

Abstract

We study the asymptotics of first-order nonlinear difference equations. In particular we present an asymptotic functional equation for potential asymptotic behaviour, and a theorem stating sufficient conditions for the existence of an actual solution with such asymptotic behaviour.

Keywords: Difference equations, asymptotics, existence theorem, attractiveness, repulsiveness, nonstandard analysis.

AMS subject classification: 03H05, 39A11.