Problem Set 2 **Calculus 3** **Due 10/17/14**

You are encouraged to work in groups of two to four on this assignment and make a single group submission. Each problem is worth 5 points for correct and clearly justified answers.

1. a) Generate a good picture for the Lagrange Multipliers question (#8) from our first exam.

   b) Find the 200th digit in the natural log of 2.

   c) Evaluate $\displaystyle\int \frac{1+x^2}{\left(1-x^2\right)\sqrt{1+x^4}}\,dx$.

   d) Evaluate $\displaystyle\int_0^\infty \sin\left(x^2\right)dx$.

   e) Do #59 in §13.3.

2. Do #70 in §13.2.

3. Do #28 in §13.3.

4. Do #50 in §13.4.