عنوان مقاله:

A Method to Approximate Solution of the First Kind Abel Integral Equation Using Navot's Quadrature and Simpson's Rule

محل انتشار:

مجله بین المللی ریاضیات صنعتی, دوره 1, شماره 1 (سال: 1388)

تعداد صفحات اصل مقاله: 11

نویسندگان:

M. A. Fariborzi Araghi - *Department of Mathematics, Islamic Azad University, Central Tehran Branch, P.O. Box ۱۳۱۸۵.۷۶۸, Tehran, Iran*

S. Yazdani - *Department of Mathematics, Islamic Azad University, Central Tehran Branch, P.O. Box ۱۳۱۸۵.۷۶۸, Tehran, Iran*

خلاصه مقاله:

In this paper, we present a method for solving the rst kind Abel integral equation. In thismethod, the rst kind Abel integral equation is transformed to the second kind Volterraintegral equation with a continuous kernel and a smooth deriving term expressed by weaklysingular integrals. By using Sidi's sinm - transformation and modied Navot-Simpson'sintegration rule, an algorithm for solving this kind of integral equation is proposed, thenthe convergence of .algorithm is derived. Some numerical results show the eciency of thementioned method

کلمات کلیدی: