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Existence theorems for a certain nonlinear boundary value problem of the third order.

(English) [Zbl 0631.34022](#)

Math. Slovaca 37, 351-356 (1987).

The author investigates the following boundary value problem:

$$x'' = f(t, x, x', x''), \quad \alpha_2 x'(a_1) - \alpha_3 x''(a_1) = A_1, \quad x(a_2) = A_2, \quad \gamma_2 x'(a_3) + \gamma_3 x''(a_3) = A_3.$$

Existence theorems for a solution, which lies between the lower and upper solutions of the problem, are proved.

MSC:

34B10 Nonlocal and multipoint boundary value problems for ordinary differential equations

Cited in **5** Documents

34B05 Linear boundary value problems for ordinary differential equations

Keywords:

third order differential equation; lower solution; upper solutions

Full Text: [EuDML](#)

References:

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