

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

Dear IMC:

Being college students, you are very familiar with the costs of attending college. Over the past several years, tuition and fees have risen dramatically across the country. My foundation awards scholarships to well deserving students. To help us budget our expenditures, we are interested in having you compare length of time it will take for college costs to double in the future.

In the project folder, you'll find a list of states, types of colleges, and tuition costs for the school years 2004-2005 and 2007-2008. On this list you should also find your last name indicating the state you will be using in your analysis.

For your state, we would like to know how long it will take the different types of institutions to double their cost with respect to the 2004-2005 school year.

To determine the answers to these questions, we want you to assume that the growth in tuition will continue to grow at a constant rate corresponding to the rate from the 2004-2005 school year to the 2007-2008 school year. We anticipate that you'll need to complete a number of tasks:

1. Graph the data for the average published tuition and fees at public two year colleges for the different school years.
2. Find a linear function that passes through the data points. Make sure you define what the variables in your function represents.
3. Put the linear function on the graph to insure that it passes through the two points on the graph.
4. Interpret the slope of the function in 2.
5. Use your function to find the year in which the average published tuition and fees at public two year colleges is double what it was in 2004-2005.
6. If you solved an equation in part 5, verify the solution using your graph. If you used the graph in part 5, solve an equation to verify the solution.
7. Repeat steps 1 through 6 for the average published tuition and fees at public four year colleges and private four year colleges.

Once you have completed these tasks, you'll need to document the process you used to reach your answer in a technical memo. Include a comparison of the times you find. Feel free to discuss the *process* amongst 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 your instructor via email or by phone at xxx-xxx-xxxx.

Dr. Hugh Price
National Education Foundation