**MA 241** TEST # 2 Name: _____
May 31, 1999 SS #: _____
*Show All Work* Seat #: _____

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1. (10 pts each) Evaluate the integrals:
   (a) $\int x^2(\ln x)^2\,dx$.
   (b) $\int \sin 5x \cos 6x\,dx$.
   (c) $\int \frac{x^2}{\sqrt{x^2-4}}\,dx$.
   (d) $\int \frac{1}{\sqrt{x^2+6x+10}}\,dx$.
   (e) $\int \frac{2x^3-9x+12}{x^3-4x^2+4x}\,dx$.
   (f) $\int \frac{x^3}{\sqrt{4-9x^2}}\,dx$.
   (g) $\int \arcsin x\,dx$.
   (h) $\int \frac{1}{\cos^4 7x}\,dx$.
   (i) $\int \sec^3 x\,dx$.
2. (10 pts) Set up, but do not evaluate, the Simpson's rule for approximating the integral
$$\int_0^1 e^{-x^2}\,dx,$$
by using 8 subintervals.