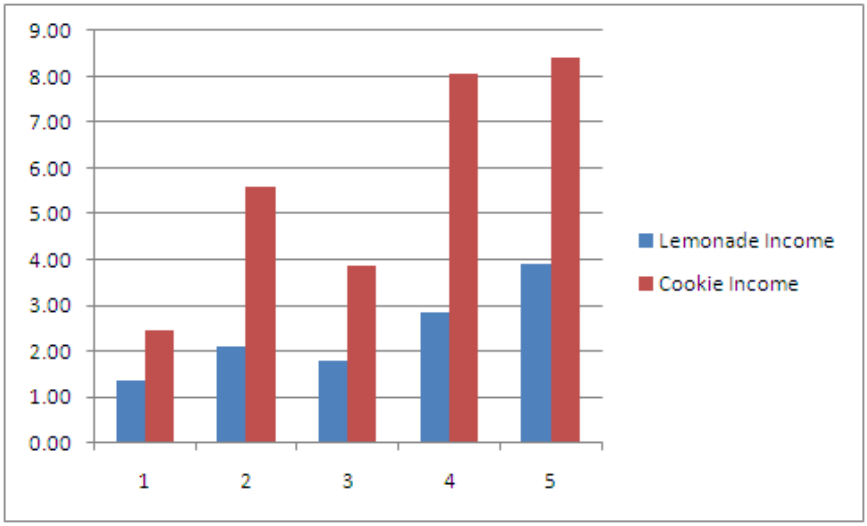
GRAPHING

Now that the first week is well under way, it is time to franchise. But, the prospective franchise buyer must be convinced of the profit possible. What better method than to use a graph.

A graph will be created showing the lemonade and cookie income for each day.

1. Highlight the lemonade and Cookies income for each day, including the headings (cells A14 to F15)

8. From the *Insert* tab, *Charts* group choose *Column* then the first *2D Clustered Columns*



Notice the X-axis labels (1, 2 ,...), the Y-axis scale, and the legend are automatically added in.

If you have a different type of graph then shown above do step below.

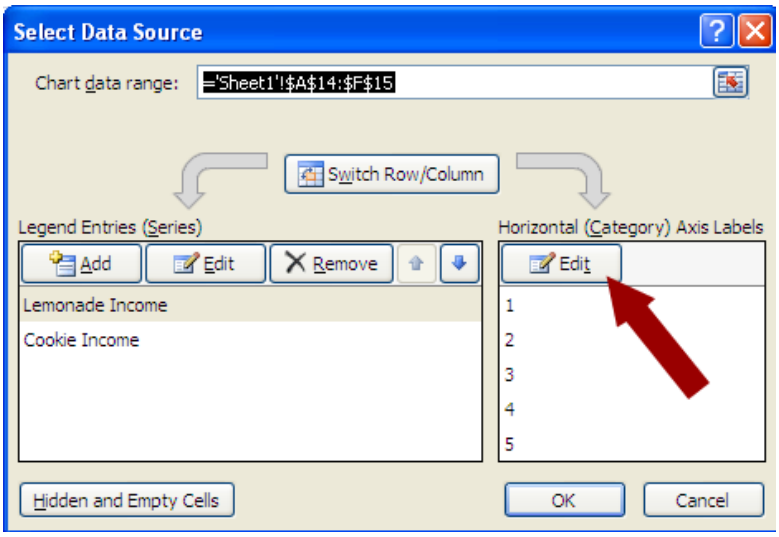
Bring up the *Graph Quick menu* (right click on the graph) and choose *Chart Type* change it to Column and Clustered Column.

The X-Axis only shows 1, 2, 3, 4, 5. It would look better if it showed Day 1, Day 2, Day 3, Day 4, Day 5 (as shown in Row 9 of the spreadsheet)

2. Bring up the *Graph Quick menu* (right click on the graph) and choose *Source Data*

3. Under *Horizontal (Category) Axis Labels*. Click Edit

4. At the bottom of the dialogue box is the "*Axis Label*". Click the red arrow at the end.



5. On the spreadsheet highlight the range for the labels B9..F9

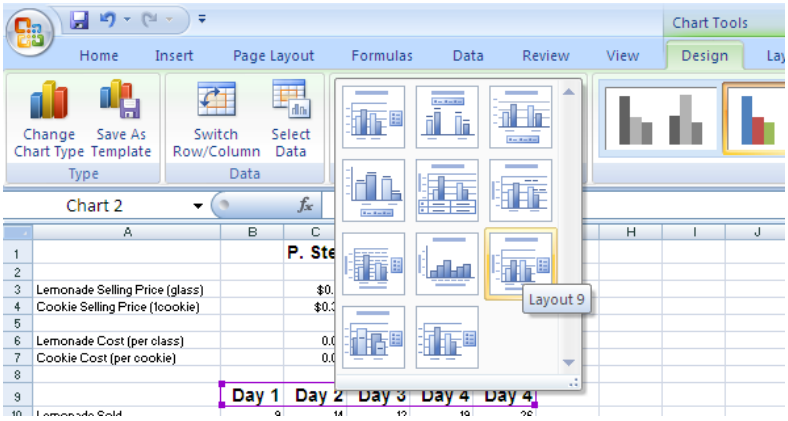
6. Now click the Red X in the *Axis Labels:* to indicate you are finished selecting.

7. Click OK & OK. The X-axis label Day 1, Day2, .. should now appear

Missing from the graph is a title across the top and a title for the Y-axis.

9. Double click the chart to show the *Chart Tools* in the ribbon bar

10. Choose *Chart Layouts*, then the *Layout 9*.



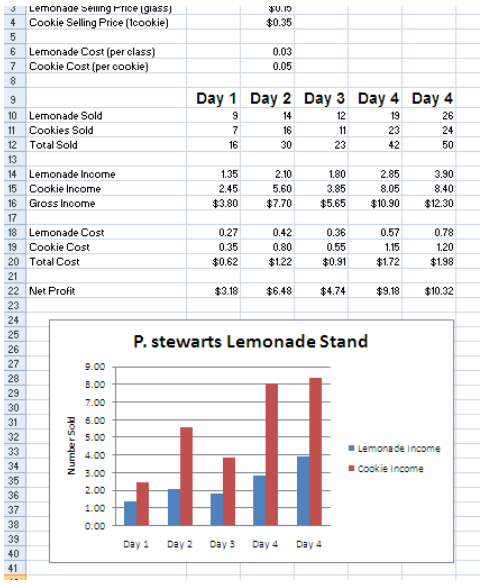
8. The *Chart title* should be the same as the title on the spreadsheet (your name Lemonade Stand)

9. The *Value(Y)-Axis* title should be *Number Sold*

10. The x- axis does not really need a title because the labels say *Day 1, Day 2 …* so delete it.

11. Move the graph so that it is below the spreadsheet values.

You may need to adjust the size of the graph.



***What IF* calculations**

One of the most powerful uses of the spreadsheet is the ***WHAT IF*** projection.

Position the spreadsheet workspace so that you can see both the graph and the lemonade sold row on the screen.

1. *What IF* the cookie sales *double*?

   -Move to row 11 and double each of the cookie sales.
   14, 32, 22, 46, 48

   Notice the totals change as you enter each new value and the graph changes too.

2. *What If* you increase the *cookie price* to *38 cents* ?

   -Move to cell **C4** and change the cookie price.

   The Total Income should change.

   -View the graph, did the graph change? Why or why not?.

More changes

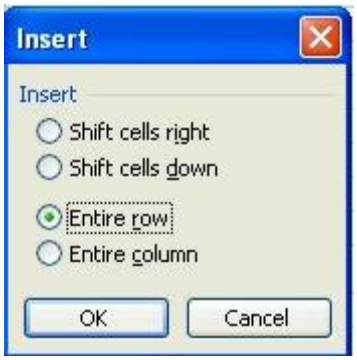
There are rumors of the government introducing an *LST (Lemonade Stand Tax)* of 6% on Gross Income. What would happen to your net sales if YOU decide to absorb this cost?

-Move to cell **E6** and enter the label: **LST %**
-Move to cell **F6** and enter **.06**
Format to *Percent, 0 decimals*

Note: That it now shows as a percent but you entered it as a decimal number

1. You are now going to insert a row to calculate the LST cost, This new row is going to be between *Cookie cost* and *Total cost.*

   Move your cursor to any where on the *Total Cost* row *(row 20)*
   Choose *Insert* from the *Quick menu,* make sure *Entire row* is selected and choose *OK*.



2. Enter the label **LST Cost** in column A of this new row.

   The formula for the LST Cost is *LST %* * *Gross Income*
   Enter this formula for Day 1 and copy it to the other days
   (Remember to use absolute address for the LST %)

   (Hint: DAY 1 LST cost is **$F$6 * B16**)

   -*Format* to Number, 2 decimals

3. The *Total Cost* formula needs to be adjusted to include this LST cost.
   It should now be *Lemonade Cost + Cookie Cost* **+** *LST Cost*
   Change the formula for each day.

Notice the Net Profit changes as well as the Total Cost changes.

	A	B	C	D	E	F	G
1			**P. Stewart's Lemonade Stand**				
2							
3	Lemonade Selling Price (glass)		$0.15				
4	Cookie Selling Price (1cookie)		$0.38				
5							
6	Lemonade Cost (per class)		0.03		LST%	6%	
7	Cookie Cost (per cookie)		0.05				
8							
9		**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 4**	
10	Lemonade Sold	9	14	12	19	26	
11	Cookies Sold	14	32	22	46	48	
12	Total Sold	23	46	34	65	74	
13							
14	Lemonade Income	1.35	2.10	1.80	2.85	3.90	
15	Cookie Income	5.32	12.16	8.36	17.48	18.24	
16	Gross Income	$6.67	$14.26	$10.16	$20.33	$22.14	
17							
18	Lemonade Cost	0.27	0.42	0.36	0.57	0.78	
19	Cookie Cost	0.70	1.60	1.10	2.30	2.40	
20	LST Cost	0.40	0.86	0.61	1.22	1.33	
21	Total Cost	$1.37	$2.88	$2.07	$4.09	$4.51	
22							
23	Net Profit	$5.30	$11.38	$8.09	$16.24	$17.63	

4. *What If* the LST increases to 7%
   -Move to cell **F6** and change the *LST amount* to **7**%

The Net Profit should now be

Day 1	Day 2	Day 3	Day 4	Day 5
$5.23	$11.24	$7.99	$16.04	$17.41

*** If it is not, you have a mistake in your formulas or data these need to be corrected. ***

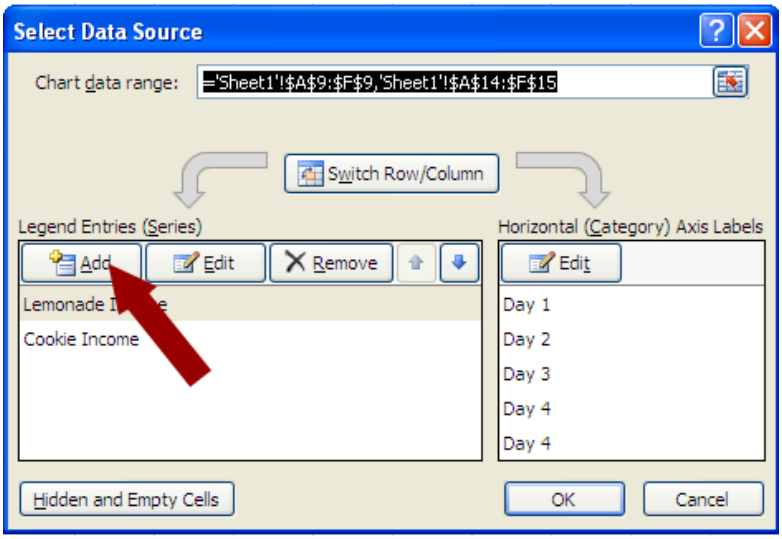
The Graph would look even better if it included the Net Profit.

1. Bring up the *Graph Quick menu* (right click on the graph) and choose *Select Data*

2. *Click the Add* button.

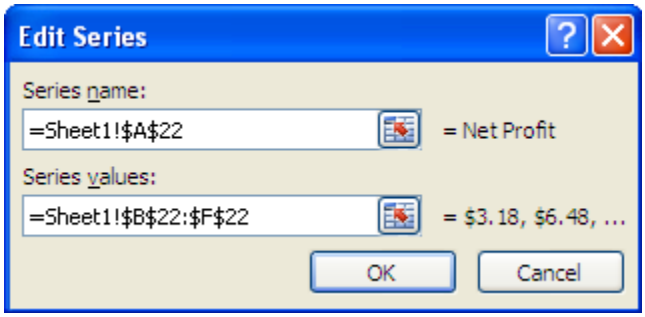
3. The *Edit Series* box should appear

4. To the Right of '*Series Name:*'box. Click the red arrow at the end.



5. On the spreadsheet highlight the range for Net Profit Name – cell A23

6. Now click the Red X in the *Source Data – name:* to indicate you are finished selecting.

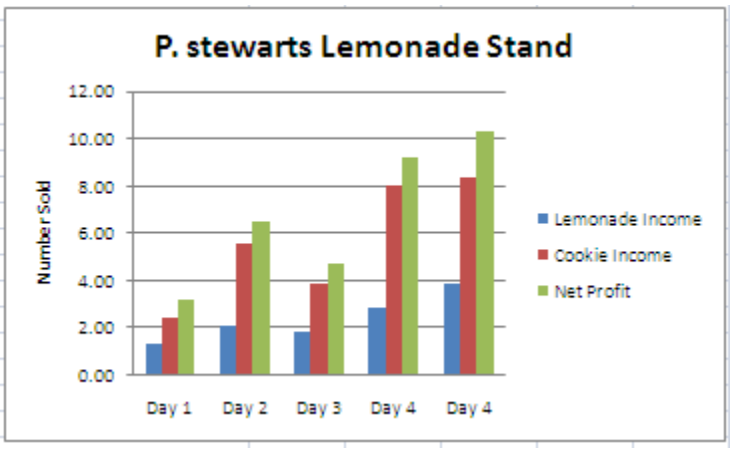


7. To add the data Values, click the red arrow at the end of the *Series Values*: box

8. On the spreadsheet highlight the range for Net Profit Values: - range of cells B23..F23

9. Now click the Red X in the *Source Data - Value:* to indicate you are finished selecting.

10. Select the OK button and check the graph, you should have the new net profit added.



Label this final spreadsheet & Graph 'Week I'

Change the documents properties to include your name and other pertinent information

Save as "Lemonade Part I *your name*" and submit

Lemonade Stand Spreadsheet **Part II**

Name _____

Obtain a copy of this page from your teacher.

Before your start be sure:

Lemonade Selling Price	0.15	Lemonade Cost	0.03		
Cookie selling Price	0.38	Cookie Cost	0.05	LST%	7%

Changing <u>only</u> the <u>Selling Prices</u> and <u>Costs</u> recalculate for the following.

a) The price of sugar has gone up. It now **costs** .06 for each glass of lemonade and .12 for each cookie.

What is the Net Profit?

Day 1 _____ Day 2 _____ Day 3 _____ Day 4 _____ Day 5 _____

b) Competition has opened across the street and a price war starts. You now **sell** lemonade for .10 per glass and cookies at .20. Keep the costs from a) above.

What is the Net Profit?

Day 1 _____ Day 2 _____ Day 3 _____ Day 4 _____ Day 5 _____

c) The competition across the street is still strong. You decide to do some advertising.
Insert a new row before the TOTAL COST row called ' Advertising Costs'.
Enter the following amounts in this new row.
Under DAY 1 $2.00, Day 2 $2.00, Day 3 $2.00, Day 4 $5.00, Day 5 $5.00

Adjust your Total cost formula.

What is the Net Profit?

Day 1 _____ Day 2 _____ Day 3 _____ Day 4 _____ Day 5 _____

d) The competition has gone bankrupt; you can now raise your prices.
Increase the selling price of lemonade to 30 cents per glass and cookies to 40 cents each.

What is the Net Profit?

Day 1 _____ Day 2 _____ Day 3 _____ Day 4 _____ Day 5 _____

e) The government just increased the LST tax to 8%.

What is the Net Profit?

Day 1 _____ Day 2 _____ Day 3 _____ Day 4 _____ Day 5 _____

f) Make up some of your own values.

g) Save as "Lemonade Stand **Part II** *your name*" and submit both the spreadsheet and this page

Larry Lotospend Expense Report Part I

Larry Lotospend is a businessman who does a lot of traveling. He must keep an expense record. You are to develop an expense report for Larry Lotsospend. Larry's expense report should have one column for each day of the week, Sunday through Saturday, and an Items Totals column.

EXPENSE REPORT

for Larry Lotospend May 7-13 (Created by your name)

ITEMS	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Hotels								
Meals								
Air fare								
Transportation								
Parking								
Entertainment								
Misc.								
Daily Total								

Note: You will have to adjust the column widths

Larry's expense for the week of May 7-13 is shown below.
Set up the expense report spreadsheet using the following data

Sunday	Air fare to Montreal	$185.00
	Meals	18.00
	Taxi to airport (Transport)	12.50
Monday Meals		25.00
Tuesday	Meals	30.00
	Entertainment	20.00
	Taxi (Transportation)	15.37
Wednesday	Meals	25.00
	Laundry (Misc)	18.00
Thursday	Meals	35.00
	Entertainment	45.00
	Taxi	21.25
Friday Meals		8.00
	Air fare to Winnipeg	180.00
	Van to airport	10.00
	Taxi from airport	12.50

Saturday no expenses, at home

Also include these expenses
-Hotel room charge of $185/day, Sunday through Thursday night
-tips, a total of $18 for the week (show them Friday under misc.)

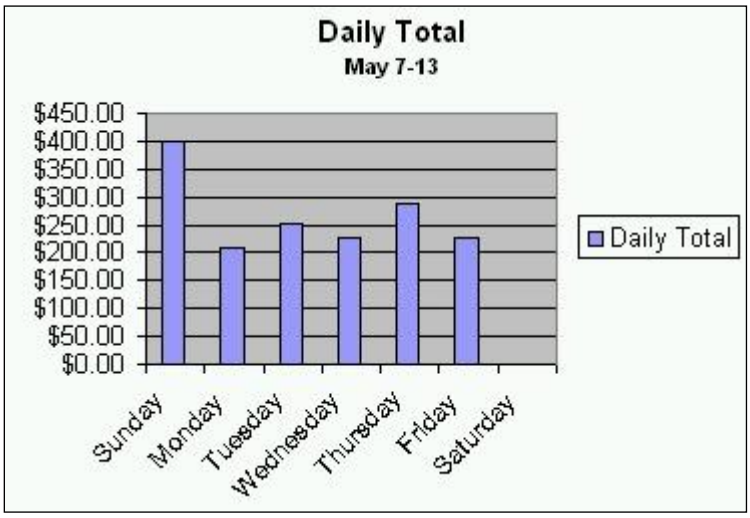
Note:
You must change the column widths for some columns.
Format as appropriate
Adjust fonts as appropriate
Add a double line above the "Daily Total" row

The worksheet should calculate the daily totals at the bottom and the weekly totals at the right-hand side.

	A	B	C	D	E	F	G	H	I
1				**Expense Report**			May 7 -13		
2				For Larry Lotospend (Created by P. Stewart)					
3									
4									
5	**Items**	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Total**
6	Hotels	185.00	185.00	185.00	185.00	185.00			$925.00
7	Meals	18.00	25.00	30.00	25.00	35.00	8.00		$141.00
8	Air Fare	185.00					180.00		$365.00
9	Transportation	12.50		15.37		21.25	22.50		$71.62
10	Parking								$0.00
11	Entertainment			20.00		45.00			$65.00
12	Misc.				18.00		18.00		$36.00
13									
14	Daily Total	$ [illegible]0.50	$[illegible]0.00	$[illegible]0.37	$[illegible]00	$[illegible]25	$[illegible]8.50	$0.00	$1,603.62

Create a graph comparing Larry's *TOTAL* expenses for *EACH* day of the week.

Be sure to include Titles and labels on your graph.

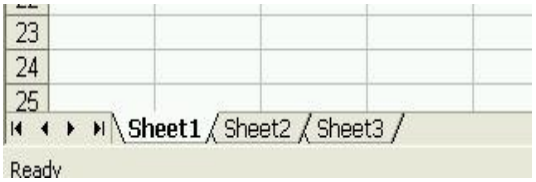


Save the spreadsheet as "Larry Lotospend *your name*"

Do NOT submit until you are finished all 5 parts.

Larry Lottospend Expense Report
Part II

You will notice at the bottom the spreadsheet are tabs sheet 1, sheet2, sheet 3 ... This is so you can have multiple spreadsheets within the same notebook.



You are going to change the name of the first Larry Lotospend sheet.

Right click on the Sheet 1 tab and select *Rename* from the Quick menu, the cursor moves to the tab, type *Larry 1*

Change the name of the Sheet 2 tab to *Larry 2*

For the week of May 14-20 Larry Lotospend went on another business trip.

His expenses are listed below.

Now to save your self some work copy the entire spreadsheet from part I, and paste it in the Part 2 tab. You may have to adjust some column widths again.

Now clear the number in the middle of the spreadsheet. NOT the formulas, headings, etc. as these are all the same (except for the dates)

To do this highlight the values for Sunday to Saturday (B6..H12), right click to bring up the Quick menu and select 'Clear Contents'

Now you can add the second week data below. The formulas should work just fine.

Sunday	Air fare to Vancouver	$325.00
	Taxi to airport	22.00
Monday	Parking	18.00
	Meals	23.00
	Car rental (transportation)	53.27
Tuesday	Parking	15.00
	Entertainment	25.00
	Meals	35.00
	Car rental	44.60
Wednesday	Meals	12.75
Thursday	Car Rental	25.00
	Meals	12.75
Friday	Parking	9.00
Saturday	Parking	3.00

Also include
- hotel room of $175.00/day for Sunday to Thursday
- tips, a total of $27 for the week (show on Saturday as Misc.)

Remember to change Larry's date at the top of the worksheet

Add a graph for this second week of expenses.

Resave the spreadsheet "Larry Lotospend *your name*"

Larry Lottospend Expense Report
Part III

Create another tab for Larry=s third week, use the data below

Sunday	Home	No expenses
Monday	Home	No expenses
Tuesday	Air fare to Halifax	$1145.00
	Parking	22.00
	Entertainment	26.00
	Meals	39.00
	Car rental	53.60
Wednesday	Meals	36.78
Thursday	Cab from airport	12.75
Friday	Parking	9.00
Saturday	Home	No expenses

Also include
- hotel room of $145.00/day for Tuesday to Thursday
- tips, a total of $14 for the week (show on Saturday as Misc.)

Remember to change Larry's date at the top of the worksheet

Add a graph for this week’s expenses.

Larry Lottospend Expense Report
Part IV

One of the features of using multiple spreadsheet pages is the ability to calculate data from all the different pages. You are going to calculate a final expense report and graph on a another page

1. Change the name of 4th sheet tab to *Larry Final*

Note: If you need to add a new Sheet tab, Right click on any tab to bring up a quick menu, Select Insert, choose Worksheet and OK.
You can then drag this tab to the correct position.

Expense Report FINAL TOTAL
for Larry Lotospend (Created by your name)

ITEMS	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Week Tota
Hotels								
Meals								
Air fare								
Transportation								
Parking								
Entertainment								
Misc.								
Daily Total								

2. Copy a spreadsheet similar to before

3. The formulas are now going to be different because they are the totals for the previous three weeks of expenses.

For Sundays Hotel the formula will be
Larry Part I Sunday Hotel + Larry Part 2 Sunday Hotel + Larry Part 3 Sunday Hotel

=’Larry 1’!B5 + ‘Larry 2’!B5 + ‘Larry 3’!B5

Notice that the formula now includes the sheet name ***‘Larry 1’!*** (the sheet name enclosed in single quotes followed by an **!**, exclamation mark) then the cell reference. Your cell reference may be different.

Enter the formulas on the *Larry Final* sheet.
(Note: Your cell reference may be different.)

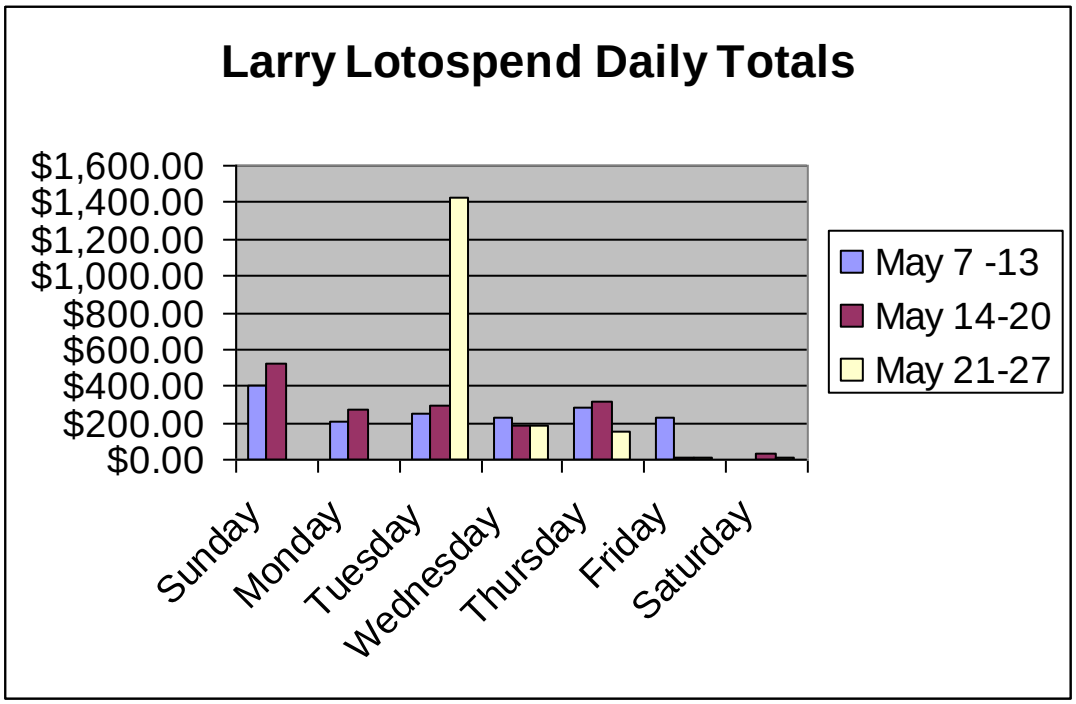
4. Copy the formula to the to the other cells on the sheet

Your spreadsheet should look similar to below

	A	B	C	D	E	F	G	H	I
1				**Expense Report**			**Final Total**		
2				For Larry Lotospend (Created by P. Stewart)					
3									
4									
5	**Items**	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Week Total**
6	Hotels	360.00	360.00	505.00	505.00	505.00	0.00	0.00	$2,235.00
7	Meals	18.00	48.00	104.00	74.53	47.75	8.00	0.00	$300.28
8	Air Fare	510.00	0.00	1,145.00	0.00	0.00	180.00	0.00	$1,835.00
9	Transportation	34.50	53.27	113.57	0.00	[illegible]	22.50	0.00	$382.84
10	Parking	0.00	18.00	37.00	0.00	0.00	18.00	3.00	$76.00
11	Entertainment	0.00	0.00	71.00	0.00	45.00	0.00	0.00	$116.00
12	Misc.	0.00	0.00	0.00	18.00	0.00	18.00	41.00	$77.00
13									
14	**Daily Total**	$922.50	$479.27	$1,975.57	$597.53	$756.75	$246.50	$44.00	$5,022.12
15									

5. Create a graph showing the daily totals (Sunday to Saturday) for each of the three weeks Larry traveled.

Be sure to include proper headings and labels.



Larry Lottospend Expense Report
Part V

There was a fourth week of travel for Larry. He flew to Las Vegas for a conference from Monday to Friday.

-Create a fourth week of travel expenses, insert a new tab sheet **before** the *Larry Final* sheet.

-You make up the expenses for this week

- Add a graph for this week's expenses.

-Modify the formulas on the Final sheet to include this new week

-Modify the graph to include this new week

-Label this spreadsheet and graph Part V.

-Change the documents properties to include your name and other pertinent information

Save the spreadsheet as "Larry Lotospend *your name*" and submit

SPREADSHEET EXERCISE
Class Marks

You Are the Teacher

Suppose it is the beginning of the school year, and you have just received your class lists for the courses you will be teaching. A worksheet will help you not only in recording marks for assignments and tests, but also for tabulating other required commodities such as averages and total marks for each student when it comes time for report cards.

Let's begin by creating a new worksheet and entering the names of your students on it.

The first thing we should do is create some meaningful headings to help you keep track of assignments, tests, and projects. Move the highlight to **B1** and type **Asgn 1** (*for assignment #1*). Next move to cell **B2** and type **10** since the first assignment will be worth 10 marks. Next move to cell **A3** and type **STUDENT** in capital letters.

Before you can enter your students names you must make the first column wider.

-change the width of column A to a set width of 25

Now begin to enter all your students, start in **A5** and continue one under the other down column A, until you have entered all the names below in order. (NOTE: These are fictitious students - the names have been changed to protect the innocent).

Smart, Ima; Rowave, Mike; Dover, Ilene; Burr, Lum; Darring I. M.; Ference, Inter; Hammer, Jack; Good, Tu; Hanger, Cliff; Mass, Chris; Funt, Elli; Burr Tim; Naisum, Jim

Well, it=s the second week of school now, it must be time for an assignment - right? You decide that September 12 would be a good day to collect an assignment. Move the highlight to **B3** and add the date as **09/12.** Starting in cell **B5** and moving down the column, enter the following marks that are arranged to match the students in order listed above:

8, 8.5, 7.5, 3.5, 4, 8.5, 9, 10, 10, 6, 10, 9, 9.5.

Format the above marks to *Number, 1 decimal place.*

Put your name to cell A1

Before going any further, now would be a good time to save your work, use the filename **"CLASS MARKS *your name*"**

SORTing

It would make things easier for you if your student's names were in alphabetic order.

1. Highlight all the data to be sorted; this includes the students name and their corresponding mark

2. Cells A5 to B17

3. Select **Sort** from the **DATA** menu.

4. You wish to sort by student names (column A.)
   So the 1st sort criteria should be Column A

5. Click OK in the dialog box, the names and their corresponding marks should be sorted.

On September 5th, there is a new student added to your class list, his name is **Samson, Ite.** Assignment mark of 7.5 Insert his name and mark in the last row (Row **18)**, then *re-sort*, in order to keep the names in alphabetic order. (Remember to Block the marks as well)

More Changes

As a teacher, some information that would be valuable to have is the average score for a test item, also the highest and lowest mark. We can accomplish this be entering formulas into a cell.

1. Move the cursor down to cell **B20**
   Here we want the average score, so enter the formula **=AVERAGE(B5.B19).**
   This formula instructs the worksheet program to start at row 5 of the current column (B in this case), and add all the numbers down to and including cell B19. Then the total is divided by the number of cells used to arrive at the average.

2. Now move down two cells and enter the formula for the lowest (minimum) score. This time enter the formula **=MIN(B5.B19)**

3. Move down two more cells and enter the formula for the highest (maximum) score, which is **=MAX(B5.B19)**

4. Change the format of the above three cells to *Number, 1 decimal place*.

5. Change the column width of column **B** to 7 *characters*.

6. Next you should include some labels to identify the calculated numbers that will occupy these cells. In the cell immediately to the left of where you placed the average formula, enter the label **Average Mark**

7. Enter appropriate labels for the other two formulas entered as well.

8. For appearance sake, you will want to have the labels you just entered to be *right justified* instead of the default that is *left justified*.

9. Do the same *right align* for the labels at the top of column B

	A	B	C
1	*your name here*	Asgn 1	
2		10	
3	STUDENT	12-Sep	
4			
5	Burr, Lum	3.5	
6	Burr, Tim	9.0	
7	Darring, I.M.	4.0	
8	Dover, Ilene	7.5	
9	Ference, Inter	8.5	
10	Funt, Elli	10.0	
11	Good, Tu	10.0	
12	Hammer, Jack	9.0	
13	Hanger, Cliff	10.0	
14	Mass, Chris	6.0	
15	Nasium, Jim	9.5	
16	Rowave, Mike	8.5	
17	Samon, Ite	7.5	
18	Smart, Ima	8.0	
19			
20	Average Mark	7.9	
21			
22	Lowest Mark	3.5	
23			
24	Highest Mark	10.0	

10. On Sept. 29 you have the term's first test which is worth 40 marks. Column *C* will be used for this test. Again label this data (**Test 1**) and enter the following scores that start with Lum Burr down to Ima Smart:

34.5, 32, 22.5, 16.5, 17.5, 32, 35, 36.5, 30, 35.5, 14, 30.5, 33.5, 39.

Why don't you get totals for the numbers you just entered? First we need formulas beneath our test scores. We could enter them individually as before, but there is a faster way. You can replicate (copy) the formulas to other addresses on a worksheet.

11. Copy the Average, Minimum and maximum formulas to this new column.

12. Adjust the Formatting of Column C, (Numeric format and width) the same as column B

-
On October 30, you conduct a second test that was worth 35 marks. The marks are as follows:

28.5, 29, 31, 30, 15.5, 25.5, 26, 26.5, 22.5, 29.5, 11.5, 24.5, 29, 34.

Enter the appropriate headings, and don't forget that you must copy the formulas before you will get totals under these scores.

-
On Nov. 3 there is another assignment, again worth 10 marks. Enter the following marks, etc.

7, 6.5, 7, 5, 4.5, 8, 9.5, 8, 8, 9, 8.5, 7, 3.5, 10.

-
The final term test for the semester was on Dec. 14. It was out of 50 marks and the scores were:

37, 27, 37, 36, 22, 32, 27.5, 37.5, 10.5, 33.5, 18, 33, 40.5, 38.5.
Again, enter the scores, headings and formulas

-

The final exam was on Jan. 24. The scores (out of 90) were:

77.5, 70.5, 77, 76.5, 64.5, 76, 68, 73.5, 75, 75, 55.5, 69, 83, 97.

The Final Mark

Finally, a formula is needed which will calculate the final percentages for the course for each student. To do this:

-total all the scores across each student's row *SUM(B5.G5)*,
-divide by the total possible marks */SUM(B$2.G$2)* and then
-multiply by 100.

In cell **H5** enter the formula: **=SUM(B5.G5)/SUM(B$2.G$2)*100**

Insert some rows at the top of the spreadsheet to label with your name and a course name (make up a course)

Be sure you have the appropriate headings above each column and have aligned and formatted the data.

Produce a graph of all of **Cliff Hanger's** marks.

Change the documents properties to include your name and other pertinent information

Submit the above graph and spreadsheet.

Worksheet Assignment
The Video Store

In this exercise you will set up a spreadsheet that might be used by a video rental store. In this spreadsheet you will set two rental rates: regular and new release. Each video in your store had to be purchased, so you will also calculate how many days the movies must be rented before you pay off the original purchase. In addition, you will calculate gross and net income based on your rentals.

Your spreadsheet should be laid out similar to the following example:

	A	B	C	D	E	F	G	H	I	J	K
1					**Mr. K's Video Emporium**						
2											
3	**New Release Rate**	$3.99									
4	**Regular Rate**	$2.00									
5											
6	**Gst**	7%									
7	**Pst**	7%									
8											
9											
10		**Purchase**	**Release**	**Rental**	**Payoff**	**Days**	**Rental**			**Total**	**Total**
11	**Title**	**Cost**	**Type**	**Rate**	**Days**	**Rented**	**Income**	**GST**	**PST**	**Gross**	**Net**
12											
13	4 Minute Break	99.99	N	3.99	25.06	48	191.52	13.41	13.41	218.33	118.34
14	Canteen Special	51.50	R	2.00	25.75	17	34.00	2.38	2.38	38.76	(12.74)
15	Dangerous Lessons	75.00	R	2.00	37.50	25	50.00	3.50	3.50	57.00	(18.00)
16	Deadly Exams	120.00	N	3.99	30.08	20	79.80	5.59	5.59	90.97	(29.03)
17	Locker Cleanup	18.95	N	3.99	4.75	27	107.73	7.54	7.54	122.81	103.86
18	Mondays	54.75	R	2.00	27.38	25	50.00	3.50	3.50	57.00	2.25
19	Nerds with CPU's	199.97	N	3.99	50.12	48	191.52	13.41	13.41	218.33	18.36
20	Night of Homework	55.50	R	2.00	27.75	14	28.00	1.96	1.96	31.92	(23.58)
21	Supercomputer XI	19.00	R	2.00	9.50	40	80.00	5.60	5.60	91.20	72.20
22	Walk Between	250.00	N	3.99	62.66	58	231.42	16.20	16.20	263.82	13.82
23											
24		$944.66				322	$1,043.99	$73.08	$73.08	$1,190.15	$245.49
25											

DIRECTIONS:

- put the name of ***your*** store at the top of the spreadsheet

- Somewhere in the top few rows put the rates you will charge for new releases and regular rent.

- Use the current rate for Provincial Sales Tax (PST) and Goods and Services Tax (GST). Be sure to enter all these values as **numbers**, not text.

-Format the GST and PST as percent

-Format the *New Release Rate* and *Regular Rate* as currency, 2 decimals

- Before typing the labels for each column, change the width of column **A** to 20 characters.

- Enter the labels for each column as they are in the example.

-The label 'Title' should be left justified, Right justified the other labels

- Enter at least 12 titles of movies available in your store (**Make up your own names for the videos).**

- Enter the price you paid for each video into the second column.

-The third column is the *Release Type*.
In this column, enter the letter **N** if the movie is a New release and **R** if it is a Regular release.

- In the next column, use a formula to call up the rent fee for each title. Remember: the rental rates are in the top rows. (By using a formula instead of just typing in the rate, we can easily change our spreadsheet later).

The formula would be something like
=IF(C13="N", $B$3, $B$4)

Note: Your cell addresses may be a little different.

- In the *Payoff Days* column enter a formula to divide the *Purchase Cost* by the *Rental Rate* to figure out the number of days the movie must be rented before it is paid off.

- The fifth Column is the actual number of days the movies were rented so far. Enter any values you wish for this column.

- For the *Rental Income* column, enter a formula to multiply the rental rate by the actual number of days rented to figure out how many fees were collected.

- To calculate the taxes charge to your rent fees, multiply the 'Rental Income' column by the cell that states the tax rate (near the top of the spreadsheet). Be sure to use ABSOLUTE ADDRESSES for the tax rate cell.

- *Total Gross* is the total money collected in your store. Add the rental income and taxes to find this value.

- *Total Net* is the money that you have cleared. It is Gross Income less purchase costs and taxes.

- One row below the spreadsheet, total all the columns except Release Type, Rental Rate and Payoff days.

- Format these totals as *Currency, 2 decimals*

- Format the spreadsheet to make it look more professional. E.g. Column Widths, fonts, bold, italics, borders, etc.

- Change the documents properties to include your name and other pertinent information

To Do:

-Sort the movies in order by name.

-Change the rental rates until you find you are making money.

-Produce a graph showing how the different movies compare in the number of times each was rented.

-label the spreadsheet,save as "Movie Rental 1 *your name*" and submit this spreadsheet.

-Change the rental Rate for new releases and regular release.

- Also the government just changed the GST tax rate to ???? (make up your own).

-label the spreadsheet,save as "Movie Rental 2 *your name*" and submit this spreadsheet.