

**COMPARATIVE STUDY OF OPEN METHODS IN FINDING
ROOT OF NONLINEAR FUNCTIONS**

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ABSTRACT

In computational and applied mathematics, root finding of nonlinear equations are of significant importance due to their wide applications in many branches of modern sciences such as Engineering, Mathematical Chemistry, Biomathematics, Physics, Statistics, etc. Newton's method and Steffensen's method are well-known methods that are often used to solve root finding problems, especially nonlinear functions. Unfortunately, there are some limitations for these two methods in terms of the simplicity of the method algorithm and efficiency of the method in solving complicated equations. The objective is to determine the best method among four numerical methods selected in solving root finding problem. All methods will be analysed based on convergence, accuracy, number of iteration and CPU times. In this project it shows that Newton's method is still the best method to be used in solving nonlinear problems.

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