

Lab E-5 - - Requirements and Hints

Advance reading:

In the "Microsoft Excel 2003" section (Green code) of the Lab Manual read Chapter 4, pages 439 to 471, page 436 (Statistical Functions) and pages 438-440 (The IF Function) **before the scheduled date of the Lab.**

Pay special attention to pp452 & 453 regarding Relative & Absolute references for copying formulas and p.467 'IF' function.

Files needed: Chapter 4 Practice 3.xls, Expanded Grade Book.xls (see handout: "GENERAL NOTES ON USE OF COMPUTERS IN THE UNIVERSITY'S PUBLIC LABS" .)

In the Lab: (hint use a pencil, or pen, to check off each sub-step as you do it)

Do all steps in the "Hands-On" Exercise 1 - pp 445-450. Hints:

-In Step 1. Open Excel from the Start>Programs menu, the file will be created by you from 'scratch'.

Whenever formulas are typed, you can use Upper or Lower case. Excel will convert formulas to all Upper case. Make sure that there is an Equal sign to start all formulas.

Do all steps in the "Hands-On" Exercise 2 - pp 454-463. Hints:

-In Step 1. Start a new file from scratch.

If the "Spell Check" icon does not appear on your tool-bar, click 'Tools' on the menu and select 'Spelling.'

-In Step 10. For the keyboard shortcut to display formulas: do not type the '+'. Hold the Ctrl and press the tilde ` (upper left key on keyboard)

Do the "Hands-On" Exercise 3 - pp 473-482.

Do "Practice" Exercise 3 on page 488. Use the file: Chapter 4 Practice 3.xls.

Note: Columns E & F depend upon whether or not a corresponding value in column D is >40. This requires use of the "If" function. Column I requires the "Vlookup" function. **The proper formulas need only be entered in row 2. You should then be able to copy all of the formulas from row 2 down as far as needed without having to edit any of the formulas that were copied down.** This is what was done in "Hands-on" Ex 3, steps 4,5 & 6, and explained in the Lab Manual sections on pp 467-468.

See Next page (or back of this sheet) for a description of the formulas you will need.

Practice Exercises account for 60% of Lab Grade

Turn in to Prof. London:

Print and turn in documents

- 1.- Hands-On ex. 1, with values
- 2.- Hands-On ex. 1, with formulas
- 3.- Page 463, Step 10 -with values
- 4.- Page 463, Step 10 -with formulas
- 5.- Page 482, Step 10 -2 sheets, 1 with formulas and 1 with values
- 6.- Page 488, practice ex 3 - Print as directed

Staple all sheets together, place a sheet with your name on top.

Read carefully!

Lab E-5

Formula descriptions for Columns E, F & I.

(Remember: Formulas are entered only in the top row of employees (row 2) and are then copied down, without the need to make any changes in the copied rows. (Requires proper use of Absolute & Relative cell references.))

*The =IF function decides what formula to use, not you.
The =VLOOKUP function decides which rate to use, not you*

Column E: Calculate Regular Pay. Uses =IF function

If Hours Worked are greater than the threshold (D13),
then it is D13 times the Hourly Wage,
else (otherwise) Hours Worked times Hourly Wage.

Column F: Calculate Overtime Pay. Uses =IF function

If Hours Worked are greater than the threshold (D13),
then it is Overtime hours (Hours Worked minus Threshold)
times the Overtime Bonus rate (D14) times Hourly Wage,
else (otherwise) nothing (i.e. zero (0))

Make sure formulas contain Absolute References to cells that remain constant when copying down.

Column I uses =VLOOKUP function which looks in the table array (\$G\$13:\$H\$17) for the proper rate depending upon the amount of taxable pay for each employee. (The VLOOKUP function in this case will only find the Rate.) This Rate must then be multiplied by the taxable pay for each employee. (i.e.: Multiply the function by the taxable pay)

Using WIZARDS with above descriptions:

Using the =IF Wizard: (Columns E & F)

For Logical_Test see "If" above
For Value_if_true see "then" above
For Value_if_false see "else" above

Using the =Vlookup Wizard (Column I)

For Lookup_value the rate depending upon taxable pay in Column H
For Table_array location of the table (G13:H17)(see paragraph below).
For Col_index_num Column 2 in the table has the rate to be looked-up.
(Range_lookup Not used here)

The =Vlookup function looks up the proper rate, not you. You copy down the formula created in the top row (Row 2) into as many rows as there are employees. Make sure formulas contain Absolute References to cells that remain constant when copying down. In this case the table array must remain constant.