Problem Set 2 Calculus 2 Due 2/21/11

You are encouraged to work in groups of two to four on this assignment and make a single group submission. Each problem is worth 3 points for correct and clearly justified answers. An additional quality point will be awarded to submissions which are presented in a manner appropriate to good college-level work.

1. Derive Line 101 on the Table of Integrals. Note the exception to this rule, and give a formula to handle that case.

2. Derive Line 39 on the Table of Integrals.

3. [From Briggs & Cochran §7.3] Let C_1 be a circle with radius 4 centered at the origin, and let C_2 be a circle with radius 3 centered at (2,0). The region inside C_1 but outside C_2 is called a **lune**. Find the area of this region.