

For the problems given in Assignments #3 and #4, implement the following direct methods:

- The standard shooting method
- The multiple-shooting method

In implementing the multiple-shooting method, you will need to break the interval into subintervals. Experiment with various numbers of fixed-width subintervals to see how the solution changes. In order to complete this assignment, you will need to read up on root finding in a numerical analysis book. This assignment will take some time, so do not rush through it.