

عنوان مقاله:

Some notes on convergence of homotopy based methods for functional equations

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خلاصه مقاله:

Although homotopy-based methods, namely homotopy analysis method and homotopy perturbation method, have largely been used to solve functional equations, there are still serious questions on the convergence issue of these methods. Some authors have tried to prove convergence of these methods, but the researchers in this article indicate that some of those discussions are faulty. Here, after criticizing previous works, a sufficient condition for convergence of homotopy methods is presented. Finally, examples are given to show that even if the homotopy method leads to a convergent series, it may not converge to the exact solution of the equation under consideration.

کلمات کلیدی:

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