On the systems of rational difference equations

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Abstract: In this paper, we have investigated the solutions of the system of rational difference equations

$$\begin{cases} x_{n+1} = \frac{\alpha y_{n-2}}{\beta+\rho y_{n-2}x_{n-1}y_n} \\ y_{n+1} = \frac{\delta x_{n-2}}{\zeta+\eta x_{n-2}y_{n-1}x_n} \\ z_{n+1} = \frac{\theta z_{n-2}}{\lambda+\mu y_{n-2}x_{n-1}y_n} \end{cases}$$

where the parameters $\alpha, \beta, \rho, \delta, \zeta, \eta, \theta, \lambda, \mu$ and initial values $x_{-i},\ y_{-i},\ z_{-i}$, $i \in \{0, 1, 2\}$ are reel numbers.

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