

Independent Mathematics Contractors
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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 is interested in publicizing the advantages of attending community college prior to attending a four-year college. We anticipate that this would be a cheaper option for most students around the United States.

Accompanying this letter, you will find a list of states, types of colleges, and tuition costs for the school years 2007-2008 through 2009-2010. On this list, you should also find your last name indicating the state and type of four-year college you will be using in your analysis.

In your analysis, we would like you to compare the cost of attending a four-year college in the state you were assigned to the cost of attending a two-year college and then a four-year college in the state you were assigned. To make this comparison, you will need several assumptions.

- Assume that students spend four years in college. By this, we mean that a student will spend all four years at the four-year college or the first two years at the two-year college and last two years at the four-year college.
- Assume that you will be attending college over the school years 2013-2014 through 2016-2017.
- Ignore any costs associated with room and board. Also, ignore any financial aid students might receive.

To make the comparison, we anticipate that you will need to complete a number of tasks:

- **Technology Assignment – Make a Scatter Plot of College Costs:** Make scatter plots of the data you are assigned. The independent variable should correspond to time and the dependent variable should correspond to tuition and fees at a particular time. Since you will be examining costs at two-year colleges and four-year colleges (either public or private), you will need two scatter plots.
- **Technology Assignment – Find a Linear Function for College Costs:** Find a linear function that passes through two of the data points on each of the scatter plots. Put each of the linear functions on the scatter plot to insure that it passes through the two points on the graph.
- Interpret the slopes and intercepts of the functions from the technology assignment.
- **Technology Assignment – Paste Graphs and Equations:** Paste your graphs into a Word document and type the equations of the corresponding linear functions in Word using an equation editor.
- Use your functions to calculate the savings from attending two-year college during the first two years of a four year degree instead of attending a four-year college for all four years.

The technology assignments were designed to help guide you through the solution process.

Once you have completed these tasks, you will need to document the process you used to reach your answer in a research poster. Include a comparison of the totals you find. Feel free to discuss the *process* amongst yourselves, but make sure that the documentation you turn in is your own work and you complete the solution for the state with two-year and type of four-year college you were assigned. If you are unclear on what is expected in your documentation, contact your instructor via email or by phone.

Dr. Hewj Price
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