Constructing Attracting Periodic Orbits of Three Third–Order Iterative Methods

In this paper, we shall use three third–order root–finding iterative methods that do not require the use of second derivatives for their formulation and present a procedure to construct polynomials in such a way that superattracting periodic orbits of any prescribed period will occur when these iterative methods are applied.

Key Words. Iterative methods, dynamics, rational maps, attracting periodic orbits.

AMS(MOS) subject classifications. 37N30, 65F10, 30C15.