Numerical Analysis

Math 370 — MWF 2:30-3:25
Spring 1997 — 127 Fowler

(02.14.97) Review for Exam 1

Topics

First let's review the list of topics that we have covered so far...

Review Questions

1. What is the difference between overflow and underflow?
2. Explain why false position and secant produce different estimates to a root even though they have the same "recurrence relation" (iterative step).
3. Show that $\tan(h) - h$ is $O(h^n)$ as $h \to 0$. Find n
4. What is the order of convergence of the sequence $n^{1/n}$?
5. Find the first 3 approximations to the value $\sqrt[3]{14}$ using the Bisection algorithm.
6. Write pseudocode which given a sequence p_n would compute the related Aitken's sequence
7. Given 3 iterative relations, indicate which will converge to a solution, and what equation this solution will be solving.
8. How many 3 digit binary numbers are there?
9. Page 21, # 10, Page 54, #4, Page 66, # 6, Page 77, # 11

NOTE: Friday's Exam Will Be Held In Fowler 201