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A family of ellipse methods for solving nonlinear equations.

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Summary: This note presents a method for the numerical approximation of simple zeros of a non-linear equation in one variable. In order to do so, the method uses an ellipse rather than a tangent approach. The main advantage of our method is that it does not fail even if the derivative of the function is either zero or very small in the vicinity of the required root.

Classification: N35

Keywords: nonlinear equations; Newton's method; order of convergence

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