Lab 3 for Math 215

Monday - February 11th, 2008

Student's Name: _____

Instructions: Show all your work for full credit. Indicate your answers clearly.

Problem 1. Let $E = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$. Compute E^101.

Problem 2. Let $E = \begin{bmatrix} 1 & 0 & -1 \\ -1 & 2 & .5 \\ 0 & -1 & 1 \end{bmatrix}$. Compute E^9.

Problem 3. Find the inverse of $E = \begin{bmatrix} 1 & -2 & 2 \\ 2 & -3 & 6 \\ 1 & 1 & 7 \end{bmatrix}$.

Problem 4. Solve the system of equations

$$\begin{cases} x + 2z = 5 \\ 2x - y + 3z = -1 \\ 4x + y + 8z = 3 \end{cases}$$

Problem 5. Mesh the function $f(x, y) = sin(x) \cdot \sin(y)$ by calling the function command.