

Problem 1

Let $A = \begin{bmatrix} 2 & 0 \\ 3 & 1 \end{bmatrix}$. Find the eigenvalues and eigenvectors of A . For each eigenvalue, give a basis for the associated eigenspace.

Problem 2

Let $A = \begin{bmatrix} 2 & 1 & 1 \\ 0 & 5 & 0 \\ 0 & 0 & 5 \end{bmatrix}$. Find the eigenvalues and eigenvectors of A . For each eigenvalue, give a basis for the associated eigenspace.