

Lectures 6 through 10 – contents

October 9, 2006

- Lecture 6. The bisection method for solving nonlinear equations (Section 3.1).
- Lecture 7. Newton's method for solving solving nonlinear equations (Section 3.2).
- Lecture 8. Normed vector spaces. Matrix norms (beginning of Section 4.4).
- Lecture 9. Fixed points. The contraction principle (Section 3.4).
- Lecture 10. Applications of the contraction principle: Newton's method, existence and uniqueness of solutions for ordinary differential equations. The logistic map.