MATH 2418

Exam 2 Reviews

4.3

Least squares approx

**Book**

Chapter main points

1. Solving ATA = ATb gives projection p = A of b onto the column space of A
2. When Ax = b has not solution, is the “least squares solution”: ||b - A||2
3. Partial derivaties (not used)
4. To fit points (t1,b1),….(tn,bn) by a straight line, A has columns (1,…,1) and (t1…,tm)
5. In that case ATA is the 2 by 2 matrix

Facts

(E32E31E21) A = U **--->** (E21-1E31-1E32-1) A = U **--->** A = LU

Rules

**Class**

**Recitation**