On the solution of two point boundary value problems with two point direct method.

ABSTRACT

The two point boundary value problems (BVPs) occur in a wide variety of applications especially in sciences such as chemistry and biology. In this paper, we propose two point direct method of order six for solving nonlinear two point boundary value problems directly. This method is presented in a simple form of Adams Mouton type and determines the approximate solution at two point simultaneously. The method will be implemented using constant step size via shooting technique adapted with three-step iterative method. Numerical results are given to compare the efficiency of the proposed method with the Runge-Kutta and bvp4c method.