

# MA2501 Numerical methods

Spring 2010

## Problem set 2

### Exercise 1

K&C, ch. 4.3, Problem. 4, 7, 10b, 11, 18

### Exercise 2

Solve the system  $Ax = b$  where

$$A = \begin{bmatrix} 1 & 2 & 1 \\ 3 & 4 & 0 \\ 4 & 20 & 8 \end{bmatrix}, \quad b = \begin{bmatrix} 3 \\ 3 \\ 20 \end{bmatrix}$$

using naive Gaussian elimination, Gaussian elimination with partial pivoting and with scaled partial pivoting.