PHILADELPHIA UNIVERSITY DEPARTMENT OF BASIC SCIENCES

Exam 2

Linear Algebra 2

16 - 5 - 2006

Each problem is worth 4 points.

- 1. Find the inverse of the linear transformation T(x,y) = (5x + 6y, 4x + 5y).
- 2. Evaluate $\det A$ by reducing A to a triangular matrix.

$$A = \begin{bmatrix} 2 & 2 & 2 & 2 \\ 1 & 3 & 1 & 3 \\ -1 & 0 & 4 & 3 \\ 0 & 5 & -3 & -2 \end{bmatrix}$$

3. Write the matrix $\begin{bmatrix} 2 & 3 \\ 3 & 5 \end{bmatrix}$ as a product of elementary matrices.

4. Find the solution for z using Cramer's Rule.

-Amin Witno