Math. 301-01
Spring, 2007
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**Second Examination**
*Monday, February 26, 2007*

**Instructions:** This exam should be done on your own paper. Your name should be on each sheet and on the back of the last sheet; the answers should appear written carefully and in order. If in doubt, show intermediate steps: Full credit may not be given, even for correct answers, unless work is arranged clearly and explained. This exam is closed book, but you may use the supplied tables. You may leave after handing in your exam paper, but be sure to check your answers carefully. Each problem is worth 16 points, and 4 points are "free." You may keep this exam sheet.

- Compute the following. Show all work; if you use the supplied tables (copied from the back jacket of *Calculus, single variable, fourth edition* by Hughes–Hallet et al), say which numbers you have used.

1. $\int_0^1 \sqrt{1-x^2}dx$
2. $\int \frac{1}{\sqrt{1-x^2}}dx$
3. $\int \frac{2x}{\sqrt{1-x^2}}dx$
4. $\int \frac{x+1}{x-1}dx$
5. $\int \frac{1}{x^2+x+1}dx$
6. $\int_{x=0}^{\pi/2} \sin^3(x)dx$