Douglas B. Meade
University of South Carolina
meade@math.sc.edu

Philip B. Yasskin
Texas A&M University
yasskin@math.tamu.edu
What is a maplet?

- Maplet
  - Applet created in the Maple programming language

- Simple Examples
  - Hello World!
  - Integrator
What are Maplets for Calculus?

Collection of 69 maplets
... utilizing Maple’s *symbolic, numeric, and graphic* capabilities

... to create *student-(and instructor-)* friendly environments

... for learning and teaching fundamental calculus *concepts, manipulations, theory, and applications.*
Problem Selection

- Algorithmic problems provide almost endless practice problems
- Ability to enter user-defined problems allows for use on traditional homework
Problem Solution / Checking

- Step-by-step approach closely follows standard methods and terminology found in textbooks

- Hints are available

- Solution is checked symbolically step-by-step

- Correct solution can be displayed
Distribution of topics:

- 16 Pre-Calculus
- 4 Limits
- 22 Derivatives
- 20 Integration
- 2 Differential Equations
- 3 Sequences / Series
- 2 Curvilinear Coordinates
- 69 Total
Individual and Classroom Licenses

available through Maplesoft’s MapleConnect program
http://www.maplesoft.com/products/thirdparty/maplets_calc/

Web Access

USC/TAMU Students (secure)
Download: http://calclab.math.tamu.edu/maple/maplets/
MapleNet: http://m4c.math.sc.edu/

TOC/Videos (non-secure)
http://www.math.sc.edu/calclab/M4C/
What is WebALT?

Distance education using state-of-the-art technologies …

- Multi-lingual (automatic translation)
- Internet-based, interactive/responsive, affordable

- Based at University of Helsinki; funded by European Community
Customized WebALT Maplets

- Solving Absolute Value Equations
- Fundamental Theorem of Calculus
- Limit Drill
- Derivative Drill
- Integration Drill
- **MathFest (Knoxville, TN)**
  - Saturday, August 12, 3:35 – 3:50
  - Phil Yasskin & Doug Meade

- **Conference on Mathematics in the Digital Era (Aveiro, Portugal)**
  - August 15 – 17, time TBA
  - Phil Yasskin & Doug Meade