

for all $a > 0$. From (A.26) and the fact that under conditions of the Theorem $x(t; t_0, x_0) \in \mathcal{C}$, we conclude that the i -th component $x_i(t; t_0, x_0)$ of the solution $x(t; t_0, x_0)$ is a strictly increasing function for all $t \in \mathcal{T}_0$, which contradicts the property (P_2) . This proves Theorem A.2.

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