

Name: _____ 3/24/2015
Math 202 Quiz 2

Directions Answer all questions in the space provided and box your final answers. Good luck!

1. Evaluate the following integrals.

(a) (8 points) $\int x^5 \ln x \, dx$

(b) (8 points) $\int_0^\pi e^x \sin x \, dx$

2. Evaluate the following integrals.

(a) (8 points) $\int \sin^5(\pi\theta) d\theta$

(b) (8 points) $\int \tan^3(2\theta) \sec^5(2\theta) d\theta$

3. (8 points) Use trigonometric substitution to evaluate the integral

$$\int \frac{\sqrt{x^2 - a^2}}{x^4} dx.$$

4. (8 points) Use the method of partial fractions to evaluate the integral

$$\int \frac{1}{x^4 - x^2} dx.$$