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Multiple positive solutions for singular BVPs on the positive half-line. (English)

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Summary: We are concerned with the existence of multiple positive solutions to a second-order nonlinear singular boundary value problem set on the positive half-line. We mainly use the Krasnozels'kii and Leggett-Williams fixed point theorems in cones to prove existence of one positive solution, two positive solutions and three positive solutions. The results complement, extend and correct some recent ones.

MSC:

- 34B18** Positive solutions to nonlinear boundary value problems for ordinary differential equations
- 34B16** Singular nonlinear boundary value problems for ordinary differential equations
- 34B40** Boundary value problems on infinite intervals for ordinary differential equations

Cited in **2** Reviews
Cited in **14** Documents

Keywords:

fixed point theorem; positive solution; singular problem; cone; compactness; infinity interval

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