Half-sweep geometric mean method for solution of linear Fredholm equations

Abstract

The objective of this paper is to examine the application of the Half-Sweep Geometric Mean (HSGM) method by using the half-sweep approximation equation based on quadrature formula to solve linear integral equations of Fredholm type. The formulation and implementation of the Full-Sweep Geometric Mean (FSGM) and HalfSweep Geometric Mean (HSGM) methods are also presented. Some numerical tests were carried out to show that the HSGM method is superior to the FSGM method in the sense of complexity and execution time.