

# Microsoft Excel 2007 – Part 2 Exercises

## Class Notes

### Part 1 – Exercise Summary

1. **Open Excel 2007 Part 2 Exercises.xlsx**
2. **Save As** as shown below:  
Office Button | **SAVE AS** | My Excel 2007 Part 2 Exercises.xlsx
3. Review Worksheet Tab: Exercise Summary.

### Part 2 – Exercise 1 - Relative Cell Addressing...

#### Relative Cell Addressing

1. Select Worksheet Tab: Exercise 1.

#### 2. Total Soda Sales

- a. Select C7.
- b. From Home tab, click AutoSum.
- c. Select B5 thru B6.
- d. Press Enter.

The formula references 1 column to the left and 2 cells above.

SWEET SHOP					
2007 Annual Sales			2008 Annual Sales		
PRODUCT	SALES	TOTAL	PRODUCT	SALES	TOTAL
Soda			Soda		
Cola	\$10,253.00		Cola	\$11,585.89	
Root Beer	\$6,528.00		Root Beer	\$7,376.64	
<b>Total</b>			<b>Total</b>		

#### 3. Copy formula in C7 to G7

- a. Select C7.
- b. From Home tab, click Copy.
- c. Select G7.
- d. From Home tab, click Paste.

The copied formula references 1 column to the left and 2 cells above.

SWEET SHOP					
2007 Annual Sales			2008 Annual Sales		
PRODUCT	SALES	TOTAL	PRODUCT	SALES	TOTAL
Soda			Soda		
Cola	\$10,253.00		Cola	\$11,585.89	
Root Beer	\$6,528.00		Root Beer	\$7,376.64	
<b>Total</b>		\$16,781.00	<b>Total</b>		\$18,962.53

#### 4. Copy formula in G7 to C13

- a. Select G7.
- b. From Home tab, click Copy.
- c. Select C13.
- d. From Home tab, click Paste.

The copied formula references 1 column to the left and 2 cells above.

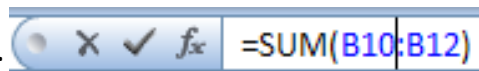
The formula does not include B10.

The copied formula calculates relative to the cell it is in.

SWEET SHOP					
2007 Annual Sales			2008 Annual Sales		
PRODUCT	SALES	TOTAL	PRODUCT	SALES	TOTAL
Soda			Soda		
Cola	\$10,253.00		Cola	\$11,585.89	
Root Beer	\$6,528.00		Root Beer	\$7,376.64	
<b>Total</b>		\$16,781.00	<b>Total</b>		\$18,962.53
<b>Ice Cream</b>			<b>Ice Cream</b>		
Chocolate	\$5,243.00		Chocolate	\$5,924.59	
Strawberry	\$1,258.00		Strawberry	\$1,421.54	
Vanilla	\$7,182.00		Vanilla	\$8,115.66	
<b>Total</b>		\$8,440.00	<b>Total</b>		

#### 5. Edit formula in C13 to include the missed cell (B10)

- a. Select C13
- b. In the Formula Bar, change B11 to B10.
- c. Click Tip: Ctrl Enter are the shortcut keys for this button.



#### 6. Optional:

- a. Copy formula in C13 to G13, G19 and C19. Tip: Ctrl C in C13 and Ctrl V in G13, G19, C19.
- b. AutoSum in C21 of cells C19 thru C7.
- c. AutoSum in G21 of cells G19 thru G7.

7. Copy formula in L4 to L5 through L10 using Fill Handle
  - a. Notice each formula references the 2 cells immediately to the left.
8. Copy formula in L8 to J1


Another Example		
25	80	105
16	100	
28	21	
19	582	
55	51	
28	88	
15	195	

- a. Copy formula in L8 to J1.  
Notice the formula in J1 references the 2 cells immediately to the left (H1 + I1).

fx =H1+I1			
G	H	I	J
			0

- b. Click Undo.

9. Move the formula in L8 to J1

- a. Select L8
- b. Hold the mouse over the black edge of cell.  
The cursor will change to a Move cursor. 

- c. Click and drag the cell to J1.  
Notice the formula still references the original cells.

fx =J8+K8			
G	H	I	J
			106

- d. Click Undo.

10. *Optional:*

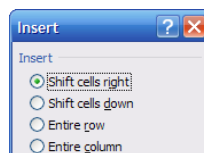
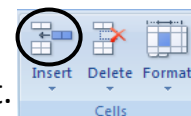
- a. Copy formula in L8 to J1 using shortcut keys: Ctrl C to copy; Ctrl V to paste.



## Inserting Cells

1. Insert cell in J7

- a. Select J7.
- b. From Home tab, Cells group, click the icon above the word Insert.
- c. Notice a cell is inserted and remaining cells moved down.
- d. Click Undo.
- e. From the Home tab, Cells group, click the word "Insert."
- f. Select Insert Cells.
- g. Select Shift cells right.
- h. Click OK.
- i. Click Undo.



2. Insert cells in J7 thru L7

- a. Select cells J7 thru L7.
- b. From Home tab, Cells group, click the icon above Insert.
- c. Click Undo.

Another Example		
25	80	105
16	100	116
28	21	49
19	582	601
55	51	106
28	88	116
15	195	210

→

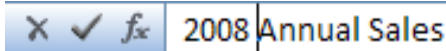
Another Example		
25	80	105
16	100	116
28	21	49
19	582	601
55	51	106
28	88	116
15	195	210

Inserted cells

## Wrapping Text Within Cell

### 1. Wrap text in A2 (2008 Annual Sales)

- Select cell A2.
- Place I-beam cursor in formula bar, between 2007 and Annual and click.

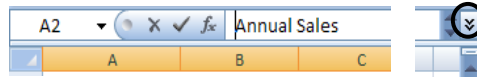


- While holding down the Alt key, tap the Enter key; Release the Alt key.

*Note: It will look like the 2008 disappeared, but it didn't!*


*Optional: Click the "Expand Formula Bar" button.*

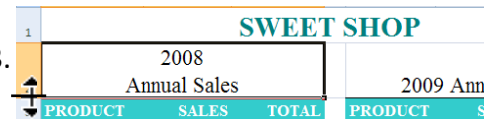
*Click again to "Collapse Formula Bar."*



- Press Enter.
- Resize row 2 to accommodate the 2 lines of text in cell A2.

How?

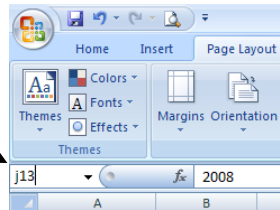
- Hold cursor over line between row number 2 and 3.
- The cursor will change to 
- Hold left mouse button down and drag down until row is wide enough.



### 2. Wrap text as label is being typed into the cell

- Select cell J13 using the Name Box.

- Click in the Name Box
- Type j13
- Press Enter



- Type the letter "a"
- While holding down the Alt key, tap the Enter key; Release the Alt key.
- Type the letter "b"
- Press Enter.
- Click Undo.

**SAVE** 

## Hide/Unhide Columns

### 1. Hide columns J thru L

- Select cells J5 through L5.
- From the Home tab, Cells group, click Format (icon or word).
- Select Hide & Unhide.
- Select Hide Columns.

*Notice the column letters skip from I to M (J thru L are hidden).*

### 2. Unhide columns J thru L

- Select cells I1 thru M1.
- From the Home tab, Cells group, click Format (icon or word).
- Select Hide & Unhide.
- Select Unhide Columns.


## Part 3 – Exercise 2: Absolute Cell Addressing...

### Absolute Cell Addressing (1<sup>st</sup> Example)

1. Select Worksheet Tab: Exercise 2.
2. Create & copy a formula for calculating the % of students liking each flavor

- a. Select C4.
- b. Type =
- c. Click B4.
- d. Type /
- e. Click B12.
- f. Click

	A	B	C
1	<b>ICE CREAM SURVEY</b>		
2	Formula: Students / Total		
3	<b>FLAVOR</b>	<b>STUDENTS</b>	<b>% of TOTAL</b>
4	Chocolate	18	=B4/B12
5	Strawberry	12	
6	Vanilla	20	
7	Peach	1	

- g. From Home tab, Number group, click 
- h. From C4, click & drag Fill Handle to C12. (produces relative cell reference formulas)

% of TOTAL	Results	Formula View (Ctrl ~)	
0.225	←	=B4/B12	
#DIV/0!		=B5/B13	#DIV/0! Means cannot divide by zero. B13 is empty.
#DIV/0!		=B6/B14	
#DIV/0!		=B7/B15	
#DIV/0!		=B8/B16	
#DIV/0!		=B9/B17	
#VALUE!	→	=B10/B18	#VALUE! Sometimes means the formula is referring to text. (B18)
#VALUE!		=B11/B19	
0%		=B12/B20	B20 contains the sales figure 25,888

- i. Select C4.
- j. In the Formula Bar, place the I-beam cursor anywhere within **B12**. This cell must “absolutely” never change. =B4/B12 or =B4/B12 or =B4/B12 or =B4/B12
- k. Press F4.
- l. Click
- m. From C4, click & drag Fill Handle to C12. (produces absolute cell reference formulas)  
**Look at the Status Bar!!!**

### Absolute Cell Addressing (2<sup>nd</sup> Example)

1. Create & copy a formula for calculating the amount of sales commission
  - a. Scroll down so that only the Annual Sales & Commission can be seen.
  - b. Select C20.
  - c. Type =
  - d. Click B20.
  - e. Press \*
  - f. Click C18.
  - g. Press F4. (will change C18 to \$C\$18)
  - h. Click
  - i. From C20, click & drag Fill Handle to C23. (produces absolute cell reference formulas)  
**Look at the Status Bar!!!**

**SAVE**

## Part 4 – Exercise 3: Fill Handle...

### Fill Handle

1. Fill Handle on single cell (Repeat these steps for each column from A thru F

- a. From A1, click and drag the fill handle down approximately 10 rows.

	A	B	C	D	E	F
1	Jan	August	Mon	Wednesday	1	Thursday, January 15, 2009
2	Feb	Septem	Tue	Thursday	1	Friday, January 16, 2009
3	Mar	October	Wed	Friday	1	Saturday, January 17, 2009
4	Apr	Novem	Thu	Saturday	1	Sunday, January 18, 2009
5	May	Decem	Fri	Sunday	1	Monday, January 19, 2009
6	Jun	January	Sat	Monday	1	Tuesday, January 20, 2009
7	Jul	Februar	Sun	Tuesday	1	#####
8	Aug	March	Mon	Wednesday	1	Thursday, January 22, 2009
9	Sep	April	Tue	Thursday	1	Friday, January 23, 2009
10	Oct	May	Wed	Friday	1	Saturday, January 24, 2009

Cell F7 shows ### because the column is not wide enough.

2. Change the column width of multiple columns at one time

- a. Hold the mouse over the center of the A in column A. The cursor will change to ↓.
- b. Click and drag the cursor to include column F, then release the mouse button.
- c. Hold the cursor over the line between any 2 previously selected column letters. When the cursor changes to ↔, double click.

3. Prevent Fill Handle from sequencing

- a. Select A1.
- b. Hold down the Ctrl key while dragging the Fill Handle.

4. Create a series of numbers

- a. Select G1.
- b. While holding down the left mouse button, drag the mouse to G2.
- c. Release the mouse button.
- d. Click and drag the fill handle down approximately 10 cells.
- e. Repeat steps a. through d. for the numbers in column H and then column I.

G	H	I
1	1	5
2	3	10

5. Using the Fill handle, complete the CD Collection spreadsheet.

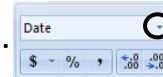
	K	L	M	N	O
1	<b>CD Collection</b>				
2	<b>ALBUM</b>	<b>ARTIST</b>	<b>DISC</b>	<b>TRACK</b>	<b>SONG</b>
3	The White Album	Beatles	Disc 1	Track 1	Back In The U.S.S.R.
4	The White Album	Beatles	Disc 1	Track 2	Dear Prudence
5	The White Album	Beatles	Disc 1	Track 3	Glass Onion
6	The White Album	Beatles	Disc 1	Track 4	Ob-La-Di, Ob-La-Da
7	The White Album	Beatles	Disc 1	Track 5	Wild Honey Pie
8	The White Album	Beatles	Disc 1	Track 6	The Continuing Story Of Bungalow Bill
9	The White Album	Beatles	Disc 1	Track 7	While My Guitar Gently Weeps
10	The White Album	Beatles	Disc 1	Track 8	Happiness Is A Warm Gun
11	The White Album	Beatles	Disc 1	Track 9	Martha My Dear
12	The White Album	Beatles	Disc 1	Track 10	I'm So Tired
13	The White Album	Beatles	Disc 2	Track 1	Birthday
14	The White Album	Beatles	Disc 2	Track 2	Yer Blues
15	The White Album	Beatles	Disc 2	Track 3	Mother Nature's Son
16	The White Album	Beatles	Disc 2	Track 4	Everybody's Got Something To Hide Except Me And My Monkey
17	The White Album	Beatles	Disc 2	Track 5	Sexy Sadie
18	The White Album	Beatles	Disc 2	Track 6	Helter Skelter
19	The White Album	Beatles	Disc 2	Track 7	Long, Long, Long
20	The White Album	Beatles	Disc 2	Track 8	Revolution 1
21	The White Album	Beatles	Disc 2	Track 9	Honey Pie
22	The White Album	Beatles	Disc 2	Track 10	Savoy Truffle

**SAVE**

## Date Formats

### 1. Change Date format in column F

- Select any date in column F.
- From Home tab, Number group, click arrow next to Date.
- Select Short Date.
- Select Long Date.
- Select More Number... Formats.
- Scroll through the various Date formats. Notice there is no "March 2001" format.
- Select Custom.



- Delete whatever is in the Type box

Type:

*Note: The Sample box displays the number of days since January 1, 1900 to the date you selected for this exercise.*

Sample  
39830

*Note: As you type each of the following letters into the Type box, look at the Sample.*

- Type mmmm yyyy (note the space between the m's and y's).
- Click OK.

Sample  
January 2009  
Type:  
mmmm yyyy

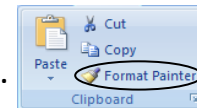
## Format Painter

### 1. Format cell and copy format to another cell using the Format Painter

- Select B3.
- From the Home tab, apply new formatting by changing the circled items.



- Make sure B3 is still the active cell.
- From the Home tab, Clipboard group, click Format Painter.
- Select cell D3. This cell now takes on the same formatting.
- Click cell C3. Nothing happens.
- Select cell D3.
- Double click Format Painter.
- Click cell C3, A1, F3. All selected cells take on the same formatting.  
*Notice that the F3 Custom date format changed to General format.*
- To turn off the Format Painter, either press the ESC key or click Format Painter.

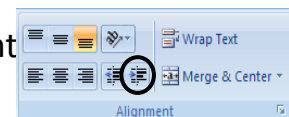


## Indenting

### 1. Indent Q2 thru Q8

- Select Q2 thru Q8.
- From the Home tab, Alignment group, click the Increase Indent button 2 times.

	Q
1	Exercise 3 - Fill Handle
2	Fill Handle
3	Column Width
4	Ctrl Fill Handle
5	Date Formats
6	Vertical Alignment
7	Format Painter
8	Indenting (this list)



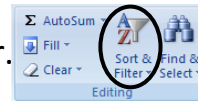
**SAVE**

## Part 5 – Exercise 4: Sorting...

### Sorting

#### 1. Sort List (a.k.a. database) by single column

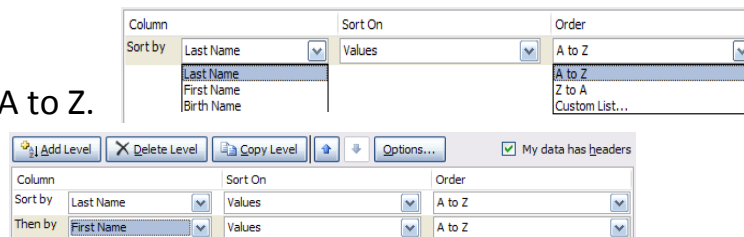
- Select any name in the First Name column.
- From the Home tab, Editing group, click Sort & Filter.
- Select Sort Newest to Oldest.
- Notice the List sorts by First Name.
- Select any date in the Birth Date column.
- Click Sort & Filter.
- Select Sort Oldest to Newest.



Notice that 2/11/1819 is before September 29, 1994. This is because Excel does not recognize any dates prior to January 1, 1900.

#### 2. Sort List by multiple columns

- Select any cell in the data area of the spreadsheet.
- Click Sort & Filter.
- Select Custom Sort.
- Sort by Last Name, A to Z.
- Click Add Level.
- Sort by First Name.
- Click OK.



#### 3. Insert column and sort

- Select any cell in column E.
- From the Home tab, Cells group, click the word “Insert.”
- Select Insert Sheet Columns.
- Notice that Don Adams was born in New York.
- Sort the First Name column. (select any cell in column B, click Sort & Filter, A to Z)
- Find Don Adams; notice the Town is no longer New York.

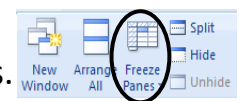
*This is because the inserted column contains no data. It separates the database into separate 2 databases.*

- Click Undo.
- Select E4.
- Type Phone.
- Press Enter.
- Sort the First Name column.

*This example also holds true for inserted rows.*

#### 4. Freeze rows 1-4 and columns A-B from scrolling off screen

- Select C5.
- From the View tab, Window group, click Freeze Panes, Freeze Panes.
- Experiment with the scroll bar. Notice the areas that always remain on the screen.



**SAVE**

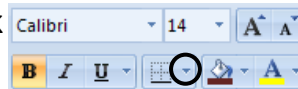
## Part 6 – Exercise 5: Linking Formulas...

### Rename Worksheet Tab

1. Rename worksheet tab Exercise 5 to 2009
  - a. Double click the worksheet tab Exercise 5.
  - b. Type 2009.
  - c. Press Enter.

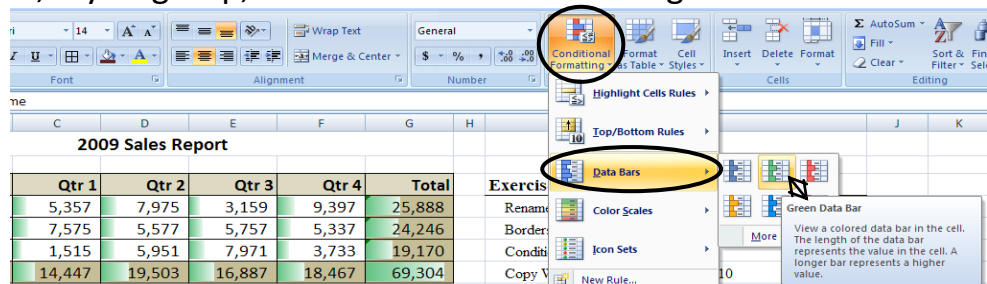
### Borders

1. Add Borders to the spreadsheet
  - a. Select (highlight) cells A3 thru G7.
  - b. From the Home tab, Font group, click the arrow on the Borders button.
  - c. Select All Borders.



### Conditional Formatting

1. Add Conditional Formatting to the spreadsheet
  - a. Select C4 thru G7.
  - b. From the Home tab, Styles group, click Conditional Formatting.
  - c. Select Data Bars.
  - d. Select any color.



**SAVE**

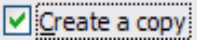
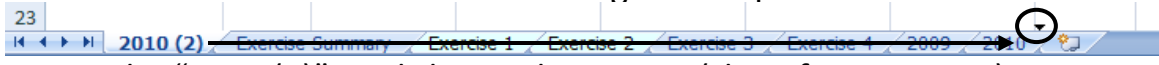
### Copy Worksheet

1. Make copy of the 2009 worksheet, rename, and edit
  - a. Right click the “2009” worksheet tab.
  - b. Left click Move or Copy.
  - c. Select (move to end).
  - d. Select Create a copy.
  - e. Click OK.
  - f. Rename the “2009 (2)” worksheet tab to 2010.
  - g. Edit report heading to 2010 Sales Report.
    - 1) Select A1.
    - 2) In the Formula Bar, click in front of the 2009 Sales Report
    - 3) Press the Delete key 4 times to delete 2009.
    - 4) Type 2010
    - 5) Press Enter.
  - h. Delete all data from D4 thru F6 (data in Qtr 2 thru Qtr 4).  
*Tip: Select D4 thru F6, press the Delete key.*

The goal of this section is to create a worksheet for 2010. Then, create another worksheet that includes only the annual (as opposed to quarterly) sales for each year...a summary worksheet.

**SAVE**


2. Make a sales summary worksheet


- a. Right click the “2010” worksheet tab.
  - b. Left click Move or Copy.
  - c. Select Create a copy. 
  - d. Click OK. *Note: Because “(move to end)” was not selected, the worksheet was placed in front of the Exercise Summary tab.*
  - e. Using the mouse, point to the “2010 (2)” tab.
  - f. Hold the left mouse button down and drag the tab past the “2010” tab.
- 
- g. Rename the “2010 (2)” worksheet tab to Sum. (short for Summary)
  - h. Edit report heading to Sum Sales Report.
  - i. Change column headings from Qtr 1, Qtr 2, Qtr 3, Qtr 4, to 2009, 2010, 2011, 2012.  
*Tip: Select C3, type 2009, press the Tab key, type 2010, repeat as necessary.*
  - j. Delete all data from C4 thru C6.  
*Tip: Select C4 thru F6, press the Delete key.*


**SAVE**

**Linking Formulas**

1. Create formulas linking annual totals between worksheets

- a. From the Sum worksheet, select C4.
  - b. Type =
  - c. Select the 2009 worksheet.
  - d. Select G4.
  - e. Press 
- } As you perform each step, note the formula being created in the Formula Bar.

*Note: When pressing the Enter key upon completing a formula, Excel moves the cursor down causing the cell below the formula to be the active cell. This is true when creating linking formulas as well. Because the next step requires using the fill handle to copy the formula, pressing the  button prevents having to press the up arrow key on the keyboard to select the cell containing the formula to be copied.*

- f. Using the fill handle, copy the formula in C4 down to C6.
  - g. From the Sum worksheet, select D4.
  - h. Type =
  - i. Select the 2010 worksheet.
  - j. Select G4.
  - k. Press 
- } As you perform each step, note the formula being created in the Formula Bar.

- l. Using the fill handle, copy the formula in D4 down to D6.

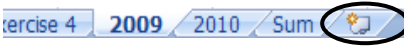
*Note: The formula in C4 cannot be copied across to D4 because Excel does not know to change the tab names in the formula from 2009 to 2010.*

	A	B	C	D	E	F	G
1	Sum Sales Report						
2							
3	Name	Emp #	2009	2010	2011	2012	Total
4	Mel Gibson	11	25,888	5,357			31,245
5	Sanra Bullock	24	24,246	7,575			31,821
6	Donald Duck	28	19,170	1,515			20,685
7	Totals		69,304	14,447	-	-	83,751

**SAVE**

## Insert/Move/Delete Worksheets

### 1. Insert 2 Worksheets

- Click the Insert Worksheet tab. 
- Repeat Step a.

### 2. Move Worksheets

- Experiment with moving the newly created worksheets by clicking and dragging the worksheet tabs.

### 3. Delete Worksheets

- Right click one of the newly created worksheet tabs from Step 1 above.
- Left click Delete
- Right click the other newly created worksheet tab from Step 1 above.
- Left click Delete

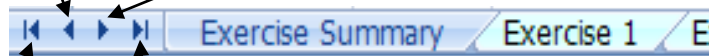
## Navigate Between Worksheets

### 1. Ctrl-Page Up, Ctrl-Page Down

- Select the Example Summary worksheet
- Hold down the Ctrl key
- Tap the Page Up key to move forward to the next worksheet.
- Repeat Steps 2-3 a few times.
- Hold down the Ctrl key
- Tap the Page Down key to move to the previous worksheets.
- Repeat Steps 5-6 a few times.

### 2. Sheet Tab Scroll Buttons

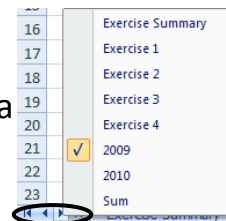
- Moves to the previous and next worksheets.



- Moves to the first and last worksheets.

### 3. Worksheet Tab Scrollbar Shortcut Menu

- Right click anywhere on the Sheet Tab Scroll area to display a Shortcut Menu listing all worksheet tab names.



### 4. Adjust size of Horizontal Scroll Bar to display more worksheet tabs

- Hold the cursor over this area of the Horizontal Scrollbar.



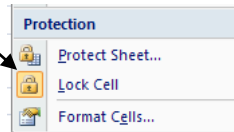
- Click and drag this area to resize the scrollbar, thereby viewing more worksheet tabs.

## Part 7 – Exercise 6: Protecting Worksheets/Sharing Workbooks...

### Protect Worksheet

By default, all cells are “locked.” When worksheet protection is turned on, no cells can be edited. To allow only certain cells to be edited when protection is turned on, the cells to be edited must be unlocked. This prevents accidental changes to locked cells, and forces the use to only make changes to unlocked cells.

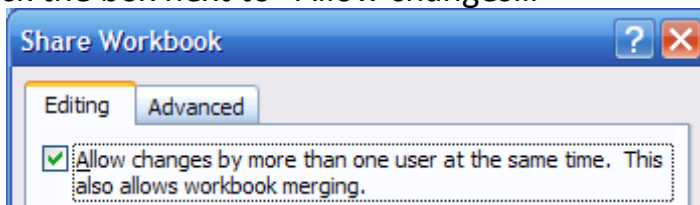
1. Select worksheet tab Exercise 6.
2. Select cells E7 through F11.
3. Hold down the Ctrl key. This will allow you to select multiple ranges.
4. Select cells E13 through F17
5. Select cells E19 through F23.
6. Release the Ctrl key.
7. From the Home tab, Cells group, click Format
8. In the Protection section, click Locked. By default, this option is active. Clicking it will deactivate this feature, hence, unlocking the selected cells.
9. Click Format again.
10. In the Protection section, click Protect Sheet...
11. Select/unselect options as desired.
12. Enter a password if necessary. DO NOT FORGET THE PASSWORD!



### Share Workbook (File)

This feature allows multiple people to open and make changes to the file at the same time. Without doing so, if the file is already being used by someone, a Read Only message will appear upon attempting to open the file. Any changes made while in Read Only mode, can only be saved if it is saved as a separate file. Now, there will be 2 different versions of the same file.

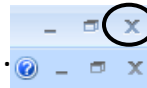
1. From the Review tab, Changes group, click Share Workbook.
2. Click the box next to “Allow changes...”



3. Click OK
4. Answer Yes when prompted to save.

## Close Workbook (File) and Excel

1. Close the Workbook (file).
  - a. Click the top X in the upper right corner of the screen.



## Delete Workbook

1. Click Start
2. Click My Documents
3. Double click the folder, Excel Class
4. Single click "my Excel 2007 Part 2 Exercises."
5. Press the Delete key on the keyboard
6. Click Yes to delete the file.