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# Smale's Fundamental Theorem of Algebra reconsidered

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(Submitted on 30 Mar 2012)

In his 1981 Fundamental Theorem of Algebra paper Steve Smale initiated the complexity theory of finding a solution of polynomial equations of one complex variable by a variant of Newton's method. In this paper we reconsider his algorithm in the light of work done in the intervening years. Our main theorem raises more problems than it solves.

Comments: 28 pages, 3 figures

Subjects: **Numerical Analysis (math.NA)**; Algebraic Geometry (math.AG); Complex Variables (math.CV); Dynamical Systems (math.DS)

Cite as: [arXiv:1204.0036v1](https://arxiv.org/abs/1204.0036v1) [math.NA]

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