

Title of Article: Block Algorithm for General Third Order Ordinary Differential Equations.

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Abstract: We present a block algorithm for the general solution of $y''' = f(x, y, y', y'')$. The numerical algorithm is developed by the methods of interpolation of the power series approximate solution and collocation of the differential system of the approximant at selected grid points to generate a continuous method. Block method is adopted to simultaneously generate all the parameters needed to implement the method. The method was tested on numerical examples and to investigate the efficiency of the method