

NAME: _____

MATH 12003

HOMEWORK #1 (13 pts)

FALL 2009

SHOW ALL WORK FOR FULL CREDIT — PLEASE CIRCLE YOUR FINAL ANSWER

DUE: WEDNESDAY, SEPTEMBER 9, 2009 AT THE BEGINNING OF CLASS

1. (2 pts each) Evaluate each integral.

(a) $\int x^2 \sin 4x \, dx$

(b) $\int x^5 \ln x \, dx$

(c) $\int x \sin x \cos x \, dx$

(d) $\int \cos^2 x \sin 2x \, dx$

(e) $\int \sin^9 \theta \cos^3 \theta \, d\theta$

2. (3 pts) Evaluate the definite integral.

$$\int_0^{\pi/4} \tan^7 x \sec^6 x \, dx$$