Math 10560-04 Fall 2008

Alternative extra credit assignments
due Friday, December 5

Alternative Extra Credit Assignment 2

This assignment is only for students who had a verifiable conflict with Prof. Cholak's talk about the mathematics of voting theory (Tuesday, October 28 at 5:30).

Read the Wikipedia article about Arrow's Impossibility Theorem. Also read The Mathematics of Voting. You might also want to look at some of the other related resources on this year's at Math Awareness Month.

Write a summary of what the theorem says and how it is applied. Your summary should convince me that you've understood what the theorem says and some of its applications. At the end tell me what your conflict was.

Alternative Extra Credit Assignment 3

This assignment is only for students who had a verifiable conflict with Timothy Pennings' talk on "Does your dog know calculus?" (Tuesday, November 4 at 5:00).

Read "Do dogs know calculus?", *The College Mathematics Journal*, vol. 34 no. 3 (2003), pp. 178-182 (available in the Mathematics library or electronically from JSTOR, which you can access from the Notre Dame libraries home page) and "Do dogs know related rates rather than optimization?", *The College Mathematics Journal*, vol. 37 no. 1 (2006) pp. 16-19 (available in the Mathematics library). You might also want to read the next article, *Do dogs know calculus of variations*, pp. 20-23.

Write a summary. Your summary should convince me that you've understood the articles. At the end tell me what your conflict was.