

Anti-Derivatives and Integration by Substitution

Ronda Sanders

Department of Mathematics

Overview

This lab will help develop your anti-differentiation skills and reinforce integration by substitution. The Maplets introduced in this lab should be very useful as you study for your final exam.

Maple Essentials

- The *Anti-Derivative Drill* and *Integration by Substitution* maplets provide integration practice. These maplets are available from the course website:

<http://www.math.sc.edu/calclab/141L-S06/labs/> → [AntiDerivativeDrill](#)

<http://www.math.sc.edu/calclab/141L-S06/labs/> → [IntBySub](#)

Preparation

Review basic integration and integration by substitution.

Activities

1. Use the *Anti-Derivative Drill* maplet to practice your skills finding the anti-derivative.
 - Under the **Functions/Methods** tab add Trigonometric, Exponential, and Logarithmic functions.
 - Click on **New Function** to work a randomly generated example.
 - Click on **Enter Function** to enter a problem from your homework or study materials.
 - **Don't forget +C!**
2. Use the *Integration by Substitution* maplet to practice your skills finding the anti-derivative when you must first rewrite the problem.

Assignment

Congratulations! You have completed the Maple lab for Calculus I! Please complete the End of Course survey. Have a Great Summer!