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Shobha Oruganti* (so1@ra.msstate.edu), Department of Mathematics and Statistics,
Mississippi State University, P.O Drawer MA, Mississippi State, MS 39762. *A Multiplicity Result
for Classes of p -Laplacian Equations.*

We establish a multiplicity result for positive solutions to classes of boundary value problems of the form

$$\begin{aligned} -\Delta_p u &= \lambda f(u); & \Omega \\ u &= 0; & \partial\Omega \end{aligned}$$

where Δ_p denotes the p -Laplacian operator defined by $\Delta_p := \operatorname{div}(|\nabla z|^{p-2}\nabla z)$; $p > 1$, Ω is a bounded region in \mathbb{R}^n ; $n \geq 1$ with smooth boundary $\partial\Omega$, and λ is a positive parameter. In particular, we study classes of p -sublinear functions f . Our result is based on the method of sub and super solutions. (Received September 28, 2000)