NOVAL BASED APPROACH FOR SOLUTION OF PANTOGRAPH EQUATION BY USING ORTHOGONAL EXPONENTIAL POLYNOMIALS(OEP)

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RESEARCH HIGHLIGHTS

Pantograph differential equations (PDE) are describe in the existence of linear functional exchange and it play vital role in defining countless different phenomena. Such equations evolve in industrial applications (1, 2) and their studies which depend on economy, electrodynamic, control and biology (3). Another term OEP (4, 5) have some real sense applications in many specialized fields of science, technology and engineering,

RESEARCH OBJECTIVES

The objective of this research is to redue the error of pantograph equation. Which has a huge application in many field of sciences. Orthoexponential polynomials used to improve result taken on pantograph equation.

MATERIALS AND METHODS

Collocation method which is based on matrices use with orthoexponential polynomial. Methodology based on metrices and the collocation points. As the size of the matrix increase the error between the exact and the approximated result will decrease.

RESULTS

Result taken in three problem and compares with different reported results. And It comes in our understanding that our method gives formore better result than reported result in previous exercises.

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