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Short title: Numerical solution of two-point boundary value problem in linear differential equation.

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Review text:

This paper deals with the approximation of linear differential equation using Legendre polynomials. Some matricial properties concerning the integration and product of Legendre polynomials are derived. The numerical method is based on writing the higher derivative of the exact solution as a finite expansion of Legendre polynomials with coefficient to be determined. . Integrating this expansion n–th time, where n is the order of the equation to be solved, replacing the results in the equation, and using the above stated matricial properties leads to algebraic equations to be solved. Some numerical tests are provided.