

CSC2322H

Assignment 3

November 10, 2009

University of Toronto

Due: December 8, 2009

1. Using a collocation code, COLNEW (described in Appendix B of the text), you are to carry out a similar investigation to that of assignment 2. That is, you are to run COLNEW on the three test problems and specified parameter values (for each problem) and report on its performance.
2. Discuss briefly the efficiency, accuracy, ease of use, and robustness of COLNEW relative to MUSN on these test problems.
3. COLNEW allows the user to solve fourth-order differential equations directly (without first reducing the equations to a first-order system). You are to solve the third test problem with COLNEW using these two approaches and discuss briefly the relative results.