MATH 579 Exam 1 Part I
Assigned 1/26/10, Due by classtime 1/28/10
Please read the exam instructions.

Please write your answers on separate paper and put your name or initials on every sheet. Cross out work you do not wish graded; incorrect work can lower your grade, even compared with no work at all. Keep this sheet for your records. Show all necessary work in your solutions; if you are unsure, show it. Simplify all numerical answers to be integers, if possible. You are welcome to use your book, notes, calculators, computers, etc. This problem is worth 10-20 points.

You may *NOT* discuss possible solutions to this exam with any human prior to submission. Violations of this policy will cause catastrophic course failure.

Part I: Your nemesis places five points on the surface of a sphere. You may slice the sphere in half with a great circle, and keep either half. Prove that there is some way to do this to get at least four of the five points in your half. (points on the great circle are considered to be in your half).