

MA 112 - Calculus II
Worksheet # 4
Professor Broughton

Name: _____

Box #: _____

Due: Monday Jan 12.

1. Problems from the text: Section 7.2 10,24,26,32,36,80
2. Compute the following integrals:

- $\int x^2 e^{-2x} dx$

- $\int_1^2 x^2 \ln x dx$

- $\int t^3 e^{-4t} dt$

- $\int \arctan x dx$

- $\int \tanh^{-1} x dx$

- $\int_1^2 \frac{\ln 5x}{3x^2} dx$

3. Plot the curve $x(t) = 5e^{-0.5t} \sin 4t$ for $0 \leq t \leq 5$. Compute the areas of the first four arches. Compare the ratios of successive areas. What do you observe?