

{tag} International Journal of Computer Applications  
Foundation of Computer Science (FCS), NY, USA

[Volume 136](#)

-  
[Number 8](#)

Year of Publication: 2016

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10.5120/ijca2016908208

{bibtex}2016908208.bib{/bibtex}

## Abstract

In this difference equation, Stability, Periodicity, boundedness, global Stability.

We investigate some qualitative behavior of the solutions of the difference equation  $x_{n+1} = \frac{a + bx_n}{c + dx_n}$  where the the initial conditions  $x_0, x_1$  are arbitrary positive real numbers such that  $x_0 > 0$  where  $a, b, c, d$  and  $e$  are positive constants.

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### Index Terms

Computer Science

Applied Mathematics

### Keywords

Difference equation, Stability, Periodicity, Boundedness