

ON A FORMAL SOLUTION FOR A DISCRETIZED SIRS EPIDEMIC MODEL

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To understand infection mechanisms, the stability of the solution for continuous epidemic models is often discussed. However, Acedo et al. [1] recently proposed a formal solution for a continuous SIRS model. We apply analytical approach by [1] to a discretized SIRS model. This analytical approach can not be applied to discretized model using traditional numerical schemes. Sekiguchi and Ishiwata [2] recently obtained a discretized SIRS model using the nonstandard discretization in [3] and also showed the sufficient conditions for global behaviors of the solution, which are corresponding to those of the original continuous model. Similarly, we derive a discretized SIRS model and, as in [1], we obtain a formal solution for this discretized model.

References

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