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Kent M Neuerburg* (kneuerburg@selu.edu), Kent M. Neuerburg, Southeastern Louisiana University, SLU Box 10687, Hammond, LA 70402. *Implementing Newton's Method*. Preliminary report.

Every calculus student is familiar with Newton's Method for approximating the zeros of a differentiable function given an initial approximation. They also know that the strategy generally converges "quickly" to an accurate approximation of the desired root. However, few are aware of how to determine a "good" initial approximation or how many iterations should be performed to approximate the zero with any pre-determined accuracy. This session will focus on two known theorems that address these implementation issues associated with Newton's Method. (Received June 23, 2000)