

1023-M5-254

**Philip B Yasskin\*** ([yasskin@math.tamu.edu](mailto:yasskin@math.tamu.edu)), Department of Math, Texas A&M University, 3368 TAMU, College Station, TX 77843-3368, **Douglas B Meade** ([meade@math.sc.edu](mailto:meade@math.sc.edu)), Department of Math, University of South Carolina, Columbia, SC 29208, and **Mika Seppala** ([mika.seppala@webalt.net](mailto:mika.seppala@webalt.net)), Department of Math and Statistics, University of Helsinki, P.O. Box 68, FIN-00014, Helsinki, Finland. *Maplets for Calculus - Now with Proofs.*

Maplets for Calculus is a collection of over 70 Maple applets for teaching single-variable calculus, including precalculus, limits, derivatives, integrals, differential equations, sequences, series, and polar coordinates. The Maplets are highly pedagogical, building intuition and providing routine computational practice, using either randomly-generated or user-entered problems. Most of the Maplets ask the student one or more questions and guide the student through the solution process. Instructors may also use them as effective classroom demonstrations (including 2D and 3D graphics and animations).

Recently some new Maplets have been added, which help the students understand proofs. One justifies the Fundamental Theorem of Calculus by guiding the student through the computation of the derivative of the area under a curve. Another drills the students on the epsilon-delta proofs for limits of linear functions. These new Maplets have been developed for the distance education program provided by WebALT (Web Advanced Learning Technologies).

A Table of Contents and sample videos may be seen at <http://calclab.math.tamu.edu/maple/Maplets/Contents.html> (Received August 30, 2006)