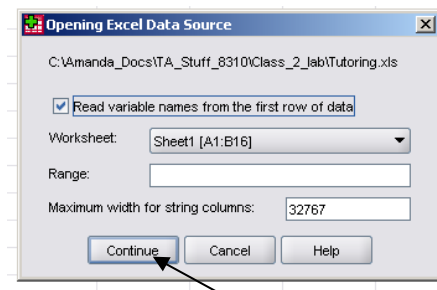
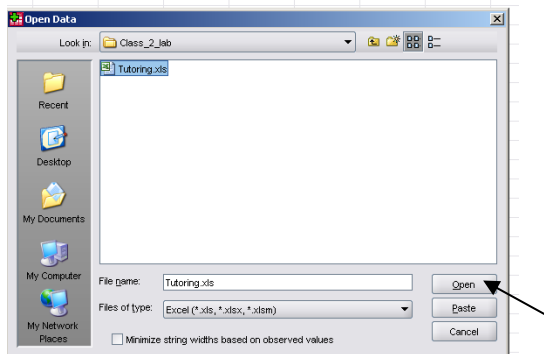
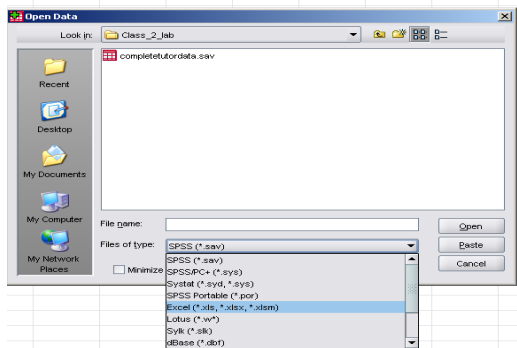
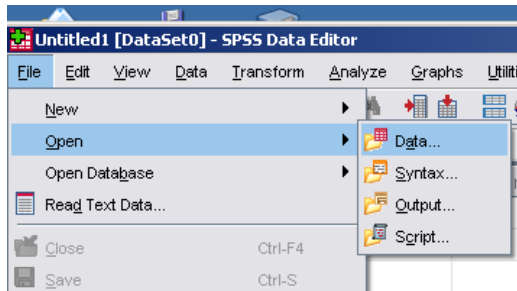


SPSS LAB 2

Tonight's lab will be a mix of questions based on your reading/lectures and some more practice with the SPSS program. At some points you will be asked to generate output on your own. When we get to conceptual ideas, we will generate our output together as a class. However, every menu option and calculation is included in this screen shot guide (so that you may return to it and complete any portion on your own). Have fun!

1) Importing the data set into Excel

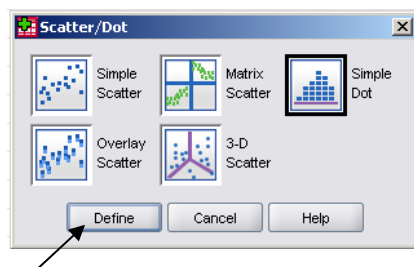
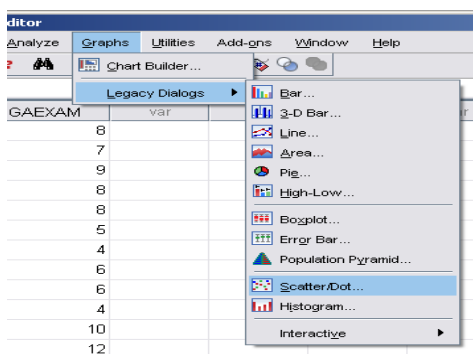
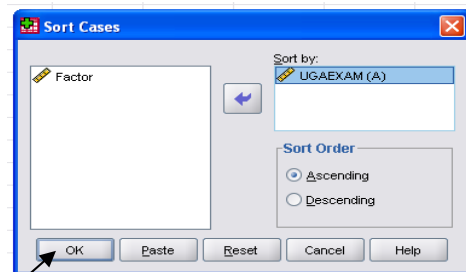
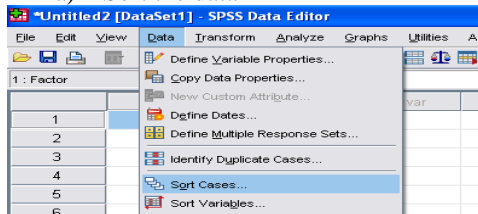


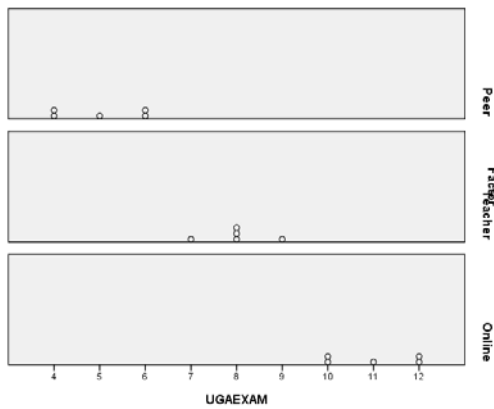
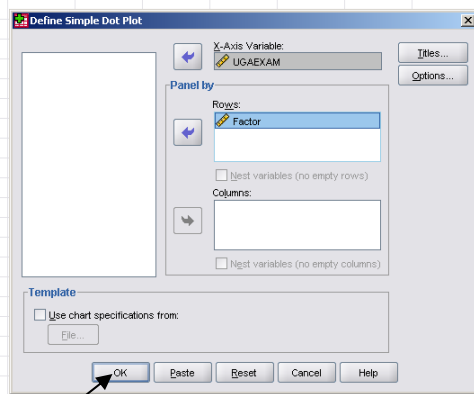
*Untitled3 [DataSet2] - SPSS Data Editor

	Factor	UGAEXAM
1	1	8
2	1	7
3	1	9
4	1	8
5	1	8
6	2	5
7	2	4
8	2	6
9	2	6
10	2	4
11	3	10
12	3	12
13	3	12
14	3	11
15	3	10
16		

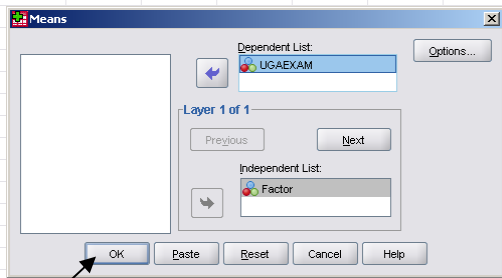
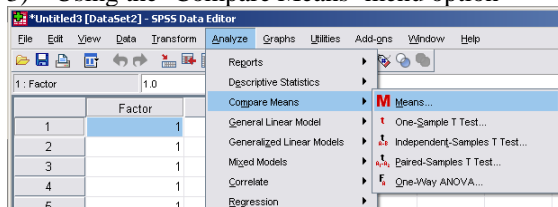
2) Creating a DOT PLOT

a) Sort the data





3) Using the 'Compare Means' menu option



The screenshot shows the SPSS Data Editor window with the menu bar open. The 'Insert Variable' option is highlighted in blue. The menu items are: Undo (Ctrl-Z), Redo (Ctrl-Y), Cut (Ctrl-X), Copy (Ctrl-C), Paste (Ctrl-V), Paste Variables..., Clear (Delete), Insert Variable, and Insert Cases. The background shows a data table with columns 'UGAEXAM' and 'GRADE'.

The screenshot shows the SPSS Data Editor interface. The title bar reads 'Untitled2 [DataSet1] - SPSS Data Editor'. The menu bar includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, and Add-ons. Below the menu bar is a toolbar with icons for file operations, editing, and analysis. The main window displays a data grid with 25 rows and 4 columns. The columns are labeled 'Factor', 'VAR00001', 'UGAEXAM', and 'YR'. The data is as follows:

	Factor	VAR00001	UGAEXAM	YR
1	2		4	
2	2		4	
3	2		5	
4	2		6	
5	2		6	
6	1		7	
7	1		8	
8	1		8	
9	1		8	
10	1		9	
11	3		10	
12	3		10	
13	3		11	
14	3		12	
15	3		12	
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

At the bottom of the window, there are two tabs: 'Data View' and 'Variable View'. An arrow points to the 'Variable View' tab.

*Untitled3 [DataSet2] - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities A

	Name	Type	Width	Decimals
1	Factor	Numeric	11	0
2	GSUEXAM	Numeric	8	2
3	UGAEXAM	Numeric	11	0
4				

SPSS Data Editor window showing a dataset with 7 rows and 4 columns: Factor, GSUEXAM, UGAEXAM, and var. The data is as follows:

	Factor	GSUEXAM	UGAEXAM	var
1	1	11.00	8	
2	2	11.00	7	
3	3		9	
4	4		8	
5	5		8	
6	6		5	
7	7		4	

- 5) COMPUTING the 'Total Sums of Squares', 'Between Groups Sums of Squares', and 'Within Groups Sums of Squares'. Please watch the screen or follow along (practice later if you like).

As a reminder we want to compute 3 deviations

Deviations

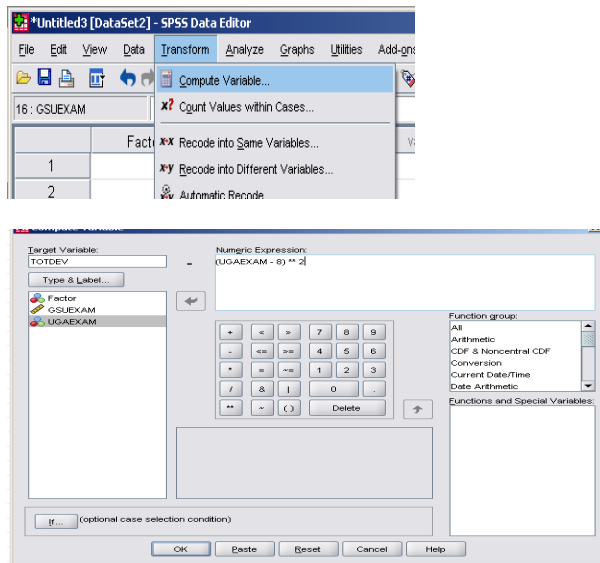
- The total deviation is: $(Y_{i,j} - \bar{Y}_T)$
- The between groups deviation is: $(\bar{Y}_{a_i} - \bar{Y}_T)$
- The within groups deviation is: $(\bar{Y}_{i,j} - \bar{Y}_{a_i})$

We are computing the deviations based on the UGA Experiment

Total Deviation

Each Single Exam Score minus the Grand Mean [Grand Mean from our Output = 8.00]

Our goal is to calculate SS_T (Sum of Squares Total). So we will also square this deviation. We will sum in a later step.



BETWEEN GROUPS DEVIATION

Each Group Mean minus the Grand Mean. [Teacher Group Mean=8, Peer Group Mean=5, Online Group Mean = 11]

So, each group has a different between groups deviation

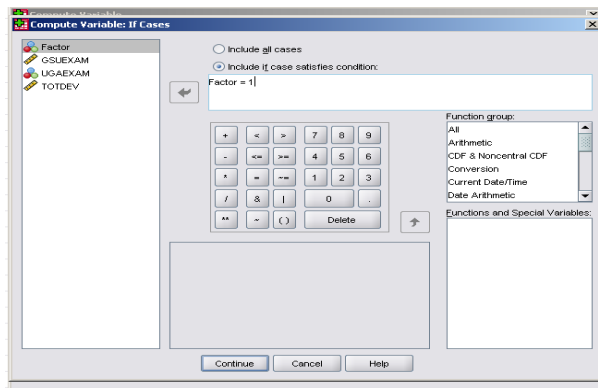
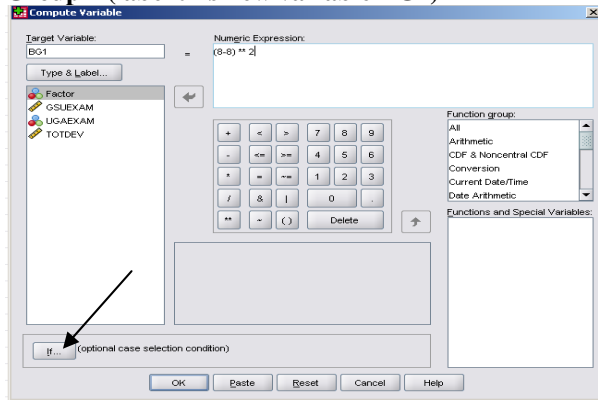
Group 1 = (8-8)

Group 2 = (5-8)

Group 3 = (11-8)

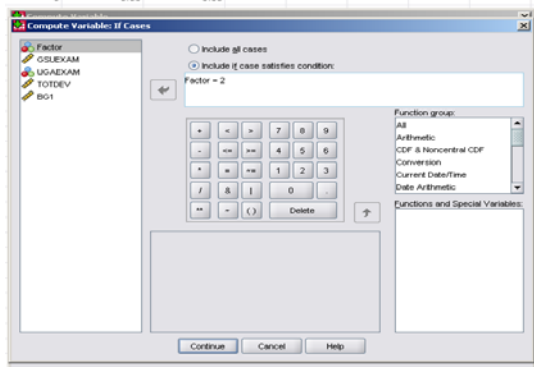
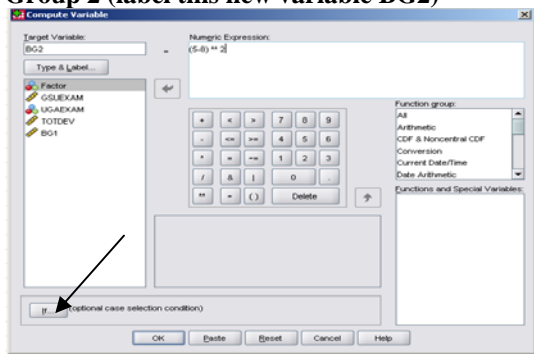
We have to square this result as well. Note: Each person in a specific group receives the same calculation.

Group 1 (label this new variable BG1)



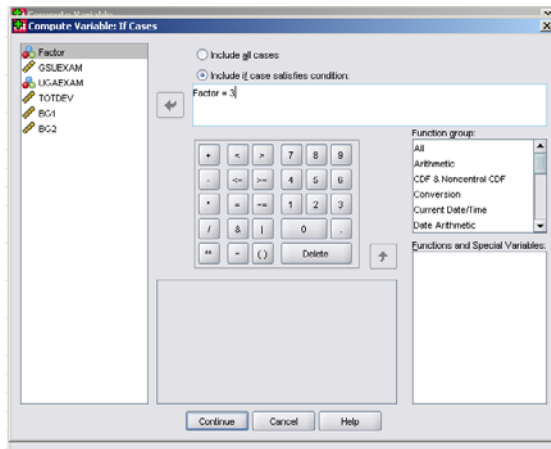
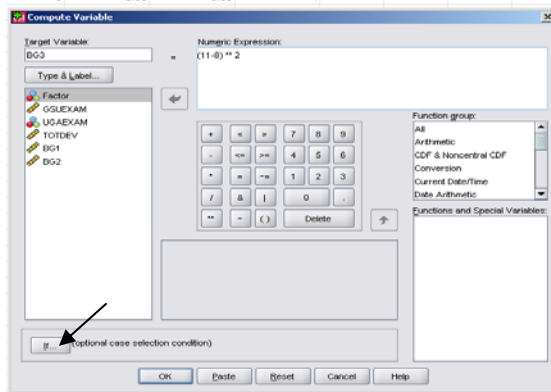
Click Continue>OK

Group 2 (label this new variable BG2)



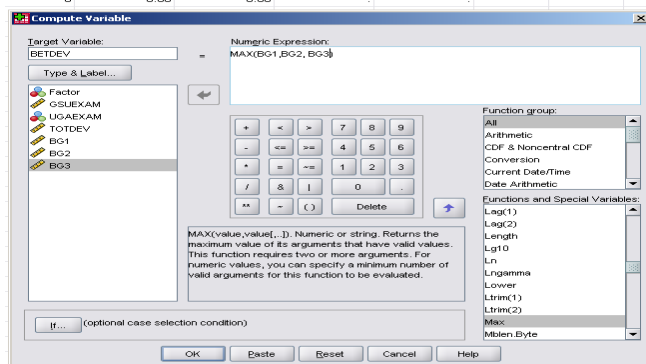
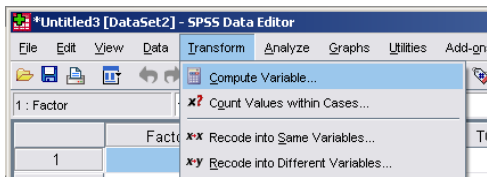
Click Continue>OK

Group 3



Click Continue>OK

Mmmm...all of our calculations are in separate variables and we need them in one!
The MAX function will find the maximum value found across variables



Click OK; We can cut our 3 'working' variables out of the file by highlighting them>edit>cut.

WITHIN GROUPS DEVIATION

Each Exam Score minus its respective Group Mean. [again Teacher Group Mean=8, Peer Group Mean=5, Online Group Mean = 11]

So, each person within a group has a different 'Within Groups Deviation' dependent on his/her specific score & his/her group average

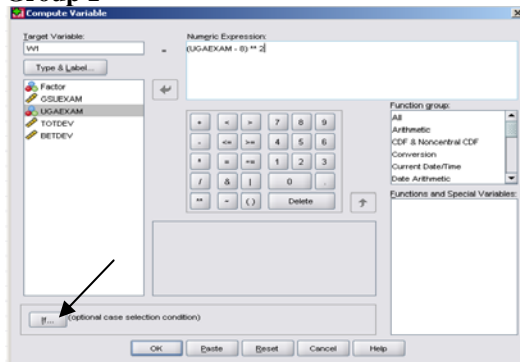
Group 1 = (UGAEXAM-8)

Group 2 = (UGAEXAM-5)

Group 3 = (UGAEXAM-11)

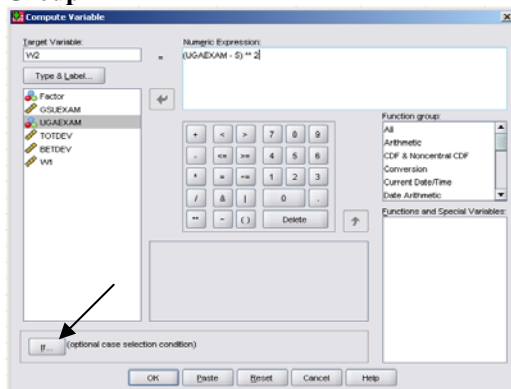
We have to square this result as well.

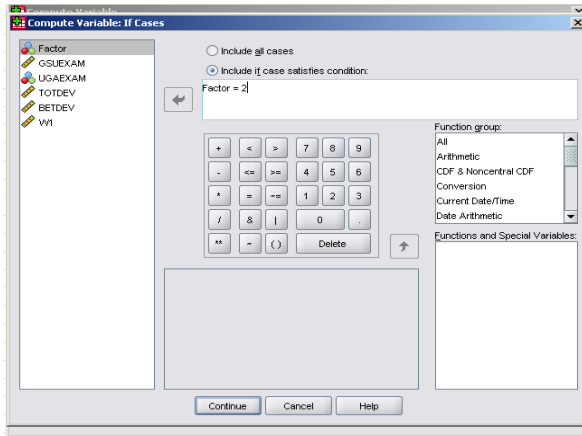
Group 1



Click Continue>OK

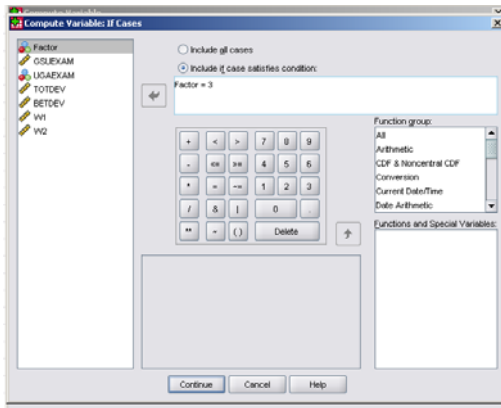
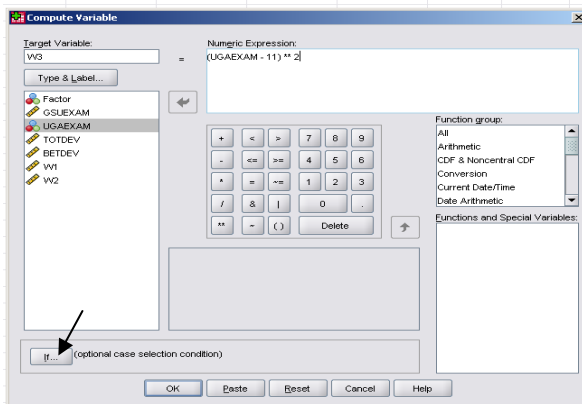
Group 2





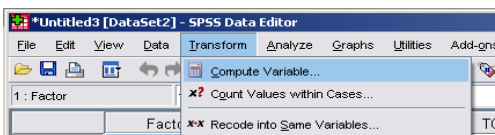
Click Continue>OK

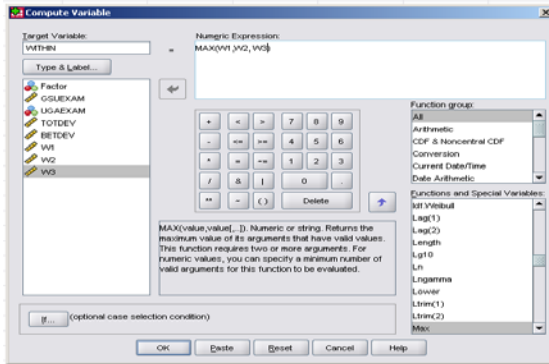
Group 3



Click Continue>OK

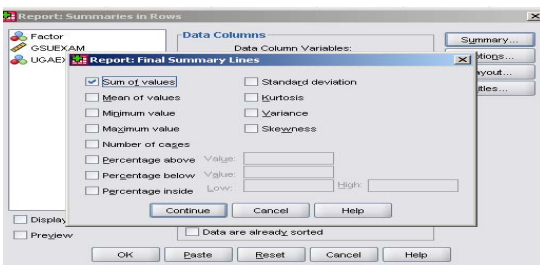
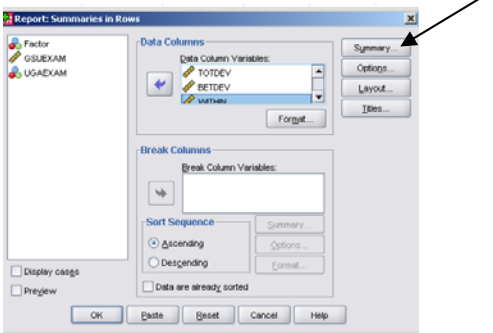
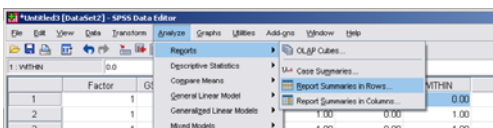
The MAX function will find the maximum value found across our within variables





Click OK. And we can cut our 3 'working' variables out of the file by highlighting them>edit>cut.

So, we have our squared deviations and now we just need to sum each one up.

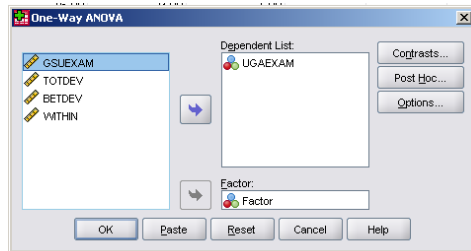
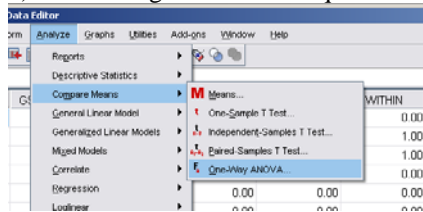


Continue>OK

Page 1

	TOTDEV	BETDEV	WITHIN
Grand Total			
Sum	100.00	90.00	10.00

6) Obtaining the Sums of Squares and Mean Sums of Squares (running an ANOVA table)



ANOVA

UGAEXAM					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	90.000	2	45.000	54.000	.000
Within Groups	10.000	12	.833		
Total	100.000	14			