On the solution of fractional order nonlinear boundary value problems by using differential transformation method.

ABSTRACT

In this research, we study about fractional order for nonlinear of fifth-order boundary value problems and produce a theorem for higher order of fractional of nth-order boundary value problems. The aim of this study was to evaluate and validate the theorem and provide several numerical examples to test the performance of our theorem. We also make comparison between exact solutions and differential transformation method(DTM) by calculating the error between them. It is shown that DTM has very small error and suitable in several numerical solutions since it is effective and provide high accuracy.