Spreadsheet Laboratory

Part II

1. We will now generate the spreadsheet above. The sheet calculates a students’ grade using a complex calculation. We have three quizzes, a midterm, and a final exam. The sheet drops the lowest quiz grade (Column F) and then calculates the resulting quiz average (column G). The sheet then calculates the final average (column J) using 50% of the quiz grade, 20% of the midterm grade and 30% of the final grade.

Start a new spreadsheet and copy the gradesheet from “Introduction to Spreadsheets’ handout to it. In Column ‘F’ place a function that chooses the lowest test score for each student (Use ‘Insert Function’ and choose MIN(.....). Fill this formula down for all the students (Highlight the cells and from ‘Calculate’ menu choose ‘Fill Down’. In column ‘G’ place a formula for calculating the quiz average after dropping the lowest grade.

2. In column K and I make an area for midterm and final exam grades. In column J place a formula for calculating a student average by giving different weights to quiz average (50%), midterm (20%), and final (30%). You can do this by multiplying each grade by the appropriate decimal value.

3. Spreadsheets can automatically find cells in a table based on a specific value. In columns M and N place a lookup table for determining grades as shown at the right using a grading scale to assign a letter grade to each numerical value.

In Cell K2 place the formula

=VLOOKUP(J2,$M$2..$N$7,2)

The first value (J2) is the grade average cell, followed by the table coordinates, followed by the number of columns needed to go to the right of the numerical value to find the value to be returned

WHAT IS THE PURPOSE OF THE DOLLAR SIGNS IN THE CELL REFERENCES? When we copy the formula to the remaining cells we do not want the program to change these. We want then cell references to be ABSOLUTE. The dollar sign tells the computer not to reference the cells but to keep them as is.
4. Use ‘FILL DOWN’ to copy this formula to the remaining cells.

5. In cell L2 place the function

   =IF(J2>69,"passing","failing")

   and copy it to remaining cells.

Show to your instructor the completed sheet. ________

**Part II:** Complete the Statistical spreadsheet by loading gradesblank.

1. In all of the boxes that are colored, insert appropriate formulas.

2. . SORT THE NUMBER GRADES HIGH TO LOW

   Who has the highest grade? ____________ Who has the lowest grade? ____________

2. CALCULATE THE MEAN, MEDIAN & MODE OF NUMBER GRADES

3. CALCULATE THE FREQUENCY DISTRIBUTION OF GRADES (How many A’s B’s etc).
   In cells F19 down.

4. CALCULATE THE PERCENT OF LETTER GRADES  (in cells G19 down).

5. CHART THE LETTER GRADE DISTRIBUTION - using a bar graph

6. Adjust the Lookup Table so that the distribution is more bellshaped

7. Repeat with other lookup table using the minus grading A-, B- etc In cells