EXISTENCE, LOCALIZATION AND MULTIPLICITY OF POSITIVE SOLUTIONS FOR THE DIRICHLET BVP WITH ϕ-LAPLACIAN

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Abstract. The aim of this paper is to discuss the existence, localization and multiplicity of positive solutions for the Dirichlet boundary value problem with ϕ-Laplacian. Our approach is based on Krasnosel'skiĭ's fixed point theorem in cones and on a weak Harnack type inequality. As concerns the systems, the localization is established by the vector version of Krasnosel'skiĭ's theorem, where the compression-expansion conditions are expressed on components.
Key Words and Phrases: Positive solution, ϕ-Laplacian, boundary value problem, Krasnosel'skiĭ's fixed point theorem in cones, weak Harnack inequality.
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