Math 1030 Fall 2012 – Unit Commentaries

Choose three (3) of the topics below to write a commentary. The writing should be turned in the class following the test for that unit. Find an example of the topic in the news and explain how it is an example of the quantitative reasoning that the class has covered. Commentaries are usually one page, plus a copy of the news article.

Unit 1, chapters 1, 2 – Logical Fallacy

Find at least one fallacy in a statement which purports to make a logical argument and explain the fallacy. Many arguments and "logical statements" contain numerous fallacies and you could go on and on, but limit this report to no more than three different fallacies – no matter how much fun it is to find the fallacies.

Unit 2, chapters 3, 4 – Simpson's Paradox

Find an article that *should* incorporate Simpson's paradox in order to be a complete report. Explain how the variables could be examined more closely to obtain a different picture than the article gives. An example of an older article that *does* incorporate Simpson's paradox is http://rwdacad01.slcc.edu/academics/dept/math/dnelson/How_well_are_Utah_students_doing.pdf .

Unit 3, chapters 5, 6 – Correlation vs. Causation

Find an article which compares two quantitative variables and makes a conclusion about how one of the variables influences the other. Comment on the legitimacy of the article's conclusion: (1) Is the correlation strong or weak, or superficial? (2) Is there enough data to support the conclusion? (3) Is there reason to think there is causality? Explain.

Unit 4, chapters 7, 12 – Alternative Voting

Find an article that reports on a recent political election (less than two years ago) in which the winner was not necessarily determined by majority rule. Explain how the winner of the election was determined, the outcome of the election, and what the voters thought about the alternative voting method.

Unit 5, chapters 8, 9 – Logistic Growth

Find an article reports on how a quantitative variable is changing linearly, exponentially, or logistically – not both increasing and decreasing. Explain what kind of change the article is claiming and if the claim is reasonable for the domain involved. Comment on what might be expected, and how it might occur, if the conditions in the article remain the same for a larger domain.