
Subject: Re: Better Root Finder

Posted by jschwab@gmail.com on Sun, 15 Apr 2007 20:41:23 GMT

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On Apr 15, 12:55 am, "Max Watson" <max...@gmail.com> wrote:

- > IDL's `fx_root` seems very limited; when I want to find the root of say
- > $x^3 - 8$ with the initial guess vector `[-1,-100,100]`, IDL returns a
- > complex number: (`-1.00000`, `1.73205`). Is there a way that
- > `fx_root` can be easily modified so that it can find the right answer
- > with a bad initial guess?

I wouldn't say that `fx_root` is limited from that example; it is finding (one of) the correct (complex) solutions.

If you are only solving polynomial equations and need to get all the real solutions, you could try `fz_roots`, which gives you all of the solutions to a given polynomial. Then pick off the real solutions, or whatever your desired "right answer" is.

I wouldn't say that's necessarily the best solution, but it's certainly one of the easiest.
