

Numerical Solution of Fractional Order Delay Differential Equation via Collocation Method

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Abstract:

This paper is devoted to investigation the superconvergence of the fractional order delay differential equation via collocation method. The method is based on the truncated Taylors polynomial. The solution is obtained in term of Taylor polynomial. Some non-linear fractional order delay differential equation is solved and compared with the exact result to show the accuracy, validation, and applicability of the collocation method via Taylor polynomial.

Keywords: Numerical; Differential Equation; Fractional Order; Taylor polynomial

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