

# MATH 335 Quiz 4

Name: \_\_\_\_\_

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Show all work. 10 points each.

1. Find the characteristic polynomial and eigenvalues of  $\begin{bmatrix} 2 & 1 \\ -1 & 4 \end{bmatrix}$  **by hand** and check with Matlab. (#5 5.2)

2. Diagonalize the matrix  $\begin{bmatrix} 1 & 0 \\ 6 & -1 \end{bmatrix}$  by hand check with Matlab.(#7 5.3)