

Name: \_\_\_\_\_

This quiz covers: 5.7.

**Directions:** Complete all questions and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Evaluate the following integral:

$$\int_{\frac{\pi}{2}}^{\frac{3\pi}{4}} \tan^5 x \cos^8 x \, dx$$

2.) Evaluate the following integral using the substitution  $x = \tan \theta$ :

$$\int \frac{x}{\sqrt{x^2 + 1}} \, dx$$

3.) Evaluate the following integral:

$$\int \frac{x - 4}{x^2 - 5x + 6} \, dx$$