

## Math 350 — Computer Assignment 4, due March 10, 2011

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1. Do Exercise 4.2 in NCM.

Note that the Symbolic Toolbox is part of the student version of MATLAB. If you're not using the student version, you may not have access to the Symbolic Toolbox. It should, however, be installed on all lab computers on campus. Alternatively, you can use Mathematica or Maple to complete part (a).

Hint for part (d): MATLAB recognizes complex numbers automatically and then performs appropriate complex arithmetic. A complex number is input as, e.g., `3+2i` (note that this is **not** a good starting value for part (d)). You can modify the Newton code used in class and may find the commands `real()`, `imag()`, and `isreal()` useful for formatting your output.

2. Do Exercise 4.3 in NCM.

Again, the Symbolic Toolbox, Mathematica or Maple may be helpful for part (a).

Can you get one of the methods to find the middle root?

3. Do Exercise 4.10 in NCM.

4. Do Exercise 4.15 in NCM.

Since MATLAB can't sum up infinitely many terms you will have to come up with an appropriate stopping criterion for part (b).

5. Do Exercise 4.16 in NCM.