

Numerical solution for high-order linear complex differential equations in a circular domain

Faruk Dusunceli^a, Ercan Celik^b

^{a,b}Department of Mathematics, Ataturk University, Turkey

^adusuncelifaruk@gmail.com, ^bercelik@atauni.edu.tr

Abstract: In this study, a collocation approach and Legendre polynomials are used to get numerical solution of high-order linear complex differential equations in circular domain. The solutions in the form of power series are obtained. Method is applied on test problems. Results demonstrate in tables that they are quite applicable. All of the numerical computations have been computed on computer using a code written in Matlab.

Keywords: linear complex differential equations, Legendre polynomials, collocation method, numerical solution.

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