

MAT 211: Linear Algebra
Problem Set 9

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Recall that the eigenvalues of a matrix A are the solutions to the equation $\det(A - \lambda I) = 0$, where I is the identity matrix.

Problem 1. (5 points) Find all the eigenvalues of $A = \begin{bmatrix} 4 & -1 \\ 2 & 1 \end{bmatrix}$. Give bases for each of the corresponding eigenspaces.

Problem 2. (5 points) Find all the eigenvalues of $A = \begin{bmatrix} 2 & 4 \\ 6 & 0 \end{bmatrix}$. Give bases for each of the corresponding eigenspaces.

Due Date: Thursday April 18.