

INVESTIGATING GLOBAL BEHAVIOR OF SOME SYSTEMS OF EXPONENTIAL DIFFERENCE EQUATIONS

Abdul Khaliq¹ and Muhammad Zubair²

¹King AbdulAziz University, Faculty of Science

²Riphah International University - Lahore Campus

April 28, 2020

Abstract

This paper focused to the study of the boundedness, the persistence, and the asymptotic behavior of the positive solutions of the system of three difference equations of exponential form: $x_{n+1} = \alpha x_n + \beta e^{\gamma x_n} + \delta y_n$; $y_{n+1} = \alpha y_n + \beta e^{\gamma y_n} + \delta z_n$; $z_{n+1} = \alpha z_n + \beta e^{\gamma z_n} + \delta x_n$ where $\alpha, \beta, \gamma, \delta$; and $\alpha, \beta, \gamma, \delta$ are positive constants and the initial values x_0, y_0, z_0 are positive real values

Hosted file

zzzz01 (2).pdf available at <https://authorea.com/users/308695/articles/439682-investigating-global-behavior-of-some-systems-of-exponential-difference-equations>