

Math 164 - HW 3

HW 3 Assignment:

(Place in Notebook, Presentations, May be collected on 2/8/05)

1. Contest: Prettiest $z^3 - 1 = 0$ basins of attraction graphic.
2. Contest: Most interesting other complex function's graphic.
3. Time: Creation of "color array" in MATLAB vs C. Don't time writing array to file or creating graphic.
4. LAPACK: Solve linear system $ay = x$ for y , using the values of a and x as initialized in lapb.C. You will have to find and use the appropriate LAPACK routine (see netlib.org).
5. Use above linear solver for a C Program's Newton search direction solver (see for example HW 2.5).
6. Code ODE System Solver using Euler's for $y'' = -y$, $y(0) = 0$, $y'(0) = 1$.