

# Periodic and Eventually Periodic Solutions of Piece-wise Difference Equations and Max-Type Difference Equations

Michael A. Radin

Rochester Institute of Technology  
College of Science  
School of Mathematical Sciences  
Rochester, New York 14623  
U.S.A.  
`michael.radin@rit.edu`

We will start out with the history difference equations that exhibit periodic and eventually periodic solutions; such as  $3X+1$  Conjecture and Collatz Equations and the Max-Type Equations. We will discover the particular patterns of periodic solutions and well as the transient terms. Furthermore, we will compare the similarities and differences between the Piecewise Difference Equations and Max-Type Difference Equations. Moreover, we will discuss applications in neural networks.

## References

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