CS130 In Class Problems

Create an Excel Workbook called **PUNetIDInClassExecl** and solve the following problems:

Problem#1: Name your worksheet "Grades".

Design a worksheet that allows the user the ability to enter a weight (e.g. 30%) for quizzes, a weight for the midterm (e.g. 30%), and a weight for the final (e.g. 40%). Then using the weights and the class scores, add an additional column that determines each student's class average.

	A	B	C	D	E	F	G
1	Class Grader						
2							
3	Enter Quiz Weight	30%					
4	Enter Midterm Weight	30%					
5	Enter Final Weight	40%					
6							
7	Name	ID#	Quiz1	Quiz2	Midterm	Final	Class Average
8	Adams	1	14	23	82	76	
9	James	2	12	21	76	68	
10	Jones	3	15	24	91	93	
11	Mann	4	14	19	88	73	
12	Smith	5	11	16	79	71	
13	Tolls	6	10	13	62	65	
14	Wells	7	5	10	43	55	
15	Max Points		15	25	100	100	
16							

If the sum of all weights do not add up to 100%, then print a message "CANNOT COMPUTE" for each of the student's grades.

Problem#2: Name your worksheet "Overtime Wages"

	A	B
1	Wage Calculator	
2		
3	Enter Hours Worked	
4	Enter Hourly Wage	
5		
6	Gross Pay Is	
7		

The user enters the hours they worked and their hourly wage.

1. Hours worked less than 40 gets paid the regular rate
2. Hours worked between 40 and 50 inclusive will make 1.5 times their normal wage on any hours over 40 and regular wage on all other hours
3. Hours worked over 50 will make 2.0 times their normal wage on any hours over 50, and amounts of money described in 1. and 2. for all other hours

Compute their gross pay in cell B6.

Problem #3: Is it possible to rewrite the following IF function without using any ANDs or ORs? =IF(AND(A1>5,B1>10,C1,D1) If it is possible, then you have two IF statements that are logically equivalent. If it is possible, what test data do you need to run through both IF functions to make sure they do exactly the same thing (i.e. they are logically equivalent)?

Problem #4:

The harmonic mean of a set of numbers is the number of scores N, divided by the reciprocals of each number. As an example, the

harmonic mean of 7,8,7,3,6,2 is:

6 / (1/7 + 1/8 + 1/7 + 1/3 + 1/6 + 1/2) = 4.3

Design an Excel worksheet that allows the user the ability to enter up to 10 numbers and prints the harmonic mean of the numbers entered. Note: The user can enter from 1 to 10 different numbers inclusively.

Here is an example:

Numbers	Reciprocal
7	0.142857143
8	0.125
7	0.142857143
3	0.333333333
6	0.166666667
2	0.5

Harmonic Mean =   4.253165

Make your worksheet look like the following:
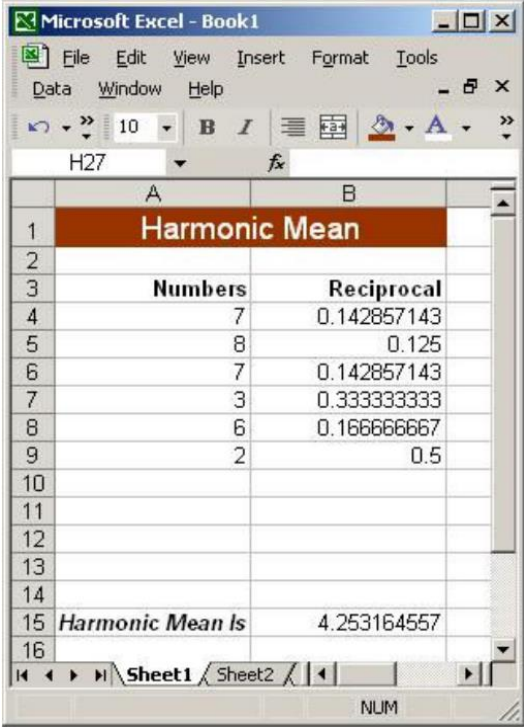
If a value is typed into A10, the reciprocal is calculated in B10 without any dragging down being necessary. Again, set the worksheet up to handle up to **10** numbers.