The purpose of Foundational Studies is to broaden the understanding of what math is and why math is important to the non-math major. On the 143 web page, there is a link to the rubric of the Mathematics Discipline requirements for Foundational Studies. On each test, I will be providing one question for you to grade based on the rubric.

Listed below are three questions which will assist to prepare the students for the test question. Please provide these questions in the last five minutes of class.

Communications of mathematical Ideas:

Later in the semester, we will be asking students to take a quiz which asks them to complete a regression and make decisions from their work. Today, we would like students to describe the processes to completing a regression including how to enter the points.

Formulate and justify generalization

1) Business: You have just completed a quadratic regression which looks number of items sold on the x axis and profit on the y axis. Your equation is: $y = -x^2 + 1100x - 10,000$. What is your maximum profit and why.

2) STEM: You have just completed a quadratic regression which looks pressure (PSI) on the x-axis and the number of microscopic organisms that can survive in that pressure on the y axis. Your equation is: $y = -x^2 + 1100x - 10,000$. What is your maximum number of microscopic organisms and why.

Select an appropriate strategy.

Given the following equation, how would you find the x-intercepts. The important issue with this question is explaining why you made your decision.

1) $y = 2x^2 + x - 3$
2) $y = x^2 + 50x - 200$