

CS 257: Numerical Methods  
Spring 2006

Homework, Set 10

Due: "Do Not Hand In! Solution Will Be On The Web"

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1. Compute the approximation to  $\int_0^1 \frac{1}{\sqrt{x}} dx$  using  $n = 2$  and  $n = 3$  Gauss Quadrature rules.
2. Compute the approximation to  $\int_0^1 x^5 dx$  using  $n = 1, 2, 3$  Gauss Quadrature. Compare with the exact integral.
3. Approximate  $\int_{-1}^1 \frac{2}{x^2-4} dx$  using Gauss Quadrature with  $n = 2$
4. Problems 16, 18, 20, 22 in the text are also insightful.