



PHILADELPHIA UNIVERSITY
DEPARTMENT OF BASIC SCIENCES

Second Exam

MATHEMATICS FOR COMPUTING

22-12-2005

- 1 (4 points) Find the solutions using Cramer's Rule.

$$\begin{aligned}x - 5y &= 1 \\ 2x - 3y &= 3\end{aligned}$$

- 2 (5 points) Find the solutions using the inverse of A.

$$\begin{aligned}x + z &= 1 \\ y + z &= 2 \\ x + y &= 3\end{aligned}$$

- 3 (5 points) Find the solutions using Gauss Jordan.

$$\begin{aligned}A + 2B - 5C + D - 3E &= 6 \\ B + 4C - 2D + E &= 1 \\ D + 9E &= 5\end{aligned}$$

- 4 (6 points) Find the determinant of A.

$$A = \begin{bmatrix} 2 & 5 & -3 & -2 \\ -2 & -3 & 2 & -5 \\ 1 & 3 & -1 & 2 \\ -1 & -6 & 4 & 3 \end{bmatrix}$$