MAT 141
Quiz #6
October 21, 2004

Intructions: You have 15 minuntes for this quiz. You may not use any books, notes, or calculators. Justify every statement that you make. If you wish to use a theorem proved in class, state the theorem precisely. Good luck.

Let $\sigma_n(x)$ and $\tau_n(x)$ be the *good* approximations (as discussed in class) to $f(x) = x^2$ on the interval $[1, 3]$.

Compute $\displaystyle\int_1^3 \sigma_4(x)\,dx$

Compute $\displaystyle\int_1^3 \tau_4(x)\,dx$

Compute $\displaystyle\int_1^3 x^2\,dx$