# Turkish Journal of Mathematics

Existence of three solutions to a non-homogeneous multi-point BVP of second order differential equations

Yuji LIU
Department of Mathematics,
Guangdong University of Business Studies,
Guangzhou 510320, P.R. CHINA
e-mail: liuyuji888@sohu.com

🔍 Keywords
🔍 Authors

@

Scientific Journals Home Page

Abstract: This paper is concerned with a non-homogeneous multi-point boundary value problem of second order differential equation with one-dimensional p-Laplacian. Using multiple fixed point theorems, sufficient conditions to guarantee the existence of at least three solutions of this kind of BVP are established. Two examples are presented to illustrate the main results.

Key Words: Second order differential equation with p-Laplacian, generalized Sturm-Liouville boundary value problem, fixed point theorem in cone