

Experiment-1

If $A = \begin{bmatrix} 3 & -1 & 3 \\ 9 & -1 & 9 \\ 7 & -1 & 7 \end{bmatrix}$ Find the following by using Matlab

- Characteristic polynomial of A
- Roots of Characteristic polynomial of A
- Eigen values of A
- Eigen vectors of A
- Eigen values of A^{-1}
- Eigen values of A^T
- Eigen values of $B = A^3 + 2A^2 + 3A - 2I$