

Work with grade sheet

1. Enter the information in the spreadsheet below. Be sure that the information is entered in the same cells as given, or the formulas below will not work.

	A	B	C	D	E	F	G
1	PSC 556: Policy Analysis						
2	Spring 1995						
3			EXAM	EXAM	EXAM		FINAL
4	STUDENT NAMES	STUDENT ID	#1	#2	#3	PART.	AVERAGE
5	Thomas, Steven	999-25-5683	94	65	89	90	
6	Alexander, Suzette	999-52-6938	93	91	97	80	
7	Richards, Billy Joe	998-71-2838	92	83	88	90	
8	Rasmussen, Betty	997-74-4447	95	94	90	90	

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You will notice that when you enter the information in the first column, the text runs over into the next cell. To adjust the size of the column, once all the information is entered for the first column, click on the column heading (that is the letter A). Then on HOME ribbon on the Cells panel (right side) click on Format, and choose AutoFit Column Width.

2. Enter the formula below into cell G5 and copy it into cells G6 to G8. This demonstrates the use of a “relative reference” (e.g., C5) that points to the contents of a cell G5: $=c5*.3+d5*.3+e5*.3+f5*.1$
in case of Hungarian regional settings You have to use commas instead of decimal points, like:
.3 → ,3
.1 → ,1
3. Now copy this formula to cells G6, G7, and G8. To do this click on cell G5 to make it the active cell. Then open the EDIT menu and choose the COPY command (a flashing border should now appear around the cell G5). Now click on cell G6 and drag the pointer so the range of cells from G6 to G8 are now highlighted. At this point you need to open the EDIT menu again, but this time selected the PASTE option. Notice that when you copy this formula into other cells the row numbers for the cells change according to the row into which the formula has been copied.
4. Enter the information below in the cell indicated.
B10: Averages
5. Enter the formulas below in the cells indicated. These formulas demonstrate three methods for calculating averages for a column of data.

C10: $= (c5+c6+c7+c8)/4$

D10: $= \text{sum}(d5:d8)/4$

E10: $= \text{average}(e5:e8)$

6. Enter the information below in the cells indicated. This will establish the weight each exam is given in a student's final average.

B12: Weights

C12: .3

D12: .3

E12: .3

F12: .1

7. Enter the formula below into cell G5 and then copy it into cells G6 to G8. This demonstrates the use of an "absolute reference" (e.g., $\$C12$) that points to a specific cell in a spreadsheet. Notice that when the formula is copied into other cells, the formula changes to reflect the new cell address. For example, if the formula is copied to cell G6, the formula becomes $c5+d12d5+e12e5+f12*f5$.

8. Make the changes to the cell contents indicated below and notice how the final averages change.

a. D5: 74

b. C7: 98

c. C12: .25 and E12: .35

d. E12: .30 and F12: .15

9. Just when you thought you were finished calculating final grades, you realize that you forgot someone. You know, that quiet student that always sits in the back of the room. Anyhow, you can start all over or simply insert a new row for the forgotten student.

a. Move the cursor to row 6 and click once (on any cell in this row or the row heading). Then use the right button of the mouse and select Insert. Or you can insert a row by ribbon: HOME ribbon / Cells panel / Insert / Insert cells or Insert Sheet Rows. Notice how a new row is inserted after row 6. Also, check the formulas entered into cells D11, E11, G5, G7, G8, and G9 have now all changed to accommodate the newly insert row.

b. Now that an additional student has been added to your grade book, the formulas used to calculate the averages for Exams #1 and #2 are incorrect (this is because these formulas still assume only four grades are to be averaged. To correct this, copy the formula in cell E11 to cells C11 and D11.

- c. Enter the information below in the identified cells.

A6: Linder, Barry

B6: 993-14-9283
 C6: 81
 D6: 73
 E6: 83
 F6: 65

d. Notice that the exam averages change when the new student's grades are entered but a final average is not automatically calculated for him. This is because the formula was not copied into that new row. Copy the formula in cell G5 into cell G6. Now your grade roll is completed.

10. Your final spreadsheet should look like the one below.

	A	B	C	D	E	F	G
1	PSC 556: Policy Analysis						
2	Spring 1995						
3			EXAM	EXAM	EXAM		FINAL
4	STUDENT NAMES	STUDENT ID	#1	#2	#3	PART.	AVERAGE
5	Thomas, Steven	999-25-5683	94	74	89	90	85.9
6	Linder, Barry	993-14-9283	81	73	83	65	76.8
7	Alexander, Suzette	999-52-6938	93	91	97	80	91.65
8	Richards, Billy Joe	998-71-2838	98	83	88	90	89.3
9	Rasmussen, Betty	997-74-4447	95	94	90	90	92.45
10							
11		Averages	92.2	83	89.4		
12							
13		Weights	0.25	0.3	0.3	0.15	

11. IF statements can be used to automatically assign letter grades to each student.

a. Enter the following formula. H5: =if(g5>89,"A",if(g5>79,"B",if(g5>69,"C",if(g5>59,"D","F"))))

In case of Hungarian document language use semicolon (;) instead of commas (,).

b. Copy the formula in cell H5 to cells H6 through H9.

c. The IF command evaluates the first logical test (i.e., G5>89). If the statement is true an "A" is assigned. If the statement is false, the next logical statement is evaluated (i.e., G5>79). To place an IF statement inside another IF statement is referred to as "nesting". Excel allows up you to nest up to seven IF statements.

12. Save your work and show it to the instructor.

Sources

1. <http://web.utk.edu/~dhouston/excel/exercise.html>

2. <https://www.wiseowl.co.uk/excel/exercises>

Course

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