Problem Set 1 – Project **Calculus 3** **Due 11/16/09**

You are encouraged to work in groups of two to four on this assignment and make a single group submission.

Option 1:	Build a physical surface, measure something calculus-related about it, and compare your physical measurement to an ideal. Examples: Make a paraboloid out of clay and measure its volume; See how closely the volume of a donut matches that of a torus; Measure the center of mass of an interesting solid.
Option 2:	Find a multivariable data set, one where one of the variables can reasonably be seen as dependant on the others. Answer an interesting question based on that data. Examples: Find data on death rates in the United States and see how well a quadratic regression model fits the geographic distribution; find data on home sales and see how well variables like square footage and number of bathrooms account for prices.
Option 3:	Create your own. The only firm requirements are that it must include more than two variables or dimensions, with strong preference for some aspect dealing with multivariable calculus.

Regardless of which option you select, you will be graded as follows:

- Up to 10 points for the ambitiousness of the project
- Up to 10 points for how well it was carried out (including accuracy)
- Up to 10 points for how well it is written up