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Existence and Local Uniqueness for Nonlinear Lidstone Boundary Value Problems

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Abstract: Higher order upper and lower solutions are used to establish the existence and local uniqueness of solutions to

$$y^{(2n)} = f(t, y, y'', \ldots, y^{(2n-2)}),$$

satisfying boundary conditions of the form

$$g_i(y^{(2i-2)}(0), y^{(2i-2)}(1)) - y^{(2i-2)}(0) = 0,$$

$$h_i(y^{(2i-2)}(0), y^{(2i-2)}(1)) - y^{(2i-2)}(0) = 0,$$

$1 \leq i \leq n.$

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