

Abstract

This work is concerned with the existence of unbounded positive solutions for a second-order nonlinear three-point boundary value problem on the positive half-line. The interesting points of the results are that the nonlinearity depends on the solution and its derivative and may change sign. Moreover, it satisfies general polynomial growth conditions. New existence results of nontrivial single and multiple positive solutions are proved using recent fixed point theorems on cones in a special Banach space