

1128-26-172

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45469-2316. *A Compactness Criterion for Sets of Solutions of Fractional Differential Equations.*

In 1969, Keith Schrader and Lloyd Jackson proved an important compactness criterion for sets of solutions of third-order ordinary differential equations. To prove this theorem, a lemma is proved in order to obtain a fixed point of an integral operator defined on $C^2[a; b]$. We obtain an analogous fixed point for fractional differential equations of orders $2 < \alpha \leq 3$, and then obtain an analogous criterion for compactness of sets of solutions of fractional differential equations of orders $2 < \alpha \leq 3$. (Received February 24, 2017)