Perturbation-Iteration Algorithm to Solve Fractional Giving Up Smoking Mathematical Model

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Abstract

In this paper, a numerical technique is applied to a five variable giving up smoking fractional mathematical model. This model is based on five types of smokers, i.e. potential, occasional, heavy, temporary quitters and permanent quitters. Efficacy of Perturbation Iteration Algorithm on fractional system of differential equations is shown graphically between standard Runge-Kutta method and PIA.

References


Index Terms

Computer Science Algorithms

Keywords

Smoking, Perturbation Iteration Algorithm, Caputo Fractional Derivative, Stability Analysis