Name:

PIN:

MATH 3306
Quiz 7.2

Consider the following matrix

$$A = \begin{pmatrix} 1 & 5 \\ 3 & -1 \end{pmatrix}.$$

(1) Find the characteristic polynomial for A.

(2) Use the characteristic polynomial to find the eigenvalues of A.

(3) Find the corresponding eigenvectors of A by hand. You may verify your answer using technology.