

The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied. In the case when this condition is not satisfied, the system has no solutions. The second part of the paper is devoted to a detailed study of the properties of the solutions of the system (1) for arbitrary values of the parameters α and β . It is shown that the solutions of the system (1) are unique and depend continuously on the parameters α and β . The third part of the paper is devoted to a study of the asymptotic properties of the solutions of the system (1) for large values of the parameters α and β . It is shown that the solutions of the system (1) approach zero as the parameters α and β approach infinity.

The fourth part of the paper is devoted to a study of the properties of the solutions of the system (1) for small values of the parameters α and β . It is shown that the solutions of the system (1) approach zero as the parameters α and β approach zero. The fifth part of the paper is devoted to a study of the properties of the solutions of the system (1) for arbitrary values of the parameters α and β . It is shown that the solutions of the system (1) are unique and depend continuously on the parameters α and β .