

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:

$$\int \sin^2 x \, dx$$

2.) Simplify the following expression using the substitution $x = 2 \sin \theta$. Your answer should not include "x". (DO NOT INTEGRATE)

$$\frac{x}{\sqrt{4-x^2}} \, dx$$

3.) Evaluate the following integral:

$$\int \frac{4x}{(x+3)(x-1)} \, dx$$