

Two and three point implicit second derivative block methods for solving first order ordinary differential equations

ABSTRACT

In this research we developed implicit block methods which make use of the first and second derivatives of the problems. The aim is to give a more accurate as well as faster numerical results for solving first order ordinary differential equations. The methods are then used to solve a set of first order initial value problems. Numerical results clearly show that the new proposed methods performed better than other well-known existing methods in solving the set of test problems.

Keyword: Second derivative; Implicit block methods