

WEEK 6 - Excel Exercise (If the following directions do not apply to your version of Excel, and if you have trouble locating specific buttons or commands, please email me for help or post to the discussion board.)

Follow the underlined instructions below so your spreadsheet will look like the samples. Either tile this document and an Excel spreadsheet, or print this document because you'll need to refer to it to complete the exercises.

Each new set of instructions is based on mastering the previous set of instructions, so please do not continue with the next set until your spreadsheet looks like the sample. Post a question to the group if something in your spreadsheet doesn't 'look right'. We'll get you right back on track so you can continue with the next set.

A. Entering data - Selecting / Highlighting Individual Cells

Click with your mouse in any cell - notice the thick border - this designates 'the active cell' - click with your mouse in the cell **B4** and type the number **97** - click into another cell, then click back in this cell

The data you entered for this cell is displayed in the **Formula bar** above the '**C**' column. Look above the '**A**' column and you'll notice the name of the ACTIVE cell displayed - this box is the **Name box**.

The reference in the **Name box**, for the active cell you have selected, consists of a column letter followed by a row number. In this case **B4** will be displayed in the **Name box**, and '**97**' will be displayed on the **Formula bar**.

Use your arrow keys, or your mouse, to move to cell **C4** - notice that nothing is displayed in the **Formula bar** and **C4** is displayed in the **Name box**. Enter the figure '**89**' into the **C4** cell and hit **Enter**

Click with your mouse on the cell **B4** with the number '**97**' in it and then click with your mouse in the **Formula bar** (above '**C**' column), delete '**97**' and type '**55**' and then hit **Enter** on your keyboard or click with your mouse in another cell.

When you make a mistake entering data in Excel, one way to correct the mistake is to use the **Formula bar** to reenter data.

To delete cell contents, select the cell, hit your **space bar**, **back space**, or **delete**

key to erase the incorrect data - or use **undo** in the **Edit** menu, or the button on the **Standard** toolbar.

If you double click in a cell you can correct a mistake or type new information directly into the cell where the mouse cursor is blinking.

Go to **C4** and use any of the above methods to erase '**89**' - type '**65**' instead

Cell and Range Names - Click with your mouse in the cell **B3** and type '**1st Qtr**' - leave **C3**, **D3**, and **E3** empty for now

In cell **A16** type '**Total**'

'**Fill A Series**' - Click with your mouse one time on **1st Qtr** and position the pointer over the black square in the bottom right corner - when your mouse changes from a thick white cross to a thin black cross, drag your mouse across cells **C3**, **D3**, and **E3** - then release the mouse button - the quarters should be entered in the correct order with the correct numbers.

'**Auto complete**' - After the first time you enter a word, such as **Qtr**, the next time you try to type it, Excel may complete the word for you.

Click with your mouse in the cell **A1** and type '**Quarterly Grades**' and then click in cell **A3** and type '**Student**'

Continue entering the info in the spreadsheet until it looks like the one below.

	A	B	C	D	E
1	Quarterly Grades				
2					
3	Student	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
4	David R.	55	65	68	75
5	Michael J.	75	63	55	100
6	Sarah S.	65	62	45	85
7	Sally M.	63	68	97	96
8	Zoe Y.	85	85	63	89
9	Keisha R.	99	99	85	55
10	Evan B.	85	63	68	99
11	Roland V.	63	87	79	63
12	Michaela R.	88	85	68	79
13	Cody T.	55	63	89	96
14	Aaron R.	100	100	99	68
15	Erin K.	55	98	63	89
16	Total				
17					

B. Selecting / Highlighting Ranges of Cells (Multiple rows / columns)

- To select a single row, position the mouse on a number to the left of a row - click once - the entire row is selected
- To select multiple rows, position the mouse on a number to the left of a row - hold your mouse button down - drag to select more than one row
- To select a single column, position the mouse on a letter at the top of a column - click once - the entire column is selected
- To select multiple columns, position the mouse on a letter above a column - hold your mouse button down - drag to select more than one column
- To select the entire document, click with your mouse in the blank cell above the #1 and to the left of the letter A

C. How to Move Cells

Hold the mouse button down and click to highlight cell E3 (drag across cells with your mouse button down to select more than one cell).

With the cell selected, position the mouse over the border of the cell until the mouse pointer turns to a black crosshair (keep the mouse away from the black square in the lower right corner of the cell) - hold the mouse button down.

Drag the mouse to cell F4 and release the mouse button, F4 now has the contents of E3, and E3 is empty

Go to **Edit** and choose **Undo**

D. Move or Copy, cut, paste - same as Word and PowerPoint

Select cell '**E3**', go to **Edit** and choose **copy**. Position the mouse in cell '**G3**', go to **Edit**, chose **paste** - or right click and make choices in that window - you can also use the **cut**, **copy**, and **paste** buttons on the toolbar. **Undo**.

E. Insert rows and columns

Select row '**3**', (click on the number '**3**' at the left of the column and the entire row is highlighted). Go to **insert** and choose **row** - notice that the information that was in row '**3**' now appears in row '**4**' - when you insert a new row, the information is moved below the row that was highlighted when you inserted a row. When you add a new column, the information is moved to the right of the column that was highlighted when you inserted a column.

Go to **edit** and **undo**

F. Delete rows and columns

Rows **9** and **10** need to be deleted

Highlight rows **9** and **10** - when you see both rows highlighted, release your mouse button - go to '**Edit**' and select **delete** (or use buttons on the toolbar)

Go to **edit** and choose **undo**

Select rows **9** and **10** again and this time **right click** on any blank cell in the highlighted rows and choose **delete**.

Now your spreadsheet should look like this:

	A	B	C	D	E
1	Quarterly Grades				
2					
3	Student	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
4	David R.	55	65	68	75
5	Michael J.	75	63	55	100
6	Sarah S.	65	62	45	85
7	Sally M.	63	68	97	96
8	Zoe Y.	85	85	63	89
9	Roland V.	63	87	79	63
10	Michaela R.	88	85	68	79
11	Cody T.	55	63	89	96
12	Aaron R.	100	100	99	68
13	Erin K.	55	98	63	89
14	Total				

G. Manual Format

By default, Excel uses Arial font, but you can change the font, the size, color, etc.

Note the Excel Format menu - there are four items that do not appear in Word or PowerPoint format menus: **cells, rows, columns, sheets**

The following are different methods to format in Excel:

- Click on the **formatting button** on the toolbar.  (Add or remove buttons, Formatting, select Cells, if the button isn't showing)
- Go to **Format** then **Cells** use the tabs across the top
- Use the **B, I, and U** toolbar buttons
- Use the **Font buttons with drop down windows** to change font and size

Highlight each of the cells below and make the changes using any of the above methods:

'Quarterly Grades' - bold, 16 point, Arial, red

'Student' & '1st', '2nd', '3rd', and '4th Qtr'. - bold, 14 point, Arial, blue

The word 'Total' bold, 14 point, Arial, red

All student names should be in 12 point, Times New Roman, bold, and black

Select cell A14 - use the **Fill Color Button** on the **Formatting toolbar** to change the

color to purple - choose **Undo**

H. To Delete Formatting

To delete the formatting (or cell contents) quickly, try this: click on cell A1, go to **Edit**, choose **clear** and choose **format**

Go to **Edit** and choose **Undo** to get the formatting back again

Now your spreadsheet should look like this:

	A	B	C	D	E
1	Quarterly Grades				
2					
3	Studen	1st Qtr	2nd Qt	3rd Qt	4th Qtr.
4	David R.	55	65	68	75
5	Michael J	75	63	55	100
6	Sarah S.	65	62	45	85
7	Sally M.	63	68	97	96
8	Zoe Y.	85	85	63	89
9	Roland V.	63	87	79	63
10	Michaela	88	85	68	79
11	Cody T.	55	63	89	96
12	Aaron R.	100	100	99	68
13	Erin K.	55	98	63	89
14	Total				

I. Date and Time and Formatting

Use the following methods to enter a static date (stays the same always) in B15 and a time in B17:

Click in cell B15, press **Ctrl;** (no space between 'Ctrl' and the semicolon)

Click in B17, press **Ctrl Shift :** (no space between 'Ctrl', 'Shift', and the colon) - if date and time are in the same cell, separate them with a space

Use the following methods to enter a current date time and date so that when you open the document, the current date and time will appear:

- Click in cell **B19** and enter **+today()** with no spaces between the parentheses or the plus sign - this will give you a date
- Click in **B20** and enter **+now()** with no spaces between the parentheses or the plus sign - this will give you the date and the time
- If the time appears in **24-hour format**, and you prefer the **12-hour format**, click on **B20**, go to **Format**, then choose **Cells**.
- You can also **right click on the B20 cell** and choose **Format Cells** from there.
- Choose the **Number** tab, choose **date in the Category window** (left window), choose the sixth from the last item in the **Type window (right)**
- Click **OK**
- Delete the content in cells **B19** and **B20**

J. Borders and Lines

Borders

Select cells **A13** to **E13**

Go to **Format, Cells**, choose the **Border** tab

Click on the middle icon (outline) under Presets area

Click **OK** - Delete the border

Lines

Select cells **A13** to **E13**

Go to **Format, Cells**, choose the **Border** tab

Click on a **style line first**, then select the **3rd icon from the top** under '**Border**' area

Click **OK** - Keep the line

K. Background or fill

Select cells **A3** to **E3**

Go to **Format, cells, patterns** tab - choose **yellow**, click **OK**

Undo

Select cells **A3** to **E3** again

Go to **Format, cells, Patterns tab** and this time click on the submenu arrow next to **patterns** at the bottom, and make a choice

Click **OK** then select cells **A3** to **E3** again

Use the **paint button** on the **Formatting toolbar** select yellow - notice the pattern remains with the fill color

Go to **Edit, Clear**, and choose **Formats**

Select cells **A3** to **E3** again and apply yellow using either the **toolbar button** or **Format, Cells**

L. Autofit

Column widths and row heights can be changed manually, or you can let Excel do it for you using **Autofit**:

Manual

Position your mouse on the lines between any row or column

Hold your mouse button down when the pointer changes shapes

Drag the line

Release the mouse button

Undo

Autofit

Select the entire spreadsheet

Go to **format, row, autofit**

Go to **format, column, autofit**

M. Alignment and Spanning Text

Center text in cells

- Select cells **B4** through **E13** and use the **alignment buttons** on the **formatting tool bar** to **center** text

- Or go to **Format** and choose **Cells** and click on the **Alignment** tab

Orientation

- Select cells **A3** through **E3**

- Go to **Format** and choose **Cells** and click on the **Alignment** tab

- In the **orientation box** hold your mouse button down on the red triangle and move the line to about the 2 o'clock position

- Click **OK**

- **Undo**

- Left align cells **A3** through **E3** again

Center a cell of writing across a span of cells

- Select cell **A1** (the heading)

- Hold your mouse button down and drag to select cells **B1** through **E1**

- Click the **Merge and Center** button on the toolbar  and the heading will span the cells you selected

- You can keep the title centered or you can delete it - up to you if you want to clear it, go to **Edit** and choose **Undo** OR go to **Edit, Clear**, and choose **Formats**

Your spreadsheet should now look like this:

	A	B	C	D	E
1	Quarterly Grades				
2					
3	Student	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
4	David R.	55	65	68	75
5	Michael J.	75	63	55	100
6	Sarah S.	65	62	45	85
7	Sally M.	63	68	97	96
8	Zoe Y.	85	85	63	89
9	Roland V.	63	87	79	63
10	Michaela R.	88	85	68	79
11	Cody T.	55	63	89	96
12	Aaron R.	100	100	99	68
13	Erin K.	55	98	63	89
14	Total				
15		4/26/2002			
16					
17		10:15 PM			
18					
19					

N. Autoformatting (a ready-to-use design - combination of preset formats including text, number styles, fonts, colors, etc.)

Select cells A1 through E17

Go to format on the menu bar, choose autoformat

Make a choice - use the scroll bar - click on the options button so you can choose types of formatting

Click OK, the cells display your choice (choose a design and keep it - don't go back to the original)

Wait

To **remove Autoformatting**, select cells, go to **Format**, choose **AutoFormat**, choose **Simple** (if you see **none** as an option, choose it)

O. Intro to simple formulas and 'rules' (formulas allow you to calculate and analyze data in your worksheet)

- Excel performs calculations in order: **exponents first** (10 to the 3rd power i.e.), **multiplication and division, then addition and subtraction**

- Use **parentheses** to change the order - Excel will perform the calculations inside the parentheses first

- **Enter formulas by referring to the cells**, not numbers like 10 +20 because Excel isn't able to reference numbers, just cells

- Always start your function with the **equal sign (=)**

- An **error message** appears when Excel can't properly calculate or display the results of a formula:

if you see this ##### - it means the column is too narrow to display the result of a calculation

if you see this #NAME - the formula contains a cell reference that Excel does not recognize

if you see this #REF - the formula refers to a cell that is not valid

if you see this #VALUE - the formula refers to a cell that Excel cannot use in a calculation

- To reference individual cells use a comma to separate, but when referencing a designated range of cells, use a colon.

(A1:C2) refers to all cells from A1 through, and including, cell C2

(A1,B2) refers only to cells A1 and B2 - nothing in between

Enter Formulas Manually - Addition (sum)

We're going to add all the figures in B4 through B13.

- In your worksheet, put your cursor in cell B14

- Go to the formula bar and enter the following formula: =sum(B4:B13)

- Hit Enter on your keyboard.

This is the formula to use to add columns of numbers. You are asking for the sum of all cells B4, through and including, cell B13. The sum is displayed in the cell where the formula is entered, in our case, the sum will be in cell B14. Notice we did not enter the formula inside the cell, but in the formula bar, and we selected the cell first.

- Copy and paste the formula in your worksheet that you entered in B14 to cells C14, D14, and E14

- Click on cell D14 and notice how the formula changed from the original formula in B14

- Instead of =sum(B4:B13) the formula now reads =sum(D4:D13)

- The new formula references the cells above the cell where the formula is (the same applies to cells C14 and E14 of course)

- Erase all formulas except the first one in B14

- Now try the Fill a Series method

- Select the cell B14, position your cursor over the square in the bottom right corner and drag across cells C14, D14, and E14.

Use AutoSum to Enter Formulas

We're going to add all the figures in **B4 through B13** again, but this time we're going to use **AutoSum** on your toolbar

- Undo all the formulas that you entered manually in cells **B14 through E14**
- Select cell **B14**
- Click on the **AutoSum** button on the toolbar  on your toolbar
- Click **Enter**
- To enter formulas in cells **C14, D14, and E14**, use **AutoSum** or **Fill a Series**

P. Number Style and Formatting Numbers

- Click on any cell with a number, look for **Currency Style, Percent Style, Comma Style** buttons in the format toolbar
- Look for **Increase and Decrease Decimal** buttons as well - click on any cell, then click on these buttons and experiment
- To display numbers in a variety of ways, go to **Format, Cells**, choose the **number tab**
- make changes and experiment
- **Undo** all changes

Q. Graphs & Charts - Become familiar with the icons and terminology associated with graphs and charts - examine the toolbar.

- Select cells **A1 through E14**
- Click on the **chart wizard** button on the toolbar  or go to **Insert** and choose **Chart**
- Click a **chart type** and **chart subtype**
- Click **Next** (click **back** at anytime)
- Click **Next**
- Enter a **chart title**
- Click **Next**
- The last window allows you to make a choice - where do you want your chart

displayed:

as new sheet (on it's own sheet)

as object in (on the same worksheet as the data) - click on **object in**

- Click **Finish** to complete the chart

- The **chart** toolbar appears with buttons to format the chart (if it doesn't show, go to **views, toolbar**, and choose **chart**)

- Click on the chart and hold your mouse button down to **move** the chart anywhere in your spreadsheet

- If you want the chart to remain **scaled horizontally and vertically**, drag only the **corner handles**

- Drag **any** of the handles to resize the chart **not to scale**

- **Delete the chart**, click on it and choose **delete** OR **right click** and choose **clear** - **Undo** to bring the chart back

- Click on cell **C4** and change the number to **300** - the chart is updated automatically whenever data is changed, deleted, or added. **Undo**. This is called **adding new data series to a chart**. It avoids having to create a new chart whenever adding or deleting data in a spreadsheet. Please examine.

Right click on any item inside the chart for formatting options

- Change the chart title by right clicking on the title - choose **format chart title**, or **double click any item within the chart**

- Choose the **Font** tab, change the color to red, click **OK**, don't **Undo**

- Choose **format legend** by right clicking on the legend, choose the **Placement tab** and **select Bottom**, **OK**, don't **Undo**

- Right click on a bar in the graph, choose **format data series**, change the color to blue - blue shows in all the the bars - **don't Undo**

Use the chart toolbar to format

- Select the chart, look at the **chart toolbar** - use tool tips to locate **the Chart Type button**, click on the black submenu arrow, choose a different chart - **don't Undo**

R. Printing - In Excel you can print a worksheet or a chart separately, or print both on one page, you can change margins, page orientation, and select only a portion of a spreadsheet to print.

Printing - you can print in Excel in a variety of ways:

- Use a keyboard shortcut, **Ctrl +P**
- Use the **print button** on the tool bar
- Go to **File** and choose **Print**

- Go to **File** and choose **Print** and when the **Print window** pops up look for the **Print what**
 - Choosing **selection** will print highlighted cells
 - **Entire workbook** will print the entire workbook
 - **Active sheet** will print whatever is currently the active page

- Go to **File, Print Preview**, click on the **Print** button

Select Print Area lets you select portions of your spreadsheet to print. In the spreadsheet that you created in this document you would not want to print the times and dates. To select only the areas that you want to print you would use **Select Print Area**. Complete the exercises below using the spreadsheet and chart that you created in this document and then. **read the portions in your text, complete the activities at the bottom of the pages**, and read the **Master It** on odd pages.

- Select cells **A1 through E14**
- Go to **File, Print Area**, choose **Set Print Area** - dotted lines appear around the area that you selected
- Go to **File** and choose **Print Preview** - only the cells you selected show

Choices in the Print Preview window

- **Zoom and Print**
- **Setup** (Page options i.e. Portrait / Landscape Orientation, Margins, Sheet, Headers / Footers - choosing **Header and Footer** from **View** is another way to edit, add, or delete headers / footers)
- **Page Break Preview**
- **Close and Help**
- **Close** the preview window

- Go to **File, Print Preview, Setup**, choose the **Page tab**, click on **Landscape** - this will

change the page orientation

- Choose the **Header and Footer tab** - click on **Custom Header** and type your name in the center box, click **OK**

- Click on **Custom Footer**, type 'Excel' in the center box, click **OK**, click **OK** and close the preview window

- Another way to **insert a header and footer** is to go to **View** and choose **Header and Footer** from there

Format Headers and Footers

- Get into the **Custom Header and Footer** window by going to **View** or through **Print Preview**, highlight header or footer word(s), and use the toolbar buttons at the top of the window - click on the 'A' to format text (note the photo button at the right)

Remove Headers and Footers

Go to **View**, click **Header and Footer**, when the **Page Setup** window pops up, click the **Header area black submenu arrow** and click **none**. Do the same to remove a **Footer**.

Print the Chart without the spreadsheet - the chart will expand to fill the paper
- click once on the chart, go to **File, Print Preview**, if you like what you see, print from there or use one of the other options to print

To print the **spreadsheet / chart**, go to **File, Print Area**, select **Clear Print area**, go to **File, Print Preview**, print from there

S. Hide and Unhide Columns and Rows - Sometimes you may want to hide a certain column or row - for example, using the spreadsheet above, maybe you don't want the quarterly grades for four to show now so you'd choose to **Hide column E**. Follow the directions below to hide and unhide columns and rows:

To Hide

- Select **Column E**
- Go to **Format, Column, Hide**

To Unhide

- Select **entire spreadsheet**
- Go to **Format, Column, Unhide**

T. Sort Data In A List - Using the spreadsheet you created above, we will sort the students in ascending alphabetical order.

Select cells **A3 to A13**

Go to **Data, Sort** and choose **Continue with the chosen selection, if you're given a choice**

Click on **Sort**, choose **Students** in the **Sort by** drop down menu (you can also use the **ascending** and **descending** buttons on the toolbar)

Select **Ascending**

Click on **OK**

U. Assignment - **There is only one assignment for this week.** The spreadsheet you created in this document should have a **chart, contain a basic (Sum - addition) formula**, and have a **unique AutoFormat design** - anything else you'd like to add, please do so. **Send your chart and spreadsheet to me, as an attachment, via WebCT email.** Point breakdown follows:

Correct formula - 5 points

AutoFormat design - 5 points

A chart relating to the data in the spreadsheet- 5 points

This concludes **Week 06-2. Please return to the **Week 06-1** document and continue.**

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