

Independent Mathematical Contractors
Any College
1 Your Street
City, State 00000

Dear IMC:

Over the past several semesters, I have had a tough time getting my students to do their homework. My colleague, Dr. Dave Graser, suggested I contact you to analyze the homework and final exam scores from my class last semester. I would like to be able to explain to my students that the better they do on the homework, the better they will do on the final exam. I would like you to analyze the data below and produce a technical memo that supports this position.

The table to the right contains some grade statistics from my Geology 101 class during the fall of 2007. Each row corresponds to a different student in the class. The first column describes the homework average in percent for each student. The second column describes the corresponding percentage on the final exam.

Homework Percentage	Final Percentage
45	41
58	44
69	60
80	80
85	91
88	96
85	94
84	91
25	24
77	79
74	71
41	39
43	39
67	62
66	59

Based on this table, I want you to decide if doing assignments is a worthwhile endeavor in this class. To help you answer this question, I anticipate that you'll need to complete the tasks below:

1. Create a scatter plot of the data to the right.
2. Find a linear function corresponding to this scatter plot based on linear regression.
3. Interpret what the slope of this linear function means.
4. Pick a realistic value for the assignment percentage that you think a student such as yourself can attain. Based on your linear function, what will you get on the final exam?
5. Pick a realistic goal for a final exam percentage. Based on your linear function, what will you need to get on the assignments to reach this goal?
6. Based on the linear function, what is the very best any student can expect to do on the final exam?

Once you have completed these tasks, you'll need to document the process you used to reach your answer in a technical memo. You'll find information on writing a technical memo in the Do Project button. This memo is due to me on February 18. Feel free to discuss the process among yourselves, but make sure that the technical memo you turn in is your own work.

If you are unclear on what is expected in your technical memo, contact me via email or by phone at 928-776-2108.

Dr. David Graser
Yavapai College