

TEMPLE MATH CLUB

WALTER JACOBS PRESENTS

A Novel Approach to the Integral of $\csc x$
inspired by Gregory's Vera Quadratura

October 3, 2014 at 1:00 in WACHMAN 617

As always, free PIZZA!

Free Pizza!

Abstract: The typical approach to the integral of the cosecant function encountered by calculus students is often frustratingly unintuitive. This strategy asks the student to perform a multiplication that is not immediately obvious and in fact requires one to know the answer in advance. As a result, even a student who appreciates the cleverness of this trick is often left wondering how they might have discovered such a solution on their own. In James Gregory's 1667 book *Vera Circuli et Hyperbolae Quadratura*, he proves a simple but surprising property of the hyperbola that allows for a much more intuitive approach to the integral of $\csc x$. In our presentation, we will explain how the translation of Gregory's book led to this observation.

