

National Education Foundation
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Dear IMC:

Over the past 15 weeks, you have conducted research on college costs in a state assigned to you by your instructor. You have modeled costs at two-year colleges and four-year colleges in order to determine the savings from attending two-year college instead of a four-year college. Based on the work you have submitted, we would like you to finish your analysis for the semester by finding a logarithmic model for your data.

In your analysis, we would like you to find logarithmic regression models for the cost of attending a four-year college and the cost of attending a two-year college in the state you were assigned. Use these models to compare the cost of attending a four-year college for four years to the cost of attending a two-year college for two years and a four-year college for two years. Specifically, determine how much is saved by attending two-year college to attain a four-year degree versus attending a four-year college to get the degree. 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.
- The logarithmic regression model will probably not pass through any of your data points.

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

- Use some type of technology (like Excel or a graphing calculator) to find logarithmic regression models for two-year and four-year college costs.
- Use your functions to find the total tuition and fees to attend a two-year college in the state you were assigned from 2013-2014 through 2014-2015 and a four-year college (either public or private) in the state you are assigned from 2015-2016 through 2016-2017.
- Find the savings from attending the first two years at two-year college versus the first two years at a four-year college.

Once you have completed these tasks, you will need to document the process you used to reach your answer. 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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